# MuxLab Pro Digital Network Controller (MNC) (Model: 500812)

# **Operation Manual**



94-000904-A SE-000904-A



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# 1. Overview

# 1.1. Description

The MuxLab Pro Digital Network Controller is a Linux-based PC that allows users to control hub-installed MuxLab products.

When installed on a local area network (LAN), the MuxLab Pro Digital Network Controller can scan the LAN for MuxLab products and allows the user to autodiscover, configure and control these products through an Ethernet Web interface.

An Application Program Interface (API) is available supporting a number of third party partner control applications running on smartphones and tables.

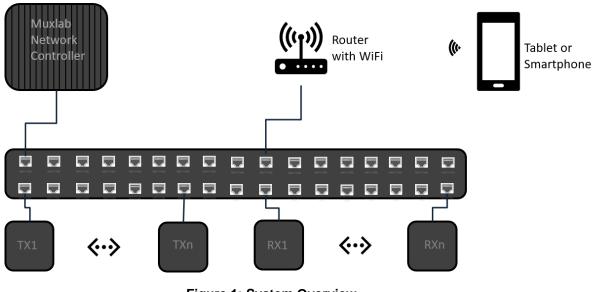


Figure 1: System Overview

Applications include but are not limited to commercial and residential AV systems, classroom projector systems, digital signage, video wall systems, boardroom systems, multi-room systems, classroom training, retail systems, collaborative PC systems, and medical information systems.

# 1.2. Features



(Front View)

(Rear View)



# **Front Panel**

- Power LED
- Power button
- Audio in (3.5 mm)
- Three (3) USB 2.0 ports
- SS USB 3.0 port
- RS232 Port

# **Back Panel**

- VGA video out port
- HDMI video out port
- Two (2) LAN ports (RJ-45 jack) "LAN 1" port for AV over IP subnet
- Audio out (3.5 mm)
- Power connector

# **2.Technical Specifications**

MuxLab ProDigital Network Controller				
CPU	Intel Celeron J1800 Processor, @ 2.41GHz 4 cores			
Memory	2GB DDR3			
Display	Integrated Intel HD Graphics, 1x HDMI and 1x VGA			
Keyboard and Mouse	USB keyboard and mouse (not required and not included)			
Peripherals	<ul> <li>USB 2.0 ports (3x)</li> <li>SS USB 3.0 port (1x)</li> <li>Network gigabit interface (2x)</li> <li>VGA Video out port (1x)</li> <li>HDMI Video out port (1x)</li> <li>Audio in via 3.5mm port (1x)</li> <li>Audio out via 3.5mm port (1x)</li> <li>RS232 port (1x)</li> </ul>			
Operating System	Ubuntu 18.04 LTS			
Temperature/Humidity	Operating: 0 °C to 50 °C, Storage: -20 °C to 80 °C Humidity: 10% to 90% (non-condensing)			
Dimensions	5.24 x 5.00 x 1.38 inch (133 x 127 x 35 mm)			
Weight	1.5lbs (0.7kg)			
Accessories Included	External 12VDC @ 2A Power Adaptor			
Regulatory	FCC, CE, RoHS, WEEE			
Order Information	500812 Pro Digital Network Controller			

**Table 1: Technical Specifications** 

# 3. Installation and Use

# 3.1. Part List

The MuxLab Pro Digital Network Controller comes with the following parts:

- Base unit (1x)
- External Power Adapter (1x)

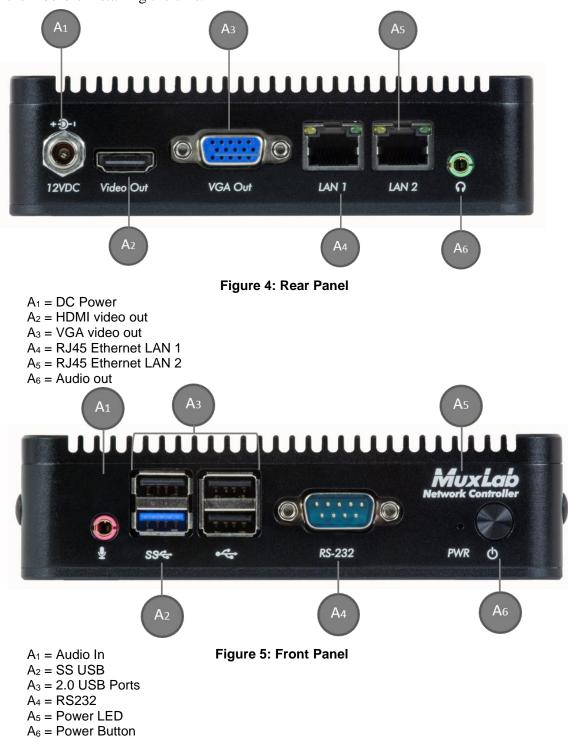


Figure 3: Base Unit

Please verify that both parts are present before proceeding.

# 3.2. Product Overview

The external connections and connection indicators of the MuxLab Pro Digital Network Controller are detailed in Figure 4 and Figure 5. Please familiarize yourself with them before installing the unit.



# 3.3. Installation Procedure

Note that the examples below assume that the Ethernet Switch used does not support WiFi, and a Router with WiFi capability is required in order to communicate with smartphones and tablets for control purposes.

### Setting the Ethernet Switch & Router to the same Subnet as MuxLab Devices:

The MuxLab Pro Digital Network Controller comes with two Ethernet ports. LAN 1 is configured with a static IP address which is 192.168.168.50. LAN 1 port should be connected in to the same network switch where all the Muxlab equipment is connected. Note that LAN 2 port is configured as a DHCP client, and can be utilized for control purpose. The MuxLab AV over IP Transmitters and Receivers are set to support DHCP by default. When no DHCP server is available the AV over IP Transmitters and Receivers fallback to a static IP address of:

- 192.168.168.54 (for the 500816-IP)
- 192.168.168.55 (for the 500752, 500753, 500754, 500755, 500755-AMP and 500756 Transmitters)
- 192.168.168.56 (for the 500752, 500753, 500754, 500755, 500755-AMP and 500756 Receivers)
- 192.168.168.58 (for the 500758, 500759, 500770, 500771, 500773 and 500777 Transmitters)
- 192.168.168.59 (for the 500758, 500759, 500770, 500771 and 500777 Receivers)
- 192.168.168.62 (for both the 500762 and 500763 Transmitters)
- 192.168.168.63 (for the 500762 Receiver)
- 192.168.168.85 (for the 500768 Transmitter)
- 192.168.168.86 (for the 500768 Receiver)
- 192.168.168.32 (for the 500778 Transmitter)
- 192.168.168.33 (for the 500778 Receiver)
- 192.168.168.90 (for the 500800 Transmitter)
- 192.168.168.91 (for the 500800 Receiver)
- Auto IP (for the 500760 and 500761 Transmitters and Receivers)
- No Static IP (for the 500757 Transmitter and Receiver)

These MuxLab products (MNC, and the AV over IP Transmitters & Receivers) work in conjunction with a PoE (PSE) Ethernet Switch (MuxLab recommends the Cisco SG350 Series) and a Router of your choice with WiFi capability to be able to communicate with a smartphone or tablet. The use of a smartphone or tablet to manage the MuxLab devices with third party software applications is optional but is the most common method of control and generally preferred, however MuxLab devices may also be managed via the Pro Digital Network Controller web interface.

In order for the DHCP server within the Ethernet Switch to support the MuxLab device subnet, set the static IP of the Ethernet Switch to **192.168.168.1** (recommended setting). Refer to the Ethernet Switch manual for instructions on how to accomplish this. The Router with WiFi capability, must also be placed on the same subnet as the MuxLab devices and it should be set with a Static IP address, we recommend using a Static IP address of **192.168.168.2**. Refer to your Router documentation on how to accomplish this.

#### Setting MuxLab Devices, Ethernet Switch and Router to an Existing Subnet:

If the MuxLab AV over IP devices are being installed in an existing environment that has a working subnet already configured that cannot be easily changed, then the subnet of the MuxLab devices, the Ethernet Switch (if a new Ethernet Switch is required), and the Router with Wifi (if a new Router is required) must be changed in order to match the existing subnet. For this case we will use **192.168.2.x** as an example subnet already in place and which must be supported. Note that this is only an example and may not necessarily reflect your actual subnet address.

If the Ethernet Switch does not already reside in the example subnet of 192.168.2.x, then set the static IP of the Ethernet Switch to a free static IP address (for the sake of this example we will use an IP address of **192.168.2.1**). Refer to the Ethernet Switch manual for instructions on how to accomplish this. MuxLab also has a guide specific to the Cisco SG300 Series, see document SE-000819-A (Configuring Network Setting of the Ethernet Switch & MuxLab AV over IP Devices), which can be found on MuxLab's website under any of the AV over IP product pages (as a download under the Operation Manual sub-category).

If the Router with WiFi does not already reside in the example subnet of 192.168.2.x, then set the static IP of the Router to a free static IP address (for the sake of this example we will use an IP address of **192.168.2.2**). Refer to your Router documentation on how to accomplish this.

The MuxLab AV over IP Transmitters and Receivers are set by default to support DHCP, and will automatically be set to the subnet specified by the DHCP Server. These units need only be physically connected into the network as described in their respective Installation Guides and by using the 500812 Pro Digital Network Controller to discover them. But before the MNC can be used, the new MNC subnet must also be set.

To change the subnet of the MNC requires a two-step process:

### **Process 1: Configuring the IP address of the MNC Process 2: Physically installing the MNC in the network**

#### Note:

- An example subnet address of 192.168.2.x of the existing network on which the MNC will be installed is assumed for this example process.
- The MNC LAN 1 port comes with a static IP address of **192.168.168.50** and with DHCP disabled. This process explains how to change it to the example subnet of 192.168.2.x.

#### Process 1: Configuring the IP address of the MNC

Refer to Figure 4 and Figure 5.

1. On the back panel of the MNC:

- A. Plug the supplied power adaptor into the DC power jack. Ensure that the other end of the power adaptor is plugged into a power socket.
- B. Ensure that the power switch on the front of the unit is ON position (front button pressed in).
- C. Connect one end of an Ethernet cable to the LAN 1 Ethernet port. Ensure that the other end of the Ethernet cable is connected to a computer.

Refer to Figure 6.

2. On the computer to which the MNC is connected, open up an Internet browser (Explorer, Chrome, Firefox, etc.) and type the following address in the address bar near the top of the screen:



*NOTE:* mnc must be written in lower case.

) http://192.168.168.50/mn< ×	
← → X ff http://192.168.168.50/mnc/	*

Figure 6: Internet Browser Entry

- 3. Press Enter on the keyboard. If the browser connects to the MNC, go to Step 7.
- 4. If the browser fails to connect to the MNC, a failure message will appear. Perform the following steps (Steps 4 through 6) in order to set the computer to the same subnet as the MNC, to be able to then change the MNC subnet (from Step 7 onward) to match the subnet of the existing installation (refer to Figure 7):
  - A. Move the mouse to the bottom of the screen and click on the **Start** button at the lower left.
  - B. Click into the *Search programs and files* field just above the **Start** button and type cmd. Press **Enter** on the keyboard.
  - C. A DOS window will appear. Type ipconfig and press Enter on the keyboard.

Search programs and files
💽 🦳 📀 💌 🔀 🗐 😕 🛷
Step 4A
cmd × Shut down +
📀 📜 📀 💌 🖄 📓 📥 🚿
Step 4B
C:\Windows\system32\cmd.exe
Microsoft Windows [Uersion 6.1.7601] Copyright (c) 2009 Microsoft Corporation. All rights reserved.
C:\>ipconfig
~

Step 4C Figure 7: Determining Computer IP Address

The following screen will appear (Figure 8).

C:\Windows\system32\cmd.exe	
Connection-specific DNS Suffix . : Link-local IPv6 Address : IPv4 Address : 192.168.1.255 Subnet Mask : 255.255.255.0 Default Gateway : 192.168.1.1	
Tunnel adapter isatap.	
Media State Media disconnected Connection-specific DNS Suffix . :	
Tunnel adapter isatap.	
Media State Media disconnected Connection-specific DNS Suffix . :	
Tunnel adapter Local Area Connection× 9:	
Connection-specific DNS Suffix . : IPu6 Address Link-local IPu6 Address : Default Gateway	

Figure 8: Computer IP Address

- 5. If the IPv4 Address (shown in the red box of Figure 8) does NOT begin with the numbers 192.168.168.x, then perform the following steps (refer to Figures 9 through 12):
  - A. Type exit and press **Enter** on the keyboard.
  - B. Move the mouse to the bottom of the screen and click on the **Start** button at the lower left.
  - C. Click on **Control Panel**
  - D. Click on Network and Internet
  - E. Click on Network and Sharing Center
  - F. Click on Local Area Connection
  - G. Click on **Properties**
  - H. Click on Internet Protocol Version 4 (TCP/IPv4). It will turn blue.
  - I. Click on **Properties**
  - J. Click the Use the following IP address radio button.
  - K. In the **IP address** field, type the following:

#### **192.168.168.***x*

Where x can be any number from 2 to 254 except for 50 (since 50 is the MNC address). The example in Figure has the PC set to a Static IP address of 192.168.168.12

L. In the **Subnet mask** field, type the following:

255.255.255.0

M. Click on OK.

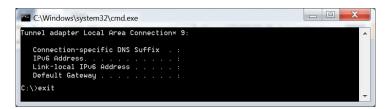
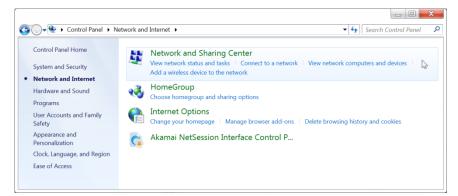


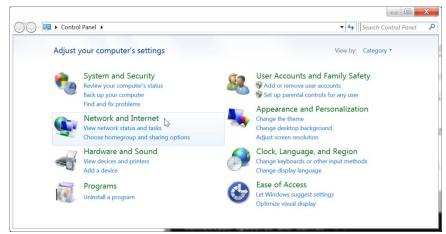




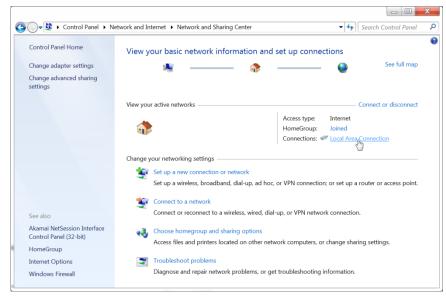
Figure 9



#### Step 5D



Step 5E



Step 5F

Figure 10

	nection Status	
ieneral		
Connection —		
IPv4 Connect	vity:	Internet
IPv6 Connect	vity:	No network access
Media State:		Enabled
Duration:		5 days 13:20:32
Speed:		1.0 Gbps
Details		
Activity ———		
Activity ———	Sent —	
Activity ——— Bytes:	Sent — 323,466,319	
·	1	

Step 5G

Jocal Area Connection Properties
Networking Sharing
Connect using:
Sroadcom NetXtreme Gigabit Ethernet
<u>C</u> onfigure
This connection uses the following items:
Client for Microsoft Networks
Virtual PC Network Filter Driver
QoS Packet Scheduler
File and Printer Sharing for Microsoft Networks
Internet Protocol Version 6 (TCP/IPv6)
☑ ↓ Internet Protocol Version 4 (TCP/IPv4)
Link-Layer Topology Discovery Mapper I/O Driver
Link-Layer Topology Discovery Responder
I <u>n</u> stall Uninstall Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
OK Cancel

Steps 5H-5I Figure 11

Internet Protocol Version 4 (TCP/IPv4)	Properties	? X
General		
You can get IP settings assigned autom this capability. Otherwise, you need to a for the appropriate IP settings.		
Obtain an IP address automatically	/	
• Use the following IP address:		
IP address:	192 . 168 . 168 . 12	2
S <u>u</u> bnet mask:	255 . 255 . 255 . 0	
Default gateway:	· · ·	
Obtain DNS server address automa	atically	
• Us <u>e</u> the following DNS server addr	resses:	
Preferred DNS server:		
<u>A</u> lternate DNS server:	· · ·	
Validate settings upon exit	Ad	<u>v</u> anced
	ОК	Cancel

Steps 5J-5K-5L-5M

#### Figure 12

The computer is now ready to communicate with the MNC.

Refer to Figure 13.

6. Open up an Internet browser (Explorer, Chrome, Firefox, etc.) and type the following address in the address bar near the top of the screen:

http://192.168.168.50/mnc/

NOTE: mnc must be written in lower case



Figure 13: Internet Browser Entry

Refer to Figure 14.

7. The MuxLab Pro Digital Network Controller Web interface Login Screen will appear.

Page 1	Language	English
MuxLai	2	
Muxlab Network Controller		
Products Setti	ngs   Software Update   Help	
	LOGIN	
	Welcome to the MuxLab network controller. Please login to configure your product.	
	User Name : admin Password :	
	Log in	
	© 2015 MuxLab Inc. version: 1.0.2	

Figure 14 Login Screen

- 8. In the User Name field, type admin. Use lower case.
- 9. In the **Password** field, type admin. Use lower case.
- 10. Click Log in.

	Controller			Language: [Eng
Products		Software Update	:   Help	
Network	Administration			
Network Use the form be	low if you'd like to set r	nanual network settings.		
LAN 1-Use DHCP:	· ○ Yes ® No			
IP address: 192 . 168 . Network mask:	168 . 50			
255 . 255 . Router: 192 . 168 .				
	C4 : D3 : B9 : 5	55		
LAN 2				
Use DHCP:	Yes O No			
Network mask:				
Router:				
	C4 : D3 : B9 : 8	10		

Figure 15: Network Settings Screen

- 11. Click the **Settings** tab. The Network Settings screen will appear.
- 12. Next to **Use DHCP**, ensure that the **No** radio button is selected.
- 13. In the **IP address** field, type the first 3 entries of the IP address of the network subnet on which the MNC will be installed, which in our example is 192.168.2.x.

For example, type the following in the MNC IP address field:

#### **192.168.2.***x*

Where x in our example can be any number from 3 to 254, and since "1" was used above for the Ethernet Switch and "2" was used for the Router, then for this example we will select "5" for a Static IP address of **192.168.2.5**, see Figure 15. Just make sure the Static IP address for the MNC does not conflict with the Static IP address of the Ethernet Switch and the Router or any other Static IP address already pre-assigned in the given network.

- 14. In the Network mask field, type 255.255.255.0
- 15. In the **Router** field, type the IP address of the network Router (which in our example is **192.168.2.2**).
- 16. Click on Save. The MNC will reboot (Figure 16).

Muxlab Network Contr		Language: <mark>English ▼</mark> Logout
Products	Settings Software Update Help	
NETWORK SE           Use DHCP:         Υ           IP address:         192 . 188 . 2 . 5           Network mask         255 . 255 . 0           Rotter:         192 . 188 . 2 . 2           Save         Save	The unit is rebooting. The page will be refreshed in 60 sec	

#### Figure 16: MNC Reboot Screen

The MNC is now configured to work with your network router.

#### **Process 2: Physically installing the MNC to the network**

1. Disconnect the Ethernet cable from the computer and connect it to either the Router or the Ethernet Switch. Ensure that the other end is still connected to the MNC. Also make sure that the Router is connected to the Ethernet Switch.

# **3.4.** Ethernet Web Interface – Device Management

The Ethernet Web interface allows the user to manage the MNC and the AV over IP product family of extenders remotely from a Windows based computer. Make sure the computer is set to a Static IP address in the same subnet, which in our example is **192.168.2.x**. Follow steps 4, 5 & 6 in section 3.3 on how to accomplish this, but set using the subnet 192.168.2.x

Ensure that the computer is connected by an Ethernet cable to the network router on which the MNC is physically installed. Open up an Internet browser (Explorer, Chrome, Firefox, etc.) and type in the MNC IP address in the address bar near the top of the screen, such as, which in our example is 192.168.2.5:

### 192.168.2.5/mnc/

**NOTE: 192.168.2.x** represents the first three IP address entries of the network subnet on which the MNC is physically installed.

The MuxLab Network Controller Web interface Login Screen will appear (Figure ).

Products	Settings	Software Upda	ate   Help	
			LOGIN	
			the MuxLab network controller. in to configure your product.	
		Username :	admin	
		Password :		
		Eorgot Password?	Sign In	
		<u>Password</u>		

#### Figure 17 Login Screen

In the **User Name** field, type admin. Use lower case.

In the **Password** field, type admin. Use lower case.

Click Log in.

You are now ready to manage the MuxLab Pro Digital Network Controller.

## **Extender Models**

The MuxLab Pro Digital Network Controller is designed to work with various MuxLab Extender models (refer to Table 2).

All Extender models are controlled using MuxLab's Network Controller software, although the setup for each differs from model to model.

**NOTE:** On the following pages, the controls for each Extender model are presented separately. Please locate your Extender model in Table 2 and refer to the pages that describe its operation. There is no need to read the remainder of this manual in its entirety, each Extender section is complete and self-contained.

Model	Туре	Resolution	Features	Page
500752	HDMI	1080p/60	IR + PoE	21
500753	HDMI	1080p/60	RS232+IR+PoE	39
500754	HDMI (Video Wall Capable)	1080p/60	RS232+IR+PoE	58
500755	Audio	2 Ch Audio	RS232+IR+PoE	81
500756	SDI	3G-SDI	RS232+IR+PoE	100
500757	HDMI	1080p/30	RS232+IR+PoE	119
500758	HDMI	4K/30	Audio+RS232+IR+PoE	135
500759	HDMI (Video Wall Capable)	4K/30	Audio+RS232+IR+PoE	152
500770	HDMI	1080p60	KVM+Audio+PoE	173
500771	DVI	1080p60	KVM+Audio+PoE	189
500773	HDMI/VGA Wall Plate	1920x1200 60Hz (VGA) & 4K/60	Audio+PoE	204
500777	HDMI/VGA Wall Plate	1920x1200 60Hz (VGA) & 4K/60	Audio+USB+PoE	218
500755- AMP	Audio	2 Ch Audio w/AMP	RS232+IR+PoE(TX)	233
500762	HDMI	1080p/60 & 4K/60	USB+RS232+IR+PoE	252
500763 TX	HDMI	4K/30	USB+RS232+IR+PoE	277
500816-IP	Controller	n/a	Controllers 500812	294
500800	HDMI	1080p/60 & 4K/60	KVM+RS232+IR+Audio +PoE	349

Table 2: Extender Models

# Extender Model 500752

### **Products Screen**

Once the user has logged in, the Products screen will appear (Figure 18).pain

MuxLab			Language: English • Logou
Products   Setting	s   Software Update	Help	
SELECT A PRODUC		ADO DEVICE	
ID Custom Name	STEM: Product Name Compagny	Product type	

Figure 18: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP (500752/753/754/755/756) and then click on ADD DEVICE (Figure 19).

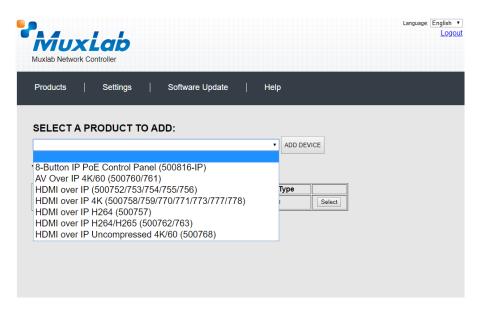


Figure 19: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 20). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 18), without a product being added.

Reversion Controller	Language: English ▼ Logout
Products   Settings   Software Update   Help	
SELECT A PR   Hdmi Over IP (500752/753/754/755/756)   YOUR CURRE   D Custon   OK CANCEL	
0 2016 MaxLab Inc. version: 1.4.8	
© 2016 MuxLab Inc. version: 1.4.8 mobile app	

Figure 20: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 21).

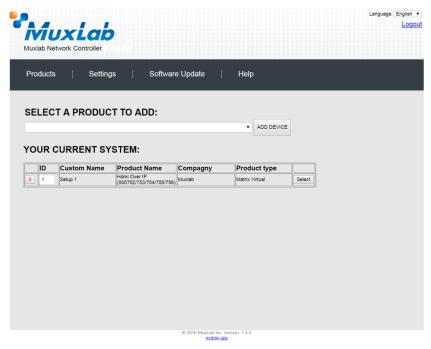


Figure 21: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 22).

Muxlab Network (			68.50 says: t to load previous stor	ed device list ? OK	Cancel	Language: Englis
Products	Settings	Softwa	re Update	Help		
SELECTED Setup 1 : Hdm		-	55/756)   Muxla	ab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Set-up Modify any availab • Automatic	le settings and clic	k Save to apply you	ur changes			
			© 2016 MuxLab In mobile			

Figure 22: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. IR
- 6. Firmware

### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 23).

Muxlab Network						Language:	En
Products	Settings	Softwar	e Update	Help			
	PRODUCT i Over IP (500	: 752/753/754/75	5/756)   Muxla	ıb   Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Automatic     Launch discovery	Of Manual	k Save to apply you	r cnang <del>e</del> S				

Figure 23: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500752 transmitters) and display side devices (500752 receivers), and will display the scan results in tabular form (Figure 24).

Each 500752 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 25 (orange highlighted fields).

		Settings	Softw	vare Update	Help						
0 = 1	ECTED PR	ODUCT									
	P 1 : Hdmi Ov		-	755/756)   Mu	ıxlab   Matrix	Virtua	I				
	Set-up	Matrix	Video Wall	RS-232	IR		Fin	mware			
• 4	fy any available se	ttings and c	lick Save to apply	your changes							
Modif A Laur Displ	ny any available se Automatic M nch discovery Iay (4 RX)	lanual									
Modif A Laur Displ Port#	fý any available se Automatic M nch discovery Iay (4 RX) # Name	ianual N	//AC address	IP address	MASK	DHCF					
Modifi	rý any available se Automatic M Inch discovery Iay (4 RX) # Name RX-00-08-78-00-71	anual D-E2	1AC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0			Reboot	Detail		
Modifi A Laur Displ Port# 0 0	rý any available se Automatic M Inch discovery Iay (4 RX) # Name RX-00-0B-78-00-71 RX-00-0B-78-00-71	D-E2	AAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0	*		Reboot	Detail		
Modified A	y any available se           Automatic         M           nch discovery         M           lay (4 RX)         M           # Name         RX-00-0B-78-00-71           RX-00-0B-78-00-71         RX-00-0B-78-00-71           RX-00-0B-78-00-71         RX-00-0B-78-00-71	anual D-E2 E-59 E-5E	AC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	•		Reboot Reboot	Detail Detail		
Modifi A Laur Displ Port# 0 0	rý any available se Automatic M Inch discovery Iay (4 RX) # Name RX-00-0B-78-00-71 RX-00-0B-78-00-71	anual D-E2 E-59 E-5E	AAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	*		Reboot	Detail		
Modif A Laur Displ Port# 0 0 0 0 0	<ul> <li>№ any available se</li> <li>№ Mutomatic</li> <li>M hch discovery</li> <li>Iay (4 RX)</li> <li># Name</li> <li>RX-00-0B-78-00-71</li> <li>RX-00-0B-78-00-71</li> <li>RX-00-0B-78-00-71</li> <li>RX-00-0B-78-00-71</li> </ul>	anual D-E2 E-59 E-5E	AC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	•		Reboot Reboot	Detail Detail		
Modif A Laur Displ Port# 0 0 0 0 0	ty any available se           Automatic         M           nch discovery         M           lay (4 RX)         M           # Name         RX-00-0B-78-00-71           RX-00-0B-78-00-71         RX-00-0B-78-00-71           RX-00-0B-78-00-71         RX-00-0B-78-00-71	anual D-E2 E-59 E-5E	AC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	•		Reboot Reboot	Detail Detail		
Modif A Laur Displ Port# 0 0 0 0 Sour	<ul> <li>№ any available se</li> <li>№ Mutomatic</li> <li>M hch discovery</li> <li>Iay (4 RX)</li> <li># Name</li> <li>RX-00-0B-78-00-71</li> <li>RX-00-0B-78-00-71</li> <li>RX-00-0B-78-00-71</li> <li>RX-00-0B-78-00-71</li> </ul>	anual D-E2 E-59 E-5E E-63	AC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	•		Reboot Reboot	Detail Detail		
Modif A Laur Displ Port# 0 0 0 0 Sour	(ỷ any available se Automatic M (h nch discovery) Iay (4 RX) # Name RX:00-08-78-00-71 RX:00-08-78-00-71 RX:00-08-78-00-71 RX:00-08-78-00-71 RX:00-08-78-00-71 RX:00-08-78-00-71	anual D-E2 E-59 E-65 E-63	AAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	5 5 5 5		Reboot Reboot	Detail Detail		
Modified A A A A A A A A A A A A A A A A A A A	Ŵ any available se \u00e4utomatic M Inch discovery Iny (4 RX) # Name RX-00-0B-78-00-71 RX-00-0B-78-00-71 RX-00-0B-78-00-71 RX-00-0B-78-00-71 RX-00-0B-78-00-71 RX-00-0B-78-00-71 # Name	anual D-E2 E-59 E-5E E-63	AAC address 00-08-78-00-70-52 00-08-78-00-7E-59 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.66 192.168.168.60 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	I DHCF		Reboot Reboot Reboot	Detail Detail Detail		

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Figure 24: Products Screen – Set-up Tab

	AUX ab Network									Lo
Proc	ducts	Settings	s ∣ Softv	vare Update	Help					
SEL	ECTED	PRODUC	т:							
Setu	ıp 1 : Hdm	i Over IP (5	00752/753/754/	755/756)   Mu	ıxlab   Matrix	Virtua	I			
	Set-up	Matrix	Video Wall	RS-232	IR		Firr	mware		
٠		O Manual	click Save to apply	your changes						
Modi • ) Lau Disp	ify any availa Automatic	O Manual	click Save to apply	your changes	MASK	DHCP	DIP			
Modi • ) Lau Disp	ify any availa <sup>Automatic</sup> nch discovery <b>Hay (4 RX)</b>	O Manual		IP address	MASK 255.255.255.0	DHCP	DIP	Reboot	Detail	
Modi Lau Disp Port	ify any availa <sup>Automatic</sup> nch discovery <b>Hay (4 RX)</b> # Name	O Manual	MAC address	IP address 192.168.168.64				Reboot	Detail Detail	
Modi Lau Disp Port 0	ify any availa Automatic Inch discovery Ilay (4 RX) # Name RX-1	O Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0					
Modi Lau Disp Port 0 0	ify any availa Automatic Inch discovery Ilay (4 RX) # Name RX-1 RX-2	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	<ul><li>✓</li></ul>		Reboot	Detail	
Modi Lau Disp Port 0 0 0 0	ify any availa Automatic Inch discovery Iay (4 RX) # Name RX-1 RX-2 RX-3	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		Reboot Reboot	Detail Detail	
Modi Lau Disp Port 0 0 0 Sour	ify any availa Automatic Inch discovery Ilay (4 RX) # Name RX-1 RX-2 RX-3 RX-4	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		Reboot Reboot	Detail Detail	
Modi Lau Disp Port 0 0 0 Sour	ify any availa Automatic Inch discovery Ilay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 RX-4 RX-4	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-58 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	<ul><li>4</li><li>4</li><li>4</li></ul>		Reboot Reboot	Detail Detail	
Modi Lau Disp Port 0 0 0 0 Soun Port	ify any availa Automatic Inch discovery Ilay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-50 00-08-78-00-7E-50 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	I DHCP	DIP	Reboot Reboot Reboot	Detail Detail Detail	
Modi Lau Disp Port 0 0 0 Sour Port 0	itý any avalila Automatic nch discovery Islay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 RX-3 RX-4 RX-4 RX-4 RX-1 RX-1 RX-1 RX-1 RX-1 RX-1 RX-1 RX-1	O Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-68 00-08-78-00-7E-63 MAC address 00-08-78-00-7D-09	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	♥ ♥ ♥ DHCP		Reboot Reboot Reboot	Detail Detail Detail Detail	

Figure 25: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 26).

IV	ĩυx	Lab	)							
	ab Network		8011) 							
Proc	ducts	Setting	s ∣ Softv	vare Update	Help					
		PRODUC	: <b>T</b> : 00752/753/754/	755/756) I Mi	wish   Matrix	lirtua				
selu	ip i . Hum	i Over IF (5	001 3211 3311 341	755/750J   Wit		viitua	1			
				05.000						
	Set-up	Matrix	Video Wall	RS-232	IR		Firmware			
• /		ole settings and O Manual	I click Save to apply	your changes						
Modi J Lau Disp	ifý any availal Automatic nch discovery Ilay (4 RX)	-								
Modi Lau Disp	ify any availal Automatic nch discovery I <b>lay (4 RX)</b> # Name	-	MAC address	IP address	MASK	DHCF		Datail		
Modi J Lau Disp	ifý any availal Automatic nch discovery Ilay (4 RX)	-		IP address 192.168.168.64	MASK 255.255.255.0 255.255.255.0		Reboot	Detail		
Modi Lau Disp Port: 0	ify any availal Automatic Inch discovery I <b>lay (4 RX)</b> # Name RX-1	-	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0		Reboot Reboot	Detail	UPDATED	
Modi Lau Disp Port: 0 0	fy any availal Automatic nch discovery I <b>ay (4 RX)</b> # Name RX-1 RX-2	-	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	•	Reboot Reboot		UPDATED UPDATED	
Modi Lau Disp Port: 0 0 0	fy any availal Automatic nch discovery Iay (4 RX) # Name RX-1 RX-2 RX-3	-	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$	Reboot Reboot Reboot	Detail Detail	UPDATED	
Modi Lau Disp Ports 0 0 0 0 Sour	ify any availab Automatic Itay (4 RX) # Name RX-1 RX-2 RX-3 RX-4	-	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$	Reboot Reboot Reboot Reboot	Detail Detail	UPDATED UPDATED	
Modi Lau Disp Ports 0 0 0 0 Sour	ifý any availal Automatic Inch discovery Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 RX-4	-	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-58 00-08-78-00-7E-58 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	<ul> <li>8</li> <li>8</li> </ul>	Reboot Reboot Reboot Reboot	Detail Detail	UPDATED UPDATED	
Modi Lau Disp Ports 0 0 0 0 Sour Ports	ify any availat Automatic Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4	-	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-58 00-08-78-00-7E-58 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	♥ ♥ ♥ DHCF	Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Modi Lau Disp Port 0 0 0 0 Sour Port 0 0	ify any availat Automatic nch discovery Iay (4 RX) # Name RX-1 RX-2 RX-2 RX-3 RX-4 RX-4 For (2 TX) # Name DVD-1 DVD-2	-	MAC address 00-08-78-00-70-52 00-08-78-00-7E-59 00-08-78-00-7E-58 00-08-78-00-7E-58 00-08-78-00-7E-58 00-08-78-00-7D-09	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	♥ ♥ ♥ DHCF	<ul> <li>Reboot</li> <li>Reboot</li> <li>Reboot</li> <li>Reboot</li> </ul>	Detail Detail Detail	UPDATED UPDATED	

Figure 26: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 27).

Device Deta	il
Custom Name:	RX-1
Model:	500752-RX
MAC Address:	00-0B-78-00-7D-E2
IP Address:	192.168.168.64 (DHCP: ON)
FW Version:	2.1.0
Group IP:	239.255.1.1
Video Resolution	: 720P 60Hz
Audio Format:	44.1 khz
Select a screen ir	nage: Choose file No file chosen
Upload Image	
Set output Video	Format:
Auto-detect Reso	lution:
Show Screen Tex	t: 🗹
Show Screen ima	ige: 🖉
-	
DVI Compatibility	On:
Save Cancel	

Figure 27: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 28).

Mux						Language:	English Logot
Muxlab Network		L Coffu	na l la data	l Llala			
Products	Settings		re Update	Help			
SELECTED Setup 1 : Hdm		-	55/756)   Muxla	ab   Matrix Vii	rtual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th	plays to the desired te connections.	sources below. On	ce you've selected t	the displays you w	vant to change, use t	he "Connect" button at the	
DISPLAY		SOURCE		PRESE	тя	7	
			> Current ac	tive Preset:			
RX-1		- •	No preset s	selected	▼ ID: 1		
			> Save curre	ent connections in fo	llowing preset:		
			> Save curr	ent connections as n	ew preset: Create		
			> Delete foll	lowing preset:			
Connect			Ľ				

Figure 28: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "RX-1") and selects which source to connect it to (Figure 29).

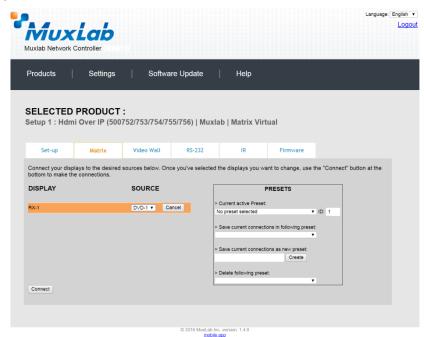


Figure 29: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 30).

		Controller	4)				Langua	ge: English v Logout
Produc	ts	Settings	Softwa	re Update	Help			
		PRODUCT ii Over IP (500)	-	55/756)   Muxl	ab   Matrix Virt	ual		
Set	·up	Matrix	Video Wall	RS-232	IR	Firmware		
		lays to the desired e connections.	sources below. On	ce you've selected	the displays you wa	int to change, use th	ne "Connect" button at the	
DISPL	AY .		SOURCE		PRESET	S	7	
RX-1 Connec			DVD-1 T SUC	CESS No preset > Save cur > Save cur	rent connections in folic	•		
				© 2016 MuxLab Ir				

Figure 30: Change Successful

PRESETS
> Current active Preset:
No preset selected V ID: 0
<ul> <li>&gt; Save current connections in following preset:</li> <li>✓</li> <li>&gt; Save current connections as new preset:</li> </ul>
Preset 1 Create
> Delete following preset:

Figure 31: Create New Preset

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 31) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 32).

PRESETS
> Current active Preset:
[1] Preset 1 <b>v</b> ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
Create SUCCESS
> Delete following preset:

Figure 32: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 33).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 33: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 34).

192.168.168.50 says:			×
Are you sure to delete this preset ?			
Prevent this page from creating additional	dialogues.		
	ОК	Cancel	

Figure 34: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 35).

PRESETS		
> Current active Preset:		
[1] Preset 1	ID: 1	
> Save current connections in following preset:		
> Save current connections as new preset:		
Create		
> Delete following preset:		
<b></b>	SUCCES	ss

Figure 35: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 36).

PRESE	TS	
> Current active Preset:		
[1] Preset 1		▼ ID: 1
> Save current connections in for [1] Old Preset	llowing prese	et: ▼
TT Old Preset		
	Create	
> Delete following preset:		T

Figure 36: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 37).

PRESETS				]
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pres	set:		JCCE	
> Save current connections as new preset:				
Cieate				
> Delete following preset:				
	•			

Figure 37: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

## 3. Products Screen - Video Wall Tab

MuxLab's Extender 500752 does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 38).

roducts   Settings   Software Update   Help ELECTED PRODUCT : etup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Virtual Set-up Matrix Video Wall R5-232 IR Firmware	Muxlab Network	Controller					Languag	e: English Loge
etup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Virtual	Products	Settings	Softwa	re Update	Help			
Set-up Matrix Video Wall RS-232 IR Firmware				5/756)   Muxla	ab   Matrix Virl	ual		
	Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
IO devices compatible with video wall features found !	NO devices com	patible with video	wall features foun	d !				
				© 2016 MuxLab In mobile				

Figure 38: Video Wall Tab

For more information on the Video Wall tab and its features, refer to the section of this manual dealing with MuxLab Extender 500754 and MuxLab Extender 500759.

### 4. Products Screen - RS-232 Tab

MuxLab's Extender 500752 does not support the RS-232 feature. Clicking on this tab will display the following screen (Figure 39).

Muxlab Network Cont	<b>ab</b> troller				Language:	English •
Products	Settings   Sof	ware Update	Help			
SELECTED PR Setup 1 : Hdmi Ov	RODUCT : ver IP (500752/753/754	l/755/756)   Muxla	ab   Matrix Virt	ual		
Set-up	Matrix Video Wall	RS-232	IR	Firmware		
NO devices compatibl	le with RS-232 features four	d !				
		© 2016 MuxLab In mobile				

Figure 39: RS-232 Tab

For more information on the RS-232 tab and its features, refer to the section of this manual dealing with MuxLab Extender 500753 and 500754.

#### 5. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands to a MuxLab transmitter or receiver IR port (Figure 40) via the Network Controller. IR pass-through mode is also supported using an IR handheld remote as the control source.

						Language:	Englis Lo
Products	Settings	Softwa	re Update	Help			
SELECTED			55/756)   Muxl	ab   Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device Select a device:	-						
- IP Feedback:							
Data to send in	HEX (ex: A013	B155C5)					
Send							
IR code receive	d in HEX						
Get IR code							

Figure 40: IR Tab

When sending IR commands through the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 41).

Muxlab Network C						Language: E
Products	Settings	Softwa	ire Update	Help		
SELECTED I Setup 1 : Hdmi		-	55/756)   Muxl	ab   Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device Select a device: - IR Mode: - IP Feedback:	-					
Save	UEX ( 4040					
Data to send in	HEX (ex: A013	810000)				
IR code receive	d in HEX					

Figure 41: IR Tab – Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, DVD-1 was chosen as the selected device, meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, then from the Ethernet Switch to the transmitter connected to DVD-1. That transmitter will then send the specified IR data command to DVD-1 via the IR Emitter connected to the transmitter IR out port.

The **IR code received in HEX** field displays the HEX version of an IR command send from a handheld remote to an IR receiver IR In port and attached IR Sensor.

When sending IR commands directly from an IR Source device, such as an IR handheld remote, from 500752 receiver through to a transmitter, the user must set up a pass-through for IR signals to be sent to and from devices. This requires the following step:

The user must tell the 500752 receiver (the device near the IR handheld remote with an attached IR Sensor) the IP address of the 500752 transmitter (where the IR commands are being sent, which has an attached IR Emitter). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.

### 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 42).

	AUX Iab Network Co		ν					Language: [	English ▼ Logout
Pro	oducts	Settings	Softwa	re Update	Help				
-		PRODUCT i Over IP (500	-	/55/756)   Muxla	ab   Matrix Virl	ual			
	Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
	<b>ISPLAY</b> X-1 (500752-RX)		ehang Di	splays (RX) se file No file chosen Apply	ngs and click Save Source (TX) URCE D-1 (500752-TX)		2.1.0		
				© 2016 MuxLab Inc. mobile a					

Figure 42: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

## **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The **Network** tab (Figure 43) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

	Language: Eng
MuxLab	
luxlab Network Controller	
Products   Settings   Software Update   Help	
Network Administration	
Network	
Use the form below if you'd like to set manual network settings.	
LAN 1 Use DHCP: O Yes @ No	
IP address: 192 . 168 . 168 . 50	
Network mask:	
255 . 255 . 255 . 0	
Router:	
192 . 168 . 168 . 1	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 55	
Save	
LAN 2	
Use DHCP:	
IP address:	
Network mask:	
Router:	
Mac Address: 00 : 0E : C4 : D3 : B9 : 58	
Save	

Figure 43: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 44).

	English V
MuxLab	<u>Logo</u>
uxdab Network Controller	
Products   Settings   Software Update   Help	
Network Administration	
User Accounts	
Create a new User Account Or Select a User to edit:	
User Name	
Confirm new password:	
User Type:   Create Update Delete	
Restore data	
Restore the unit with the selected data file	
Specify file: Choose File No file chosen	
WARNING ! You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!!	
Restore	
Backup data Backup the data and save it in a file	
Backup Ine data and save it in a me	
Deceb	
Get Logs	
Get all logs in a zip file	

Figure 44: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

## Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 45). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

Figure 45: Firmware Tab

## Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 46).

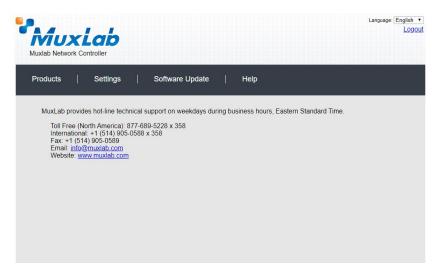


Figure 46: Help Screen

# Extender Model 500753

## **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 47).

Mu	xLab				Language: Englis Lo
Muxlab Netw	vork Controller	s   Softwar	e Update	Help	
SELECT	A PRODUCT	TO ADD:		· ADD DEVICE	
				* ADD DEVICE	
	URRENT SYS	Product Name	Compagny	Product type	
10	Custom Hame	Product Hame	compagity	Product type	

Figure 47: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP (500752/753/754/755/756) and then click on ADD DEVICE (Figure 48).

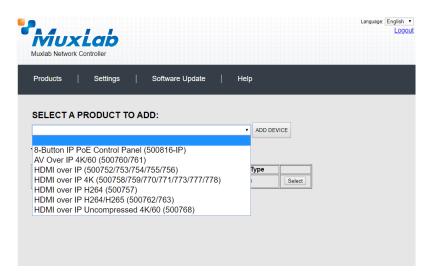


Figure 48: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 49). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 47), without a product being added.

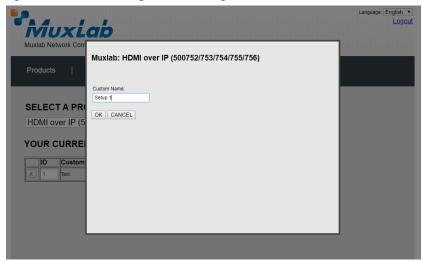


Figure 49: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 50).

	uxlab	,				
roduct	etwork Controller s   Setting	gs ∣ Softwar	e Update 🛛	Help		
ouuo				ПСР		
ELEC	CT A PRODUC	T TO ADD:				
				ADD DEVICE		
OUR	CURRENT SY	STEM:				
ID	Custom Name		Compagny	Product type		
1	Setup 1	United Course ID	h duudah.	Matrix Virtual	Select	
			1		]]	

Figure 50: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 51).

Muxlab Network			68.50 says: t to load previous stor	red device list ? OK	Cancel	Language:	English • Logout
Products	Settings	Softwa	re Update	Help			
	PRODUCT hi Over IP (5007		55/756)   Muxl	ab   Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Set-up Modify any availa	ble settings and clici	< Save to apply you	ur changes				
			© 2016 MuxLab In mobile				

Figure 51: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. IR
- 6. Firmware

### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 52).

Muxiab Network	Lab					Language:	English • Logou
Products	Settings	Softwa	re Update	Help			
	PRODUCT ni Over IP (500		55/756)   Muxla	ab   Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Set-up Modify any availa Automatic Launch discovery	ble settings and clic	k Save to apply you	ur changes				
			© 2016 MuxLab Inc mobile				

Figure 52: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500753 transmitters) and display side devices (500753 receivers), and will display the scan results in tabular form (Figure 53).

Each 500753 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 54 (orange highlighted fields).

									Language	
	ab Network Controlle									
Proc	ducts   Set	tings   Sofi	tware Update	Help						
	ECTED PROD									
Setu	ıp 1 : Hdmi Over I	P (500752/753/754	l/755/756)   Mu	uxlab   Matrix	Virtua	l				
	Set-up Mat	rix Video Wall	RS-232	IR		Fin	mware			
• /	ify any available setting Automatic O Manua	s and click Save to appl	y your changes							
Modi / Lau	ify any available setting		y your changes							
Modi o , Lau Disp Port	Ifý any available setting Automatic O Manua nch discovery Ilay (4 RX) # Name	MAC address	IP address	MASK	DHCF	PDIP				
Modi o / Lau Disp Port 0	Ify any available setting Automatic Manua Inch discovery Ilay (4 RX) # Name RX-00-0B-78-00-7D-E2	MAC address 00-08-78-00-7D-E2	IP address 2 192.168.168.64	255.255.255.0			Reboot	Detail		
Modi Lau Disp Port 0 0	Itý any available setting Automatic Manua nch discovery Iay (4 RX) # Name RX-00-0B-78-00-7D-E2 RX-00-0B-78-00-7E-59	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 2 192.168.168.64 9 192.168.168.60	255.255.255.0 255.255.255.0	•		Reboot Reboot	Detail		
Modi Lau Disp Port 0 0 0	Itý any available setting Automatic Manua nch discovery Hay (4 RX) # Name RX-00-0B-78-00-7D-E25 RX-00-0B-78-00-7E-55 RX-00-0B-78-00-7E-55	MAC address 00-08-78-00-70-E3 00-08-78-00-78-55 00-08-78-00-78-55	IP address 2 192.168.168.64 9 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		Reboot Reboot Reboot	Detail Detail		
Modi Lau Disp Port 0 0	Itý any available setting Automatic Manua nch discovery Iay (4 RX) # Name RX-00-0B-78-00-7D-E2 RX-00-0B-78-00-7E-59	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 2 192.168.168.64 9 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	•		Reboot Reboot	Detail		
Modi Lau Disp Port 0 0 0 0	Ify any available setting Automatic Annua nch discovery Ilay (4 RX) # Name RX-00-0B-78-00-7D-22 RX-00-0B-78-00-7E-59 RX-00-0B-78-00-7E-58 RX-00-0B-78-00-7E-58	MAC address 00-08-78-00-70-E3 00-08-78-00-78-55 00-08-78-00-78-55	IP address 2 192.168.168.64 9 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		Reboot Reboot Reboot	Detail Detail		
Modi Lau Disp Port 0 0 0 0	Itý any available setting Automatic Manua nch discovery Hay (4 RX) # Name RX-00-0B-78-00-7D-E25 RX-00-0B-78-00-7E-55 RX-00-0B-78-00-7E-55	MAC address 00-08-78-00-70-E3 00-08-78-00-78-55 00-08-78-00-78-55	IP address 2 192.168.168.64 9 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		Reboot Reboot Reboot	Detail Detail		
Modi Lau Disp Port 0 0 0 Sour Port	Ify any available setting Automatic Annua Inch discovery Hay (4 RX) # Name RX-00-0B-78-00-7D-E2 RX-00-0B-78-00-7E-59 RX-00-0B-78-00-7E-63 rce (2 TX) # Name	MAC address 00-08-78-00-70-E 00-08-78-00-7E-55 00-08-78-00-7E-55 00-08-78-00-7E-53 00-08-78-00-7E-53	IP address 2 192-188.168.64 3 192-168.168.65 1 192-168.168.63 1 192-168.168.63 I 192-168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		Reboot Reboot Reboot	Detail Detail		
Modi Automatical Lau Disp Port 0 0 0 0 Sour Port 0 0 0 0 0 0 0 0 0 0 0 0 0	Ity any available setting Automate Manua nch discovery Hay (4 RX) # Name RX-00-08-78-00-7D-E2 RX-00-08-78-00-7E-59 RX-00-08-78-00-7E-56 RX-00-08-78-00-7E-63 RX-00-08-78-00-7E-63 rce (2 TX) # Name DVD -1	MAC address 00-08-78-00-70-E-5 00-08-78-00-7E-55 00-08-78-00-7E-55 00-08-78-00-7E-55 00-08-78-00-7E-53 00-08-78-00-7E-53	IP address 2 192.168.168.64 192.168.168.65 192.168.168.63 IP2.168.168.63 IP address 9 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	5 5 5		Reboot Reboot Reboot	Detail Detail		
Modi Lau Disp Port 0 0 0 Sour Port	Ify any available setting Automatic Annua Inch discovery Hay (4 RX) # Name RX-00-0B-78-00-7D-E2 RX-00-0B-78-00-7E-59 RX-00-0B-78-00-7E-63 rce (2 TX) # Name	MAC address 00-08-78-00-70-E-5 00-08-78-00-7E-55 00-08-78-00-7E-55 00-08-78-00-7E-55 00-08-78-00-7E-53 00-08-78-00-7E-53	IP address 2 192-188.168.64 3 192-168.168.65 1 192-168.168.63 1 192-168.168.63 I 192-168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	v v v DHCF		Reboot Reboot Reboot	Detail Detail Detail		
Modi Automatical Lau Disp Port 0 0 0 0 Sour Port 0 0 0 0 0 0 0 0 0 0 0 0 0	Ify any available setting Automatic Annual Inch discovery Hay (4 RX) # Name RX-00-0B-78-00-7D-E2 RX-00-0B-78-00-7E-59 RX-00-0B-78-00-7E-63 RX-00-0B-78-00-7E-63 rce (2 TX) # Name DVD -1 DVD -2	MAC address 00-08-78-00-70-E-5 00-08-78-00-7E-55 00-08-78-00-7E-55 00-08-78-00-7E-55 00-08-78-00-7E-53 00-08-78-00-7E-53	IP address 2 192.168.168.64 192.168.168.65 192.168.168.63 IP2.168.168.63 IP address 9 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	♥ ♥ ♥ DHCF		Reboot Reboot Reboot Reboot	Detail Detail Detail		

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Figure 53: Products Screen – Set-up Tab

	b Network	Controller									L
Prod	lucts	Settings	s ∣ Softv	vare Update	Help						
		PRODUC	<b>T :</b> 00752/753/754/	755/756)   Mu	uxlab   Matrix	Virtual	I				
	Set-up	Matrix	Video Wall	RS-232	IR		Fim	nware			
• 4		O Manual	click Save to apply	your changes							
Modif A Laur Displ	fy any availa Automatic Inch discovery Iay (4 RX)	O Manual			MASK	DHCP	DIP				
Modif A Laur Displ	fy any availa Automatic nch discovery	O Manual	Click Save to apply MAC address 00-08-78-00-7D-E2	IP address	MASK 255.255.255.0	DHCP	DIP	Reboot	Detail		
Modif A Laur Displ Port#	fy any availa Automatic Inch discovery Iay (4 RX) ¥ Name	O Manual	MAC address	IP address				Reboot	Detail		
Modif A Laur Displ Port# 0	fy any availa Automatic Inch discovery Iay (4 RX) # Name RX-1	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60	255.255.255.0	۲					
Modif A Laur Displ Port# 0 0	fy any availa Automatic Inch discovery Iay (4 RX) # Name RX-1 RX-2	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0			Reboot	Detail		
Modif	fy any availa Automatic Inch discovery Iay (4 RX) # Name RX-1 RX-2 RX-3	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *		Reboot Reboot	Detail Detail		
Modifier A A A A A A A A A A A A A A A A A A A	fy any availa automatic Inch discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *		Reboot Reboot	Detail Detail		
Modifier A A A A A A A A A A A A A A A A A A A	y any availa wutomatic the h discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 Ce (2 TX)	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-58 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	8 8 8		Reboot Reboot	Detail Detail		
Modifier A A A A A A A A A A A A A A A A A A A	ý any availa wtomatic inch discovery iay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 Ce (2 TX) # Name	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-62 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	I DHCP		Reboot Reboot Reboot	Detail Detail Detail		
Modifi A A Laur Displ Port# 0 0 0 0 Sour Port# 0 0 0 0 0 0 0 0 0 0 0 0 0	y any availa witomatic inch discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 OUD DVD-1 DVD-1 DVD-1	O Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address 00-08-78-00-7D-09	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	♥ ♥ ♥ DHCP		Reboot Reboot Reboot	Detail Detail Detail Detail		

Figure 54: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 55).

	b Network										
Prod	lucts	Settings	Softv	vare Update	Help						
		i Over IP (5)	<b>T:</b> )0752/753/754/	755/756)   Mi	ıxlab I Matrix	Virtua	d				
octu	p i i i i i i i i i		JUI J2/1 JUI J4/	155/150/   Mc		VIICuu					
	Set-up	Matrix	Video Wall	R5-232	IR		Firm	ware			
		ble settings and	click Save to apply	your changes							
• A Laun Displ	rý any availal Automatic Inch discovery Iay (4 RX)	, in the second s		, ,							
Modif A Laun Displ Port#	ný any availal Automatic Inch discovery Iay (4 RX) # Name	, in the second s	MAC address	IP address	MASK	DHCF		Rebort	Dotail		
• A Laun Displ	rý any availal Automatic Inch discovery Iay (4 RX)	, in the second s		IP address 192.168.168.64	MASK 2552552550 25525550			Reboot	Detail Detail		
Modif • A Laun Displ Port# 0	rý any availal Automatic Inch discovery Iay (4 RX) # Name RX-1	, in the second s	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0			Reboot	Detail	UPDATED	
Modif A Laun Displ Port# 0 0	tý any availal Automatic nch discovery Iay (4 RX) # Name RX-1 RX-2	, in the second s	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	* *					
Modif A Laun Displ Port# 0 0 0 Source	ty any availat automatic theth discovery tay (4 RX)	, in the second s	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	5 5 5 5		Reboot Reboot	Detail Detail	UPDATED UPDATED	
Modif A Laun Displ Port# 0 0 0 0 0 0 0 0 0 0 0 0 0	ty any availal uutomatic tay (4 RX) # Name RX-1 RX-2 RX-3 RX-3 Ce (2 TX) # Name	, in the second s	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-50 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.66 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	I DHCF		Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Modif A Laun Displ Port# 0 0 0 Source	ty any availat automatic theth discovery tay (4 RX)	, in the second s	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	IP address 192.168.168.66 192.168.168.66 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	5 5 5 5	) = [ - [ - [ - ] - ]	Reboot Reboot	Detail Detail	UPDATED UPDATED	

Figure 55: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 56).

I
RX-1
500753-RX
00-0B-78-00-7D- E2
192.168.168.64 (DHCP: ON)
2.1.0
239.255.1.1
720P 60Hz
44.1 khz
nage: Choose file No file chosen
Format:
lution:
t 🖉
ge: 🖉
On:

Figure 56: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 57).

Muxlab Network		••				Language:	English •
Products	Settings	Softwa	ire Update	Help			
SELECTED Setup 1 : Hdm		-	55/756)   Muxla	ıb   Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th		sources below. On	ce you've selected t	he displays you wa	ant to change, use th	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	s	]	
RX-1 Connect			> Save curre		•		
			© 2016 MuxLab Inc	version: 1.4.8			
			mobile				

Figure 57: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "RX-1") and selects which source to connect it to (Figure 58).

							Language	E
ŴUX	Lab							
Muxlab Network		n)						
Products	Settings	Softwar	re Update	Help				
SELECTED	PRODUCT	:						
Setup 1 : Hdr	ni Over IP (500	752/753/754/75	5/756)   Mux	lab   Matrix Virt	ual			
Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
Connect your dis bottom to make t	plays to the desired he connections.	sources below. Onc	e you've selecte	d the displays you wa	ant to change, use t	he "Conne	ect" button at the	
RX-1		DVD-1 ▼ Ca	incel	> Current active Preset: No preset selected		ID: 1		
RX-1		DVD-1 T Ca	incel	<ul> <li>Current active Preset:</li> <li>No preset selected</li> </ul>				
RX-1		DVD-1 V Ca	incel	> Current active Preset:				
RX-1		D\/D-1 ▼ Ca	ncel	<ul> <li>Current active Preset:</li> <li>No preset selected</li> </ul>	ons in following prese			
RX-1		DVD-1 T Ca	incel	<ul> <li>&gt; Current active Preset:</li> <li>No preset selected</li> <li>&gt; Save current connection</li> </ul>	ons in following prese			
RX-1		DVD-1 v Ca	ncei	<ul> <li>&gt; Current active Preset:</li> <li>No preset selected</li> <li>&gt; Save current connection</li> </ul>	ons in following prese ons as new preset: Create			
		DVD-1 v Ca	ncel	<ul> <li>&gt; Current active Preset:</li> <li>No preset selected</li> <li>&gt; Save current connecti</li> <li>&gt; Save current connecti</li> </ul>	ons in following prese ons as new preset: Create			
RX-1		DVD-1 T Ca	ncel	<ul> <li>&gt; Current active Preset:</li> <li>No preset selected</li> <li>&gt; Save current connecti</li> <li>&gt; Save current connecti</li> </ul>	ons in following preset ons as new preset: Create tt:			
		DVD-1 Ca	ncel	<ul> <li>&gt; Current active Preset:</li> <li>No preset selected</li> <li>&gt; Save current connecti</li> <li>&gt; Save current connecti</li> </ul>	ons in following preset ons as new preset: Create tt:			

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Figure 58: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 59).

Muxlab Network						Langua	ge: Englis LO
Products	Settings	Softwar	e Update	Help			
	PRODUCT hi Over IP (500	: 752/753/754/75	5/756)   Muxl	ab   Matrix Vi	rtual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th		sources below. Onc	e you've selected	the displays you	want to change, use t	the "Connect" button at the	
DISPLAY		SOURCE		PRESE	TS	7	
RX-1		DVD-1 V SUC	0500	active Preset:			
			ino preset	selected	ID: 0		
			> Save cur	rent connections as r	rew preset: Create		
Connect			> Delete fo	llowing preset:	•		
			© 2016 MuxLab Ir	c. version: 1.4.8			

Figure 59: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 60) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS
> Current active Preset:
No preset selected  ID: 0
> Save current connections in following preset:
> Save current connections as new preset:
Preset 1 Create
> Delete following preset:

Figure 60: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 61).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
Create SUCCESS
> Delete following preset:

Figure 61: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 62).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 62: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 63).

192.168.168.50 says:			×
Are you sure to delete this preset ?			
Prevent this page from creating additional	dialogues.		
	ОК	Cancel	

Figure 63: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 64).

PRESETS		]
> Current active Preset:		
[1] Preset 1	ID: 1	
> Save current connections in following preset:		
> Save current connections as new preset: Create		
> Delete following preset:		
<b></b>	SUCCES	SS

Figure 64: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 65).

PRES	ETS		
> Current active Preset:			
[1] Preset 1		▼ ID: 1	
> Save current connections in	following pres	set:	
[1] Old Preset			
	Create		
> Delete following preset:			
		T	

Figure 65: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 66).

PRESETS				]
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre	set:	-	10.05	
	•	S	JCCE	SS
> Save current connections as new preset:				
Create				
> Delete following preset:	•			

Figure 66: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

## 3. Products Screen - Video Wall Tab

MuxLab's Extender 500753 does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 67).

Muxlab Network						Language: En
Products	Settings	Softwa	ire Update	Help		
SELECTED Setup 1 : Hdm			55/756)   Muxla	ab   Matrix Virt	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
NO devices comp	atible with video	wall features four	id !			
NO devices com	atible with video	wall features four	ıd !			

Figure 67: Video Wall Tab

For more information on the Video Wall tab and its features, refer to the section of this manual dealing with MuxLab Extender 500754 and MuxLab Extender 500759.

#### 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 68). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

						Language:	
Iuxlab Network C							Logo
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdmi		: 752/753/754/75	55/756)   Muxl	ab   Matrix Viri	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device Select a device:		tion settings here.					
- Baud rate: - IP header in d - Feedback ON: - IP Feedback: Save		[ Data bits:	8   Stop bits: 1	Parity : NONE *			
Data to send in Data feedback							

Figure 68: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 69). The IP Feedback field should also contain the IP address of the Network Controller.

VIUX	Lab					Language:	English Log
luxlab Network	Controller Settings	Softwa	ire Update	Help			
							_
	D PRODUCT ni Over IP (500	: )752/753/754/75	55/756)   Muxla	ab   Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your dev	ce's RS-232 conner	ction settings here.					
Select a devic	e: DVD-1 •						
- Baud rate:	9600 •	[ Data bits:	8   Stop bits: 1 ]	Parity : NONE •			
- Baud rate: - IP header in - Feedback O	data: 🕑	[ Data bits:	8   Stop bits: 1 ]	Parity : NONE *			
- IP header in	data:		8   Stop bits: 1 ]	Parity : NONE ¥			

Figure 69: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, DVD-1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to DVD-1. That transmitter will then send the specified data command to DVD-1.

The **Data feedback received in HEX** field displays the HEX version the feedback sent to the Network Controller by DVD-1.

When sending RS-232 commands directly from a PC to any transmitter or receiver, the user must set up a pass-through system for RS-232 signals to be sent to and from devices. This requires two steps:

- (1) The user first tells the local device (the device connected directly to the PC) the IP address of the far device (where the RS-232 commands are being sent). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.
- (2) The user then tells the far device the IP address of the local device (if feedback from the far device is required). This is done by first clicking on the **Select a device** drop-down list and selecting the far device from the list, and then inputting the IP address of the near device in the **IP Feedback** field. The user then clicks on **Save**.

#### 5. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands to a MuxLab transmitter or receiver IR port (Figure 70) via the Network Controller. IR pass-through mode is also supported using an IR handheld remote as the control source.

Mux						Language:	English Loc
Muxlab Network C Products	Settings	Softwa	re Update	Help			
SELECTED F Setup 1 : Hdmi			5/756)   Muxla	ab   Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device Select a device:	-						
- IP Feedback: Save							
Data to send in	HEX (ex: A013	B155C5)					
IR code receive	d in HEX						
Get IR code							

Figure 70: IR Tab

When sending IR commands through the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 71).

						Language:	Englis
Mux	Lab						Lo
Muxlab Network C							
Products	Settings	Softwa	re Update	Help			
SELECTED		-					
Setup 1 : Hdmi	Over IP (500)	752/753/754/75	5/756)   Muxl	ab   Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device	's IR settings here	h.					
Select a device:	DVD-1 V						
- IR Mode:	Emitter *						
- IP Feedback:	0.0.0.0						
Save							
Save							
Data to send in	HEX (ex: A013	B155C5)					
Send							
IR code receive	d in UEV						
In code receive							

Figure 71: IR Tab – Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, DVD-1 was chosen as the selected device, meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, then from the Ethernet Switch to the transmitter connected to DVD-1. That transmitter will then send the specified IR data command to DVD-1 via the IR Emitter connected to the transmitter IR out port.

The **IR code received in HEX** field displays the HEX version of an IR command send from a handheld remote to an IR receiver IR In port and attached IR Sensor.

When sending IR commands directly from an IR Source device, such as an IR handheld remote, from 500753 receiver through to a transmitter, the user must set up a pass-through for IR signals to be sent to and from devices. This requires the following step:

The user must tell the 500753 receiver (the device near the IR handheld remote with an attached IR Sensor) the IP address of the 500753 transmitter (where the IR commands are being sent, which has an attached IR Emitter). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.

## 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 72).

							Language: English 🔻
Mux	Lab						Logout
Muxlab Network C	ontroller						
Products	Settings	Softwa	re Update	Help			
Setup 1 : Hdm	i Over IP (500	752/753/754/7	55/756)   Muxia	ab   Matrix Virl	tual		
Setup	Matrix	Video Wall	PC-222	ID	Firmuasa		
Jec-up	macrix						
		chang	es	-	to apply your		
			se file No file chosen	Source (TX)			
			Apply				
DISPLAY			SO	JRCE			
RX-1 (500752-RX	)	v2.1.0	DV	0-1 (500752-TX)	vá	2.1.0	
	Muxlab Network C Products	SELECTED PRODUCT Setup 1 : Hdmi Over IP (500 Set-up Matrix	Muxlab Network Controller Products Settings Softwa SELECTED PRODUCT : Setup 1 : Hdmi Over IP (500752/753/754/7 Set-up Matrix Video Wall Choo DISPLAY	Muxlab Network Controller Products Settings Software Update SELECTED PRODUCT : Setup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxla Set-up Matrix Video Wall R5-232 Modify any available setti Changes DISPLAY SOI	Muxlab Network Controller Products Settings Software Update Help SELECTED PRODUCT : Setup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Viri Set-up Matrix Video Wall R5-232 IR Modify any available settings and click Save changes Displays (RX) Source (TX) Choose file No file chosen Apply DISPLAY SOURCE	Muxlab Network Controller         Products       Settings       Software Update       Help         SELECTED PRODUCT :       Setup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Virtual         Set-up       Matrix       Video Wall       R5-232       IR       Firmware         Modify any available settings and click Save to apply your changes       Displays (RX)       Source (TX)       Source (TX)         DispLAY       SOURCE	Muxiab Network Controller       Products     Settings     Software Update     Help       SELECTED PRODUCT :       Setup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxiab   Matrix Virtual       Set-up     Matrix     Video Wall     RS-232     IR     Firmware       Modify any available settings and click Save to apply your changes     Displays (RX)     Source (TX)       Choose file [No file choosen     Apply       DISPLAY     SOURCE

Figure 72: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

## **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 73) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

	Language: En
AuxLab	
oducts   Settings   Software Update   H	Help
Network Administration	
letwork	
Ise the form below if you'd like to set manual network settings.	
-LAN 1	
Use DHCP: O Yes  No	
IP address:	
192 . 168 . 168 . 50	
Network mask:	
255 . 255 . 255 . 0	
Router:	
192 . 168 . 168 . 1 Mac Address:	
00 : 0E : C4 : D3 : B9 : 55	
Save	
-LAN 2	
Use DHCP:   Yes  No	
IP address:	
Network mask:	
Router:	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 56	
Save	

Figure 73: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 74).

	Settings	Software Update	Help		
Network	Administration				
User Accoun	5				
Create a new L Select a User tr		Ŧ			
User Name new password:					
new password: Confirm new pa	sword:				
User Type:		¥			
Create Up	late Delete				
Restore data					
Restore the u	it with the selected data fi	ile			
Specify file:	hoose File No file choser	n			
WARNING ! )	ou MUST FIRST set the I	IP address of this controll	er using the same a	as the controller thi	is backup file come from !!!
Restore					
Restore					
Restore Backup data	a and save it in a file				
Restore Backup data	a and save it in a file				

Figure 74: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 75). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

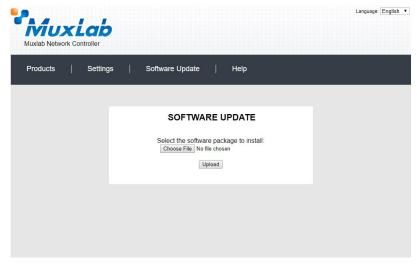


Figure 75: Software Update Screen

#### Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 76).

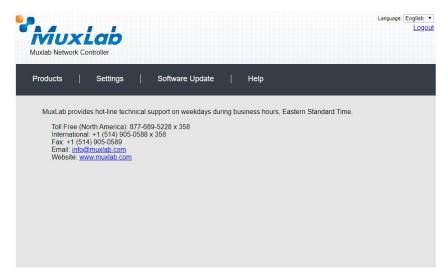


Figure 76: Help Screen

# **Extender Model 500754**

## **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 77).

invalue Network Controller  roducts Settings Software Update Help  ELECT A PRODUCT TO ADD:  ADD DEVICE  OUR CURRENT SYSTEM:  ID Custom Name Product Name Compagny Product type	ADD DEVICE
OUR CURRENT SYSTEM:	
OUR CURRENT SYSTEM:	
OUR CURRENT SYSTEM:	
	y Product type
ID Custom Name Product Name Compagny Product type	y Product type

Figure 77: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP (500752/753/754/755/756) and then click on ADD DEVICE (Figure 78).

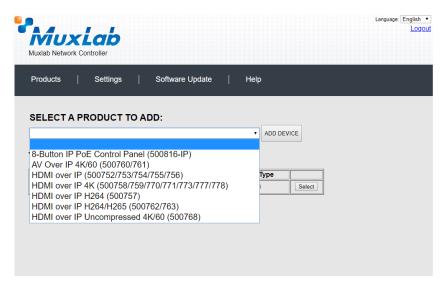


Figure 78: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 79). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 77), without a product being added.

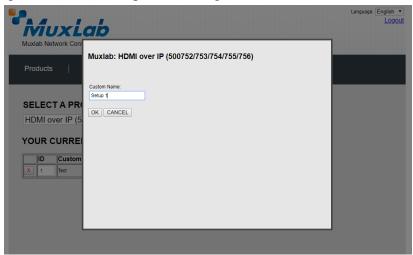


Figure 79: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 80).

Muxiab Network Controller Products   Settings   Software Update   Help SELECT A PRODUCT TO ADD:  ADD DEVICE	M	uxLab	,					Language: 1	Eng
SELECT A PRODUCT TO ADD: V ADD DEVICE VOUR CURRENT SYSTEM: V D Custom Name Product Name Compagny Product type	/luxlab N	letwork Controller	9999) 						
YOUR CURRENT SYSTEM:	Product	ts   Setting	s   Software	e Update	Help				
ADD DEVICE YOUR CURRENT SYSTEM:  ID Custom Name Product Name Compagny Product type  V device the Product Name Compagny Product type									
ADD DEVICE YOUR CURRENT SYSTEM:  ID Custom Name Product Name Compagny Product type  V device the Product Name Compagny Product type			TTO ADD.						
YOUR CURRENT SYSTEM:	SELE		TTO ADD:						
ID Custom Name Product Name Compagny Product type					ADD DEVICE				
ID Custom Name Product Name Compagny Product type			OTEM.						
V A Datum 4 Hdmi Over IP Atomics Advantage Calcul	TOUR	CURRENT ST	STENI:						
	ID	Custom Name		Compagny	Product type		]		
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			
			Hdmi Over IP	Mundah		Select			

Figure 80: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 81).

Muxlab Network	Controller	192.168.16 Do you want	58.50 says: to load previous stor	ed device list ? OK	Cancel	Language: Eng
Products	Settings	Softwar	re Update	Help		
	D PRODUCT		5/756)   Muxla	ab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Set-up Modify any availa	able settings and clic	k Save to apply you	r changes			
	able settings and clic	k Save to apply you	ir changes			
Modify any availa		k Save to apply you	r changes			
Modify any availa		k Save to apply you	ir changes			
Modify any availa		k Save to apply you	ir changes			
Modify any availa		k Save to apply you	r changes			
Modify any availa		k Save to apply you	r changes			

Figure 81: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. IR
- 6. Firmware

## 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 82).

	Settings		re Update	Help		
	PRODUCT					
		752/753/754/75	5/756)   Muxla	ab   Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Set-up Aodify any available	e settings and clic	k Save to apply you	r changes			
Automatic	Manual					
Launch discovery						

Figure 82: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500754 transmitters) and display side devices (500754 receivers), and will display the scan results in tabular form (Figure 83).

Each 500754 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 84 (orange highlighted fields).

	b Network Co	and the second second second second								Languag	
Prod		Settings	Softv	vare Update	Help						
	ECTED P										
Setu	p1:Hdmi(	Over IP (500	)752/753/754/	755/756)   Mu	ıxlab   Matrix	Virtua	I				
<b>_</b>	Set-up	Matrix	Video Wall	R5-232	IR		Fin	mware			
• A		Manual	ick Save to apply	your changes							
A Laun Displ	Automatic C nch discovery lay (4 RX)	Manual				DUIOS					
A Laun Displ	automatic nch discovery lay (4 RX) ¥ Name	) Manual Manual	IAC address	IP address	MASK 255 255 255 0	DHCF			Detail		
● A Laun Displ Port#	Automatic C nch discovery lay (4 RX)	Manual Morto-7D-E2		IP address		DHCF	) DIP	Reboot	Detail		
A     Laun     Displ     Port#     0	uutomatic nch discovery lay (4 RX) # Name RX-00-0B-78-0	0-7D-E2 (0-7E-59 (	IAC address 10-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0			Reboot Reboot	Detail		
A     Laun     Displ     Port#     0     0	Automatic Inch discovery lay (4 RX) # Name RX-00-0B-78-0 RX-00-0B-78-0	Manual 0-7D-E2 ( 0-7E-59 ( 0-7E-5E (	IAC address 10-08-78-00-7D-E2 10-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0	*		Reboot			
<ul> <li>A</li> <li>Laur</li> <li>Displ</li> <li>Port#</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> </ul>	wutomatic thch discovery lay (4 RX) # Name RX-00-0B-78-0 RX-00-0B-78	Manual 0-7D-E2 ( 0-7E-59 ( 0-7E-5E (	IAC address 10-0B-78-00-7D-E2 10-0B-78-00-7E-59 10-0B-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *		Reboot Reboot Reboot	Detail Detail		
A     Laun     Displ     Port#     0     0     0     Sourd	utomatic the discovery lay (4 RX) # Name RX-00-08-78-0 RX-00-08-78-0 RX-00-08-78-0 RX-00-08-78-0	Manual 0-7D-E2 0 0-7E-59 0 0-7E-5E 0 0-7E-63 0	IAC address 10-0B-78-00-7D-E2 10-0B-78-00-7E-59 10-0B-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *		Reboot Reboot Reboot	Detail Detail		
A     Laun     Displ     Port#     0     0     0     Sourd	wutomatic         C           hch discovery         Iay (4 RX)           # Name         RX-00-0B-78-0           RX-00-0B-78-0         RX-00-0B-78-0           RX-00-0B-78-0         RX-00-0B-78-0           Ce (2 TX)         Ce (2 TX)	Manual 0-7D-E2 ( 0-7E-59 ( 0-7E-55 ( 0-7E-63 ( N	IAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	8 8 8		Reboot Reboot Reboot	Detail Detail		
A     Laur     Displ     Port#     0     0     0     0     Sourd     Port#	utomatic         C           tch discovery         Iay (4 RX)           # Name         RX-00-0B-78-0           RX-00-0B-78-0         RX-00-0B-78-0           RX-00-0B-78-0         Cce (2 TX)           # Name         Xame	Manual 0-70-E2 ( 0-7E-59 ( 0-7E-55 ( 0-7E-63 ( N	IAC address 00-08-78-00-70-52 00-08-78-00-7E-59 00-08-78-00-7E-58 00-08-78-00-7E-63 IAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 IP2.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail Detail Detail		

### Figure 83: Products Screen – Set-up Tab

									Lang	
	UXI Ietwork Cor									L
Product	ts	Settings	Softw	/are Update	Help					
		RODUCT	0752/753/754/	755/756)   Mu	ıxlab   Matrix	Virtua	ıl			
Set-	·up	Matrix	Video Wall	RS-232	IR		Firmware			
<ul> <li>Autom</li> </ul>	natic O	settings and c Manual	lick Save to apply	your changes						
Modify an	natic O	-	lick Save to apply	your changes						
Modify an • Autom Launch d	natic O discovery (4 RX)	Manual	lick Save to apply	your changes IP address	MASK	DHCF	2 DIP			
Modify an Autom Launch d Display ( Port# Na	natic O discovery (4 RX)	Manual	//AC address		MASK 255.255.255.0	DHCF	P DIP	Detail		
Modify an Autom Launch d Display ( Port# Na 0 R	natic O discovery (4 RX) ame	Manual	//AC address	IP address				Detail Detail		
Modify an Autom Launch d Display ( Port# Na 0 R) 0 R)	matic O discovery (4 RX) ame X-1	Manual	/IAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0		Reboot			
Modify an Autom Launch d Display ( Port# Na 0 R0 0 R0 0 R0 0 R0 0 R0	matic O discovery (4 RX) ame X-1 X-2	Manual	AAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0	•	Reboot Reboot	Detail		
Modify an Autom Launch d Display ( Port# Na 0 R0 0 R0 0 R0 0 R0 0 R0	matic discovery discovery (4 RX) ame X-1 X-2 X-3 X-3 X-4	Manual	AAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *	Reboot Reboot Reboot	Detail Detail		
Modify ar Autor Launch d Display ( Port# Na 0 R0 0 R0 0 R0 0 R0	discovery discovery (4 RX) ame X-1 X-2 X-3 X-4 2 TX)	Manual	AAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *	Reboot Reboot Reboot Reboot	Detail Detail		
Modify ar Autor Launch d Display ( Port# Na R R R R R R R R R R R R R	discovery discovery (4 RX) ame X-1 X-2 X-3 X-4 2 TX)	Manual	AAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	5 5 5 5	Reboot Reboot Reboot Reboot	Detail Detail		
Modify ar Autor Launch d Display ( Port# Na 0 R) 0 R) 0 0 R) 0 R) 0 0 R) 0 R) 0 R) 0	inatic O discovery (4 RX) ame X-1 X-2 X-3 X-4 [2 TX] ame	Manual	AAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 I92.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	v v v DHCF	Reboot Reboot Reboot	Detail Detail Detail		

Figure 84: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 85).

luxla	b Network	Controller (80)								
Prod	ucts	Settings	; ∣ Softv	vare Update	Help					
		PRODUC	<b>T :</b> 00752/753/754/	755/756)   Mu	ıxlab   Matrix	Virtua	I			
	Set-up	Matrix	Video Wall	RS-232	IR		Firmware			
• A		O Manual	click Save to apply	your changes						
Modif A Laur Displ	ý any availa automatic nch discovery lay (4 RX)	O Manual			MASK	DHCP	DIP			
Modif A Laur Displ	ý any availa utomatic nch discovery	O Manual	Click Save to apply MAC address 00-08-78-00-7D-E2	IP address	MASK 255.255.255.0	DHCP	DIP	t Detail	UPDATE	
Modif A Laur Displ Port#	ý any availa ∧utomatic nch discovery l <b>ay (4 RX)</b> ∳ Name	O Manual	MAC address	IP address 192.168.168.64						
Modif A Laur Displ Port# 0	ý any availa utomatic Ich discovery I <b>ay (4 RX)</b> # Name RX-1	O Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0	۲	Reboo	Detail		5
Modif A Laur Displ Port# 0 0	ý any avalla wtomatic inch discovery lay (4 RX) ∉ Name RX-1 RX-2	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	<ul><li>✓</li><li>✓</li></ul>	Reboo	t Detail t Detail	UPDATE	2
Modif A Laur Displ Port# 0 0 0 0 0	y any availa automatic ach discovery ay (4 RX) # Name RX-1 RX-2 RX-3	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	2 2 2	Reboo     Reboo     Reboo	t Detail t Detail		2
Modifier A A A A A A A A A A A A A A A A A A A	y any availa utomatic hth discovery ay (4 RX) # Name RX-1 RX-2 RX-3 RX-4	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	2 2 2	Reboo	t Detail t Detail		2
Modifier A A A A A A A A A A A A A A A A A A A	y any availa automatic ach discover, lay (4 RX) 4 Name RX-1 RX-2 RX-3 RX-4 ce (2 TX)	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.66.66 192.168.168.65 192.168.168.63 IP2.address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	8 8 8	Reboo	Detail Detail Detail		2

Figure 85: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 86).

Device Detai	1
Overteen Niemen	
Custom Name:	RX-1
Model:	500754-RX
MAC Address:	00-0B-78-00-7D-E2
IP Address:	192.168.168.64 (DHCP: ON)
FW Version:	2.1.0
Group IP:	239.255.1.1
Video Resolution:	720P 60Hz
Audio Format:	44.1 khz
Select a screen in	nage: Choose file No file chosen
Upload Image	
Set output Video F	Format:
Auto-detect Resol	lution:
Show Screen Tex	t: 🖉
Show Screen ima	ge: 🖌
-	
DVI Compatibility	On:
Save Cancel	

Figure 86: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 87).

SELECTED PRC Setup 1 : Hdmi Ove	er IP (500752/75 Matrix Vid		re Update 55/756)   MuxI: RS-232	Help ab   Matrix Vit		
Setup 1 : Hdmi Ove Set-up M Connect your displays to to bottom to make the conne DISPLAY	er IP (500752/75 Matrix Vid					
Connect your displays to to bottom to make the conner DISPLAY		eo Wall	RS-232	ID		
bottom to make the conne DISPLAY				IK	Firmware	
	ections.	below. Ond	ce you've selected	the displays you v		"Connect" button at the
RX-1	00	ONCL	> Current a	ctive Preset:		
	•	۲	No preset		▼ ID: 1	
			> Save curr	rent connections in fo	Ilowing preset:	
			> Save curr	rent connections as n	ew preset: Create	
			> Delete fol	llowing preset:		
Connect					•	

Figure 87: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "RX-1") and selects which source to connect it to (Figure 88).

							Langua	ge: Eng
Muxlab Network (								1
Products	Settings	Softwa	re Update	Help				
SELECTED Setup 1 : Hdm		: 752/753/754/75	55/756)   Muxl	ab   Matrix Vir	tual			
Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
bottom to make the	lays to the desired e connections.		ce you've selected	the displays you w		the "Conne	ect" button at the	
bottom to make the	lays to the desired e connections.	sources below. One	ce you've selected		ant to change, use t	the "Conne	ect" button at the	
bottom to make the	lays to the desired e connections.	SOURCE	ancel	Current active Preset	PRESETS		ect" button at the	
Connect your disp bottom to make the DISPLAY RX-1	lays to the desired e connections.	SOURCE	ancel	Current active Preset	PRESETS	ID: 1	ect" button at the	
DISPLAY	lays to the desired	SOURCE	ancel	Current active Preset No preset selected Save current connect	PRESETS ions in following preset ions as new preset: Create	ID: 1	ect" button at the	
DISPLAY	lays to the desired	SOURCE	ancel	Current active Preset No preset selected Save current connect	PRESETS	ID: 1	ect" button at the	

Figure 88: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 89).

Products       Settings       Software Update       Help         SELECTED PRODUCT : Setup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Virtual         Setup Matrix Video Wall R5-232 IR Firmware         Connect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the bottom to make the connections.         DispLAY       SOURCE       PRESETS         Rx-1       DVD-1 (SUCCESS)       Current active Preset: No preset selected (ID) 0         > Save current connections in biolowing preset: > Save current connections as new preset: > Dister following preset:	Muxlab Network							L
Setup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Virtual         Set-up       Matrix       Video Wall       R5-232       IR       Firmware         Connect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the bottom to make the connections.       Ourent active Preset:       > Ourent connections as new preset:	Products	Settings	Softwa	ire Update	Help			
Connect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the bottom to make the connections.  DISPLAY SOURCE VRESETS Current active Preset: Save current connections in following preset: Save current connections as new preset: Create Delete following preset: Delete foll	Setup 1 : Hdr	ni Over IP (500	752/753/754/7					
bottom to make the connections.  DISPLAY SOURCE  RX-1 DVD-1 SUCCESS  Current active Preset: No preset selected VID. Save current connections in following preset: Save current connections as new preset: Create Delate following preset: Delate follo								
RX-1     DVD-1     SUCCESS     > Current active Preset: No preset relected     > ID: 0       > Save current connections in following preset:			sources below. On	ce you've selected t	he displays you	want to change, use the	he "Connect" button at the	
RX-1 DVD-1 • SUCCESS No preset selected • ID 0 > Save current connections in following preset: > Save current connections as new preset: Create > Delate following preset:	DISPLAY		SOURCE		PRESE	ETS	7	
Save current connections in following preset:     Save current connections as new preset:     Create     Create     Delete following preset:	RX-1		DVD-1 V SUC			- 10: 0		
Save current connections as new preset     Create     Delete following preset:								
Create  > Delete following preset:				> Save curre	ent connections in f	•••		
> Delete following preset:				> Save curre	ent connections as	new preset:		
						Create		
Connect				> Delete foll	owing preset:			
	Connect							

Figure 89: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 90) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS
> Current active Preset:
No preset selected VID: 0
<ul> <li>&gt; Save current connections in following preset:</li> <li>✓</li> <li>&gt; Save current connections as new preset:</li> </ul>
Preset 1 Create
> Delete following preset:

Figure 90: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 91).

PRESETS
> Current active Preset:
[1] Preset 1 TID: 1
<ul> <li>&gt; Save current connections in following preset:</li> <li>✓</li> <li>&gt; Save current connections as new preset:</li> </ul>
Create SUCCESS
> Delete following preset:

Figure 91: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 92).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 92: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 93).

192.168.168.50 says:		×
Are you sure to delete this preset ?		
Prevent this page from creating addition	al dialogues.	
	ОК	Cancel

Figure 93: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 94).

PRESETS		
> Current active Preset:		
[1] Preset 1	ID: 1	
> Save current connections in following preset:		
> Save current connections as new preset:		
Create		
> Delete following preset:		
<b></b>	SUCCES	SS

Figure 94: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 95).

PRESETS				
> Current active Preset:				
[1] Preset 1 v ID: 1				
> Save current connections in following preset:				
[1] Old Preset				
Create				
> Delete following preset:				

Figure 95: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 96).

PRESETS				]
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre-	set:	-		
	•	S	JCCE	SS T
> Save current connections as new preset:				
Create				
> Delete following preset:				
	۲			

Figure 96: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

### 3. Products Screen - Video Wall Tab

The **Video Wall** tab enables the user to configure an NxM video wall consisting of NxM monitors, all of the same size (Figure 97).

Muxlab MNC Ho	ome Setup sit	e Video Wall Devices	- Logout
Video Wall Set-up			Settings
Saved V-Wall + V-Wall Selected: Save Apply Save as: new Configuration Create Delete	ID::		Drag n drop here a video wall template or Select a previous configuration from the "Saved Configuration" list
		Select all	
			+ Video Wall Set-Up : Step #1
			+ Video Wall Set-Up : Step #2
			+ Video Wall Set-Up : Step #3

Figure 97: Video Wall Tab

This screen is laid-out in a 3-step pattern, with a display pane that shows the NxM video wall setup:

1. The user clicks on +Video Wall Set-Up: Step #1, which expands to provide the user with video wall size options (Figure 98).

Muxlab MNC Home Setup site	Video Wall Devices +	Logout
Video Wall Set-up		Settings
Saved V-Wall + V-Wall Selected: ID:: Save Apply Save as: new Configuration Create Detete	Drag n drop here a video wall template or Select a previous configuration from the "Saved Configuration" list	
	<ul> <li>Drag n drop a video wall template</li> </ul>	
2x2 3x3 4x4 Cus	om Size	
	✦ Video Wall Set-Up : Step #3	

Figure 98: Video Wall Tab

a. By clicking on <u>and dragging</u> any of the NxN preconfigured boxes into the display pane, the user creates a video matrix of the same size. In the example shown in Figure 99, a 2x2 video wall consisting of 4 monitors is created. Custom video wall sizes may also be created.

Muxlab MNC	Home	Setup site	Video Wall	Devices -	Logout		
Video Wall Set-	up				Settings		
Saved V-Wall 4 V-Wall Selected: Save App Save as: new Configuratio Create	oly	ID::		Drag n drop here a video wall template or Select a previous configuration from the "Saved Configuration" list			
Delete			Select all 📄	– Drag n drop a video wali template			
2x2 3x3 4x4 Custom Size							
+ Video Wall Set-Up : Step #2							

Figure 99: Video Wall Tab – Dragging to Create a 2x2 Video Wall

b. Once dragged into the display pane, the user is asked for display dimensions (Figure 100). Fill-in the requested information.

Display dimension				
Unit of measure:	inch •			
Screen diagonal length:	þiagonal length			
	Ok			

Figure 100: Video Wall Tab – Newly Created 2x2 Video Wall

c. Once created, the display pane shows an empty (unpopulated) video wall consisting of 4 monitors (Figure 101).

Muxlab MNC Home	Setup site	Video Wall	Devices -	Logout
Video Wall Set-up				Settings
Saved V-Wall + V-Wall Selected: Save Apply Save as: new Configuration Create Delete	ID::			
		Select all 📄		
			– Drag n drop a video wall template	
2x2 3x3 4x4	Cust	om Size		
			+ Video Wall Set-Up : Step #2	
			➡ Video Wall Set-Up : Step #3	

Figure 101: Video Wall Tab – Newly Created 2x2 Video Wall

2. The user clicks on +**Video Wall Set-Up: Step #2**, which expands to provide the user with display mapping options (Figure 102).

Nuxlab MNC Home	Setup site Video Wall	Devices -		Loç
Video Wall Set-up				Settings
Saved V-Wall - V-Wall Selected: Save Apply Save as:	ID::			
new Configuration Create Delete				
	Select all			
		- Drag n drop a video wall	lemplate	
2x2 3x3 4	4 Custom Size			
		<ul> <li>Select and place Disp</li> </ul>	blays	
RX-1	RX-2	RX-3		
		+ Video Wall Set-Up : St		

Figure 102: Video Wall Tab – Newly Created 2x2 Video Wall

- a. The user clicks on a given display in the lower section of the screen. This highlights the display in a light blue box. (Note that dragging and dropping displays into the display pane is not allowed.)
- b. The user clicks on any one of the cells in the display pane.
- c. The clicked cell in the display pane is now mapped to the given display.
- d. The user must continue mapping the remaining displays to the remaining cells. The display pane then becomes fully display mapped (Figure 103).

RX-3	RX-2
Sh H:0,V:0	Sh H:0,V:0
Sc H:0,V:0	Sc H:0,V:0
RX-1	RX-4
Sh H:0,V:0	Sh H:0,V:0
Sc H:0,V:0	Sc H:0,V:0

Figure 103: Video Wall Tab – Fully Display Mapped Video Wall

3. The user clicks on +Video Wall Set-Up: Step #3, which expands to provide the user with source mapping options (Figure 104).

Saved V-Wall - /-Wall Selected: ID::	RX-3 Sh H:0,V0	RX-2
Save Apply	Sc H:0,V:0	Sh H.0,V.0 Sc H.0,V.0
ave as: new Configuration Create Detete	RX-1 Sh H:0,V0 Sc H:0,V0	RX-4 Sh H:0,V:0 Sc H:0,V:0
Select	t all 📄 🗕 Drag n drop a video wall template	
2x2 3x3 4x4 Custom Size		
	Select and place Displays	
RX-1 RX-2	RX-3 RX-4	
RX-1 RX-2	RX-3 RX-4	

Figure 104: Video Wall Tab – Connecting Sources to Receivers

- a. The user clicks on one or more cells in the display pane. Once clicked, the panes will change to blue to indicate that they are now actively selected.
- b. The user clicks on any single source shown in the lower part of the screen.
- c. The clicked cell(s) in the display pane is (are) now mapped to the given source.
- d. The user maps some or all sources to all cells. The display pane then becomes fully source mapped (Figure 105).



Figure 105: Video Wall Tab – Fully Source Mapped Video Wall

To configure the display size and bezel dimensions of all the displays (assumed to be all equal) comprising the video wall, the user clicks on **Settings** in the top right hand side of the **Video Wall** tab. This brings up the display setting options (Figure 106).

Video Wal	ll Set-up										Settings
Unit inch <b>v</b>	screen width 36.54	screen height	bezel top	bezel bottom	bezel left	bezel right	scale+	scale -	Shift .	Shift .	Reset 🛞
		20.58		0.1			scale+	scale -	Shift .	Shift .	
							↔	↔	+	+	

Figure 106: Video Wall Tab – Display Setting Options

Since the video wall consists of only one type of display (all displays are the same), the user only needs to modify the dimensions for only one representative display.

Note that **Unit**, **screen width**, and **screen height** values are derived from the information provided by the user when first creating the video wall (Figure 100). Also, **Bezel top**, **bezel bottom**, **bezel left**, and **bezel right** are all set to 0.1 inch by default, but these values may be changed.

Display settings options also allow the user to scale or shift the image of one or several displays at the same time. The user must first selects the display(s) to be modified in the display plane, and then clicks on any of the eight buttons (Scale/Shift) in the display setting options. Clicking on **Reset** resets any changes made to these eight buttons, but not to **Unit**, screen width, screen height, or bezel values.

The settings of any video wall can be saved as a named configuration by using the options shown in the left hand side of the **Video Wall** tab. Video wall configurations can be named, saved, deleted, or activated.

Note that not all displays in an actual video wall need to be included in a given saved configuration, simply start the three steps mentioned above, but only include the required subset of the displays to define as a given configuration, and save this configuration. For example, if the actual video wall consists of four (4) horizontal displays by four (4) vertical displays (4x4 video wall), a 2x2 configuration can be created consisting of only the upper-left corner four displays. To do so create a 2x2 video wall configuration in Step #1 above, then assign the corresponding four displays in the upper-left corner in Step #2 above, then in Step #3 assign the initial source, and save this configuration. Tip, use a configuration name that is representative of the actual setup, such as "Upper Left 2x2" in this case.

Any saved configuration can be activated and displayed on the video wall with the initial assigned source by simply loading it. Once activated, the initial source can easily be changed by repeating Step #3 above with a different source selected, after which you can either save this change or choose not to save it so the next time this configuration is activated the initial source remains unchanged.

#### 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 107). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

Muxlab Network C						Language: Englis LC
Products	Settings	Softwar	e Update	Help		
SELECTED F Setup 1 : Hdmi		•	5/756)   Muxl	ab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device' Select a device:		tion settings here.				
- Baud rate: - IP header in da - Feedback ON: - IP Feedback:	ta: ♥ ♥	[ Data bits: )	8   Stop bits: 1	] Parity : NONE *		
Data to send in	HEX (ex: A013	B155C5)				
Data feedback r	eceived in HE	x				

Figure 107: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 108). The IP Feedback field should also contain the IP address of the Network Controller.

RODUCT	:					
ver IP (5007	752/753/754/75	55/756)   Muxla	ab   Matrix Vir	tual		
Matrix	Video Wall	PS-232	IR	Firmware		
		10 252				
	tion settings here.					
DVD-1 ¥						
9600 🔻	[ Data bits:	8   Stop bits: 1 ]	Parity : NONE •			
a: 🕑						
2						
192.168.168.5	56					
	Matrix RS-232 connec DVD-1 • a:	Matrix Video Wall RS-232 connection settings here. DVD-1 ▼ scoo ▼ [Data bits: a: ♂	Dver IP (500752/753/754/755/756)   Muxla           Matrix         Video Wall         RS-232           RS-232 connection settings here.         DVD-1 *            9600 *         [ Data bits: 8   Stop bits: 1 ]            a:	Dver IP (500752/753/754/755/756)   Muxlab   Matrix Viri       Matrix     Video Wall       RS-232     IR       RS-232 connection settings here.     DVD-1 •       DVD-1 •     Image: Connection settings here.       Image: Connection settings here.     Image: Connec	Dver IP (500752/753/754/755/756)   Muxlab   Matrix Virtual       Matrix     Video Walt     R5-232     IR     Firmware       RS-232 connection settings here.     DVD-1 *         DVD-1 *           9600 *     [Data bits: 8   Stop bits: 1 ] Parity : NONE *	Dver IP (500752/753/754/755/756)   Muxlab   Matrix Virtual       Matrix     Video Wall     RS-232     IR     Firmware       RS-232 connection settings here.     DVD-1 *        DVD-1 *

Figure 108: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, DVD-1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to DVD-1. That transmitter will then send the specified data command to DVD-1.

The **Data feedback received in HEX** field displays the HEX version the feedback sent to the Network Controller by DVD-1.

When sending RS-232 commands directly from a PC to any transmitter or receiver, the user must set up a pass-through system for RS-232 signals to be sent to and from devices. This requires two steps:

- (1) The user first tells the local device (the device connected directly to the PC) the IP address of the far device (where the RS-232 commands are being sent). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.
- (2) The user then tells the far device the IP address of the local device (if feedback from the far device is required). This is done by first clicking on the **Select a device** drop-down list and selecting the far device from

the list, and then inputting the IP address of the near device in the IP **Feedback** field. The user then clicks on **Save**.

#### 5. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands to a MuxLab transmitter or receiver IR port (Figure 109) via the Network Controller. IR pass-through mode is also supported using an IR handheld remote as the control

source.

						Language:	English •
Muxlab Network Co							
Products	Settings	Softwa	ire Update	Help			
SELECTED F Setup 1 : Hdmi		-	55/756)   Muxl	ab   Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device' Select a device:	-	5.					
- IR Mode: - IP Feedback:	Ŧ	_					
Save							
Data to send in	HEX (ex: A013	B155C5)					
		,					
Send							
IR code received	d in HEX						
Get IR code							

Figure 109: IR Tab

When sending IR commands through the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 110).

Muxlab Network C	<b>Lab</b> Controller					Langua	ge: Englis LO
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdmi			5/756)   Muxl	ab   Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device Select a device	-						
- IP Feedback:	0.0.0.0						
Data to send in	HEX (ex: A013	B155C5)					
Send							
IR code receive	d in HEX						
Get IR code							

Figure 110: IR Tab – Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, DVD-1 was chosen as the selected device, meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, then from the Ethernet Switch to the transmitter connected to DVD-1. That transmitter will then send the specified IR data command to DVD-1 via the IR Emitter connected to the transmitter IR out port.

The **IR code received in HEX** field displays the HEX version of an IR command send from a handheld remote to an IR receiver IR In port and attached IR Sensor.

When sending IR commands directly from an IR Source device, such as an IR handheld remote, from 500754 receiver through to a transmitter, the user must set up a pass-through for IR signals to be sent to and from devices. This requires the following step:

The user must tell the 500754 receiver (the device near the IR handheld remote with an attached IR Sensor) the IP address of the 500754 transmitter (where the IR commands are being sent, which has an attached IR Emitter). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.

## 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 111).

Muxiab Network Controller	6	Language: English
Products   Setti	ings   Software Update   Help	
	SOFTWARE UPDATE	
	Select the software package to install: Choose File No file chosen	
	Upload	

Figure 111: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

# **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 112) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

A	Lab			Language: [Eng	lish Lo
uxlab Network					
Products	Settings	Software U	pdate   Help		
Network	Administration				
Network					
LAN 1	elow if you'd like to se	et manual network setting	<b>3</b> 5.		
Use DHCP:	⊖ Yes ® No				
IP address: 192 . 168	. 168 . 50				
Network mask					
255 . 255 Router:	. 255 . 0				
192 . 168	. 168 . 1				
Mac Address: 00 : 0E	: C4 : D3 : B9 :	: 55			
Save					
Use DHCP:	Yes O No				
IP address:					
Network mask	· ·				
Router:					
Mac Address:					
00 : 0E	: C4 : D3 : B9 :	: 56			

Figure 112: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 113).

	Language: [English
udab Network Controller roducts   Settings   Software Update   Help	
Network Administration	
User Accounts Create a new bare Account Or Confirm new password: Confirm new password: Confirm new password: Create Update Delete	
Restore data Restore the unit with the selected data file Specify file: [Choose File] No file chosen WARNING 1 You MUST FIRST set the IP address of this controller using the same as the control [Restore]	ller this backup file come from !!!
Backup data Backup the data and save it in a file [Backup]	
Get Logs Get al logs in a zip file Download Logs   Delete Logs	

Figure 113: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 114). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

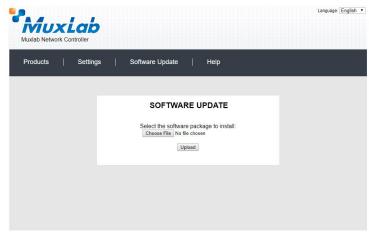


Figure 114: Software Update Screen

# **Help Screen**

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 115).

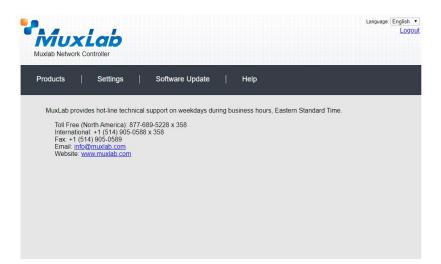


Figure 115: Help Screen

# **Extender Model 500755**

# **Product Screen**

Once the user has logged in, the **Products** screen will appear (Figure 116).

Muxlab Network	Controller				
Products	Settings	Softwar	e Update 🛛 🗎	Help	
	PRODUCT				
SELECT A	PRODUCI	TO ADD:		· ADD DEVICE	
YOUR CUR	DENT OVO	TEM			
	stom Name	Product Name	Compagny	Product type	
no jeu	ton Rane	Product Hante	compagny	r rouder type	

Figure 116: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP (500752/753/754/755/756) and then click on ADD DEVICE (Figure 117).

Products         Settings         Software Update         Help           SELECT A PRODUCT TO ADD: <ul></ul>	MuxLab Muxlab Network Controller	Language: [English ▼ Logout
Visit Number         ADD Device           8-Button IP PoE Control Panel (500816-IP)         AV Over IP 4K/60 (500760/761)           HDMI over IP (500752/753/754/755/756)         Type           HDMI over IP 4K (500758/759/770/771/773/777/778)         Select           HDMI over IP H264 (500757)         HDMI over IP H264/H265 (500762/763)	Products   Settings   Software Update	Help
8-Button IP PoE Control Panel (500816-IP) AV Over IP 4K/60 (500760/761) HDMI over IP (500752/753/754/755/756) HDMI over IP 4K (500758/759/770/771/773/777/778) HDMI over IP H264 (500757) HDMI over IP H264/H265 (500762/763)	SELECT A PRODUCT TO ADD:	
AV Over IP 4K/60 (500760/761) HDMI over IP (500752/753/754/755/756) HDMI over IP 4K (500758/759/770/771/773/777/778) HDMI over IP H264 (500757) HDMI over IP H264/H265 (500762/763)		ADD DEVICE
The first of the f	AV Over IP 4K/60 (500760/761) HDMI over IP (500752/753/754/755/756) HDMI over IP 4K (500758/759/770/771/773/777/778) HDMI over IP H264 (500757)	

Figure 117: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 118). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 116), without a product being added.

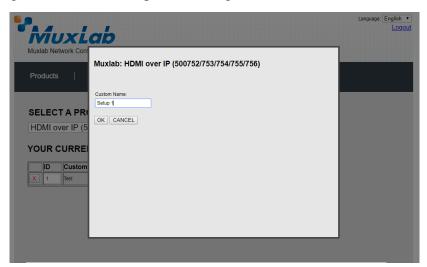


Figure 118: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 119).

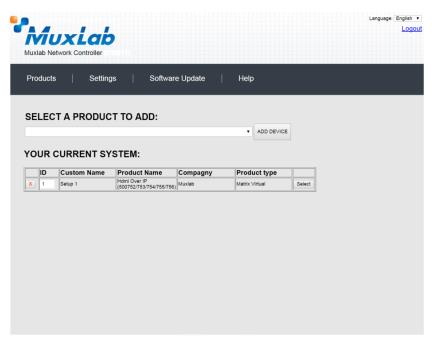


Figure 119: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 120).

Muxlab Network (		192.168.10 Do you want	68.50 says: to load previous stor	ed device list ? OK	Cancel	Language: t	English Logo
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdm			5/756)   Muxla	ab   Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Set-up Modify any availab	le settings and clic	k Save to apply you	ır changes				

Figure 120: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. IR
- 6. Firmware

## 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

Automatic means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 121).

xlab Network						Lang	uage: [
oducts	Settings	Softwa	re Update	Help			
	PRODUCT	: 752/753/754/75	55/756)   Muxia	ab   Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
e <b>t-up</b> odify any availat	le settings and clic	ck Save to apply you	ur changes				
Automatic	O Manual						
aunch discovery							

Figure 121: Products Screen – Set-up Tab

# Note: The term "Display" is used in this 500755 section to reference the sink side (RX), the actual sink devices are powered speakers or an amplifier.

The system will scan the network for all source side devices (500755 "transmitters") and display side devices (500755 "receivers"), and will display the scan results in tabular form (Figure 122). Note that there is only one type of 500755 Extender, which is a *Transceiver*. Each 500755 Transceiver is configured either as a transmitter or a receiver. This is done by toggling Dip Switch 4 on each Transceiver to either the Tx (transmitter) or Rx (receiver) position.

Each 500755 transmitter/receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any speaker/amplifier sink (RX) or audio source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 123 (orange highlighted fields).

Mux	Lab							
Muxlab Network								
Products	Settings	s   Softw	vare Update	Help				
SELECTED	BBODUC	т.						
			755/756)   Mu	xlab   Matrix V	/irtual			
eccep 171101			100/100/1 me					
			20.000					
Set-up	Matrix	Video Wall	RS-232	IR	Firr	nware		
Set-up Modify any availa	hle cettings and	click Save to apply	your changes					
Set-up Modify any availal • Automatic	ble settings and o	click Save to apply	your changes					
Modify any availa	O Manual	click Save to apply :	your changes					
Modify any availat     Automatic	O Manual	click Save to apply ;	your changes					
Modify any availat     Automatic     Launch discovery	O Manual	click Save to apply : MAC address	your changes IP address	MASK	DHCP DIP			
Modify any availat • Automatic Launch discovery Display (1 RX)	O Manual		IP address	MASK 255.255.255.0		Reboot	Detail	
Modify any availat • Automatic Launch discovery Display (1 RX) Port# Name	O Manual	MAC address	IP address			Reboot	Detail	
Modify any availat • Automatic Launch discovery Display (1 RX) Port# Name	O Manual	MAC address	IP address			Reboot	Detail	
Modify any availal Automatic Launch discovery Display (1 RX) Port# Name 0 TX1	O Manual	MAC address	IP address			Reboot	Detail	
Modify any availal Automatic Launch discovery Display (1 RX) Port# Name 0 TX1 Source (1 TX)	O Manual	MAC address 00-08-78-00-7D-2A	IP address 192.168.168.72	255.255.255.0	•	Reboot	Detail	
Modify any availal • Automatic Launch discovery Display (1 RX) Port# Name 0 TX1 Source (1 TX) Port# Name	O Manual	MAC address 00-08-78-00-7D-2A MAC address	IP address 192.166.168.72 IP address	255.255.255.0 MASK				

Figure 122: Products Screen – Set-up Tab

พ่ม	x	ab								Log
/luxlab Net			H)							
Products		Settings	Softv	vare Update	Help					
		RODUCT								
			-	755/756)   Mu	ıxlab   Matrix	Virtual				
		(		.,,						
Set-up Set-up Modify any a	wailable s	Matrix	Video Wall	RS-232	IR	Fim	nware			
Set-up	: 0		Video Wall		IR	Firm	nware			
Set-up Modify any a	: Overy	ettings and clic			IR	Firm	nware			
Set-up Modify any a	: Overy RX)	ettings and clic			MASK	DHCP DIP	nware			
Set-up Modify any a Automati Launch disc Display (1 F	: Overy RX)	Nettings and clic	k Save to apply i	your changes			Reboot	Cancel	Detail	
Set-up Modify any a Automati Launch disc Display (1 F Port# Name	c O covery (X)	Nettings and clic	k Save to apply :	your changes	MASK	DHCP DIP		Cancel	Detail	
Set-up Modify any i Automati Launch disu Display (1 f Port# Name 0 RX1 Source (1 T Port# Name	: O :overy (X) e X)	Manual Manual Manual	k Save to apply : AC address 0-08-78-00-7D-2A AC address	IP address 192.168.168.72	MASK 255.255.255.0 MASK		Reboot		Detail	
Set-up Modify any a • Automati Launch disc Display (1 f Port# Name 0 RX1 Source (1 T	: O :overy (X) e X)	Manual Manual Manual	k Save to apply AC address 6-08-78-00-7D-2A	IP address 192.168.168.72	MASK 255.255.255.0			Cancel	Detail	

Figure 123: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 124).

	Network C		,						Languag	e: English Log
Produ		Setting	js ∣ Softv	vare Update	Help					
	ECTED F 0 1 : Hdmi		CT: 500752/753/754/	755/756)   Mu	ıxlab   Matrix	Virtual				
s	et-up	Matrix	Video Wall	RS-232	IR	F	irmware			
• Au	r any available	e settings and	d click Save to apply	your changes						
	ay (1 RX) Name		MAC address	IP address	MASK	DHCP D				
Port#	RX1		00-0B-78-00-7D-2A	192.168.168.72	255.255.255.0	UHCP D		Detail	UPDATED	
	e (1 TX) Name		MAC address	IP address	MASK	DHCP D	P			
0	TX1		00-0B-78-00-7D-67	192.168.168.71	255.255.255.0		Reboot	Detail		
Save										

Figure 124: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 125).

Device Detai	I
Custom Name:	RX1
Model:	500755-RX
MAC Address:	00-0B-78-00-7D-2A
IP Address:	192.168.168.72 (DHCP: ON)
FW Version:	
Group IP:	239.255.1.18
Video Resolution:	Not Applicable
Audio Format:	44.1 khz
Save Cancel	

Figure 125: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display (sink device) to any source. The user has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 126).

2							l	.anguage:	English Logo
	Products	Settings	∣ Softwa	re Update	Help				
		PRODUCT hi Over IP (500	•	55/756)   Muxla	ab   Matrix Vi	rtual			
	Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
	Connect your disp bottom to make th	plays to the desired te connections.	sources below. On	e you've selected	the displays you	want to change, use th	ne "Connect" button	at the	
	DISPLAY		SOURCE		PRESE	TS	]		
	RX1		- Y	> Current ad					
	Connect			> Save curr	elected ant connections in fo ant connections as r owing preset:				

Figure 126: Matrix Tab

To connect a sink to a source, the user first clicks on the drop-down list next to the given sink (for example "RX1") and selects which source to connect it to, such as "Audio 1" (Figure 127).

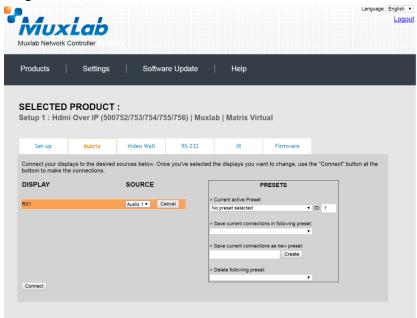


Figure 127: Change Connection

Once the selection is made (the user can change any or all connections between sinks and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 128).

Products	Settings	Softwa	re Update	Help		
	PRODUCT	: 752/753/754/7	55/756)   Music	b   Matrix V	rtual	
etup I . Huli	ii Over IF (500	1 3211 3311 3411 3	55/7 50)   MUXIA		rtuar	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
bottom to make th	e connections.		ce you've selected t			he "Connect" button at the
DISPLAY		SOURCE		PRESE	TS	
RX1		Audio 1 V SUC	CESS > Current ad		▼ ID: 0	
				ent connections in fe		
			> Save curre	ent connections as r	Create	
				owing preset:		

Figure 128: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 129) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS
> Current active Preset:
No preset selected  ID: 0
<ul> <li>&gt; Save current connections in following preset:</li> <li>&gt; Save current connections as new preset:</li> </ul>
Preset 1 Create
> Delete following preset:

Figure 129: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 130).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
Create SUCCESS
> Delete following preset:

Figure 130: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 131).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 131: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 132).

192.168.168.50 says:	×
Are you sure to delete this preset ?	
Prevent this page from creating additional dialogues.	
<b>OK</b> Cancel	

Figure 132: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 133).

PRESETS			
> Current active Preset:			
[1] Preset 1	ID:	1	
> Save current connections in following preset:			
> Save current connections as new preset: Create			
> Delete following preset:			
▼	SL	JCCE	SS

Figure 133: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 134).

PRES	TS	
> Current active Preset:		
[1] Preset 1		▼ ID: 1
> Save current connections in f	ollowing pres	et: ▼
[1] Old Preset		
	Create	
> Delete following preset:		
		T

Figure 134: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 135).

PRESETS				
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre-	set:	-		
	•	S	JCCE	SS T
> Save current connections as new preset:				
Create				
> Delete following preset:				
	۲			

Figure 135: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

# 3. Products Screen - Video Wall Tab

MuxLab's Extender 500755 does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 136).

ducts   Settings   Software Update   Help	
up 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Virtual	
Set-up Matrix Video Wall RS-232 IR Firmware	
devices compatible with video wall features found !	

Figure 136: Video Wall Tab

For more information on the Video Wall tab and its features, refer to the section of this manual dealing with MuxLab Extender 500754 and MuxLab Extender 500759.

#### 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transceiver (transmitter or receiver) (Figure 137). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver as a pass-through.

						Language:	English Log
Products	Settings	Softwa	are Update	Help			
SELECTED Setup 1 : Hdm		-	55/756)   Muxla	ab   Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your devic Select a device - Baud rate: - IP header in o - Feedback ON - IP Feedback: Save	data: ⊗ I: ⊗		8   Stop bits: 1 ]	Parity : NONE ▼			
	n HEX (ex: A013 received in HE						

Figure 137: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 138). The IP Feedback field should also contain the IP address of the Network Controller.

	Products	Settings	Softwa	re Update	Help		
etup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Virtual           Set-up         Matrix         Video Wall         RS-232         IR         Firmware           Update your device's RS-232 connection settings here.							
Set-up     Matrix     Video Wall     RS-232     IR     Firmware       Jpdate your device's RS-232 connection settings here.     Select a device:     Audio 1 •       Select a device:     Audio 1 •       • Baud rate:     6600 •     [Data bits: 8   Stop bits: 1 ] Parity : NONE •       • IP Feedback ON:        • IP Feedback:     192 168 168 56							
Jpdate your device's RS-232 connection settings here. Select a device: Audio 1 ▼ Baud rate: 9600 ■ [Data bits: 8   Stop bits: 1 ] Parity : NONE ▼ IP header in data: ∞ Feedback ON: ∞ IP Feedback: 192 168 168 56	Setup 1 : Hdmi	Over IP (5007	52/753/754/75	5/756)   Muxl	ab   Matrix Virt	ual	
Jpdate your device's RS-232 connection settings here. Select a device: Audio 1 ▼ Baud rate: 9600 ■ [Data bits: 8   Stop bits: 1 ] Parity : NONE ▼ IP header in data: ∞ Feedback ON: ∞ IP Feedback: 192 168 168 56							
Select a device: Audo 1 ▼ Baud rate: 9500 ▼ [Data bits: 8   Stop bits: 1 ] Parity : NONE ▼ Pheader in data:  Feedback: 9 PFeedback: 192.168.168.56	Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Select a device: Audo 1 ▼ Baud rate: 9500 ▼ [Data bits: 8   Stop bits: 1 ] Parity : NONE ▼ Pheader in data:  Feedback: 9 PFeedback: 192.168.168.56	Lindate your device's	RS-232 connectiv	on settings here				
Baud rate: 5600 ▼ [Data bits: 8   Stop bits: 1 ] Parity : NONE ▼ IP header in data: Feedback ON: IP Feedback: 192.168.168.56		TKO-202 CONTRECT	on settings nere.				
IP Feedback: 192 168 168 56	Select a device:	Audio 1 🔻					
IP Feedback: 192 168 168 56							
Feedback ON:			[ Data bits:	8   Stop bits: 1 ]	Parity : NONE *		
IP Feedback: 192.168.168.56							
Save	- IP Feedback:	192.168.168.56	•				
	Save						
Data to send in HEX (ex: A013B155C5)	Data to send in I	IEX (ex: A013B	155C5)				
	- IP Feedback:	192.168.168.56	i 				 

Figure 138: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, source "Audio 1" was chosen as the selected device (but a transceiver set as a receiver connected to sink equipment could have also been selected), meaning that a command sent to source "Audio 1" will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transceiver (set as a transmitter) connected to the "Audio 1" source. The transceiver (set as a transmitter) will then send the specified data command to source "Audio 1".

The **Data feedback received in HEX** field displays the HEX version the feedback sent to the Network Controller by source "Audio 1".

When sending RS-232 commands directly from a PC to any transceiver (transmitter or receiver), the user must set up a pass-through system for RS-232 signals to be sent to and from devices. This requires two steps:

- (1) The user first tells the local device (the device connected directly to the PC) the IP address of the far device (where the RS-232 commands are being sent). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.
- (2) The user then tells the far device the IP address of the local device (if feedback from the far device is required). This is done by first clicking on the **Select a device** drop-down list and selecting the far device from the list, and then inputting the IP address of the near device in the **IP Feedback** field. The user then clicks on **Save**.

#### 5. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands to a MuxLab transceiver (transmitter or receiver) IR port (Figure 139) via the Network Controller. IR pass-through mode is also supported using an IR handheld remote as the control source.

MUX Auxiab Network C						Language	English Logo
Products	Settings	Softwa	re Update	Help			
SELECTED F Setup 1 : Hdmi			55/756)   Muxl	ab   Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device Select a device: - IR Mode: - IP Feedback:							
Save							
Data to send in	HEX (ex: A013	B155C5)					
Send							
IR code receive	d in HEX						

Figure 139: IR Tab

When sending IR commands through the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 140).

						Languag	
Mux	Lab						
Muxlab Network (		0					
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdmi			5/756)   Mux	ab   Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device	e's IR settings here	ı.					
Select a device	Audio 1 🔻						
- IR Mode:	Emitter 🔻						
- IP Feedback:	0.0.0						
Save							
							1
Data to send in	HEX (ex: A013	B155C5)					
Send							
IR code receive	ed in HEX						
Get IR code							

Figure 140: IR Tab – Selecting a Device

The 500755 transceiver can be configured as a transmitter or receiver and supports a bi-directional IR port. The below example is for transmitting IR from the sink side (display/powered speaker-amplifier side) to the source side, but the 500755 can be configured to transmit IR from the source to the sink side as well.

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, source "Audio 1" was chosen as the selected device, meaning that a command sent to source "Audio 1" will travel from the Network Controller to the Ethernet Switch, then from the Ethernet Switch to the transceiver (set as a transmitter) connected to source "Audio 1". The transceiver (set as a transmitter) will then send the specified IR data command to source "Audio 1" via the IR Emitter connected to the transceiver (set as a transmitter) IR out port.

The **IR code received in HEX** field displays the HEX version of an IR command send from a handheld remote to an IR transceiver (set as a receiver) IR In port and attached IR Sensor.

When sending IR commands directly from an IR Source device, such as an IR handheld remote, from 500755 transceiver (set as a receiver) through to a transceiver (set as a transmitter), the user must set up a pass-through for IR signals to be sent to and from devices. This requires the following step:

The user must tell the 500755 transceiver (set as a receiver, and being the device near the IR handheld remote with an attached IR Sensor) the IP address of the 500755 transceiver (set as a transmitter, and where the IR commands are being sent, which has an attached IR Emitter). This is done by first clicking on the **Select a device** dropdown list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.

## 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 141).

Products       Settings       Software Update       Help         SELECTED PRODUCT :       Setup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Virtual         Set-up       Matrix       Video Wall       R5-232       IR       Firmware         Modify any available settings and click Save to apply your changes       Osplays (R/x)       Source (TX)       Choose file No file chosen         Apply       DISPLAY       SOURCE       RX1 (500755-RX)       v2.0.9       TX1 (500755-TX)       v2.0.9	Muxlab Network C							Language: English
Setup 1 : Hdmi Over IP (500752/753/754/755/756)   Muxlab   Matrix Virtual         Set-up       Matrix       Video Wall       R5-232       IR       Firmware         Modify any available settings and click Save to apply your changes	Products	Settings	Soft	vare Update	Help			
Modify any available settings and click Save to apply your changes          • Displays (RX)       • Gource (TX)       Choose file No file chosen				755/756)   Muxla	ab   Matrix Vi	rtual		
changes	Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
			cha •	nges Displays (RX) oose file No file chose	Source (TX)	e to apply your		
RX1 (500755-RX) v2.0.9 TX1 (500755-TX) v2.0.9	DISPLAY			SO	URCE			
	RX1 (500755-RX)		v2.0.9	TX1	(500755-TX)	v	2.0.9	

Figure 141: Firmware Tab

The user first selects either **Display** (**RX**) which is the sink unit (connected to powered speakers or an amplifier), or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

# **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The **Network** tab (Figure 142) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

XIAD Network Controller			
	are Update	Help	
Network Administration			
Network Use the form below if you'd like to set manual network	settings.		
LAN 1 Use DHCP: O Yes ® No			 
IP address: 192 , 168 , 168 , 50			
Network mask: 255 - 255 - 255 - 0 Router:			
192 . 168 . 168 . 1 Mac Address: 00 : 0E : C4 : D3 : B9 : 55			
Save			
LAN 2 Use DHCP:			
IP address:			
Router:			
Mac Address: 00 : 0E : C4 : D3 : B9 : 56			
Save			

Figure 142: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 143).

	<b>xLab</b> ork Controller				Language: [Eng
Products	Settings	Software Upd	ate   I	Help	
Network	Administration				
Select a User I User Name new password Confirm new p User Type:	User Account Or	• •			
Specify file:	unit with the selected da Choose File No file cho	osen	troller using the	same as the controller thi	s backup file come from !!!
Restore Backup data					
	ata and save it in a file				
Get Logs Get all logs in Download L					

Figure 143: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 144). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

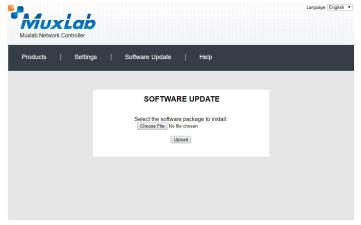


Figure 144: Software Update Screen

# Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 145).

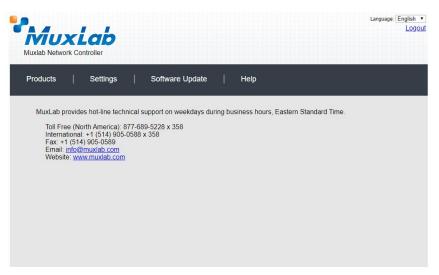


Figure 145: Help Screen

# **Extender Model 500756**

## **Product Screen**

Once the user has logged in, the **Products** screen will appear (Figure 146).

Products       Settings       Software Update       Help         SELECT A PRODUCT TO ADD: <ul> <li>ADD DEVICE</li> <li>YOUR CURRENT SYSTEM:</li> <li>ID Custom Name</li> <li>Product Name</li> <li>Compagny</li> <li>Product type</li> </ul>	Vetwork Controller         ts       Settings       Software Update       Help         CT A PRODUCT TO ADD: <ul> <li>Aco device</li> <li>CURRENT SYSTEM:</li> </ul>	Language: En
Muxiab Network Controller Products   Settings   Software Update   Help SELECT A PRODUCT TO ADD: ADD DEVICE YOUR CURRENT SYSTEM:	Vetwork Controller         ts       Settings       Software Update       Help         CT A PRODUCT TO ADD: <ul> <li>Aco device</li> <li>CURRENT SYSTEM:</li> </ul>	
SELECT A PRODUCT TO ADD:	CT A PRODUCT TO ADD:	
SELECT A PRODUCT TO ADD:	CT A PRODUCT TO ADD:	
SELECT A PRODUCT TO ADD:	CT A PRODUCT TO ADD:	
ADD DEVICE YOUR CURRENT SYSTEM:	ADD DEVICE CURRENT SYSTEM:	
ADD DEVICE YOUR CURRENT SYSTEM:	ADD DEVICE CURRENT SYSTEM:	
ADD DEVICE YOUR CURRENT SYSTEM:	ADD DEVICE CURRENT SYSTEM:	
YOUR CURRENT SYSTEM:	CURRENT SYSTEM:	
ID Custom Name Product Name Compagny Product type	Custom Name Product Name Compagny Product type	

Figure 146: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP (500752/753/754/755/756) and then click on ADD DEVICE (Figure 147).

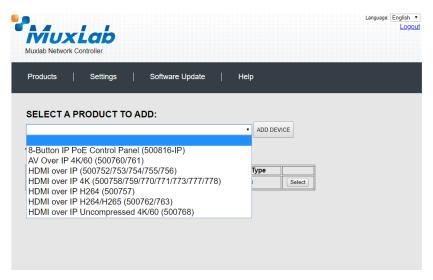


Figure 147: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 148). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 146), without a product being added.

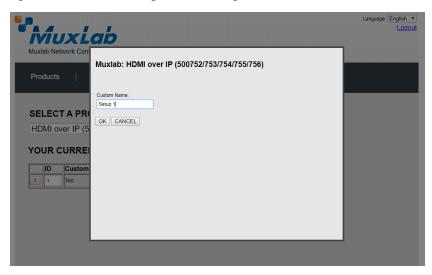


Figure 148 Products Screen – Naming a Product

The custom name has been added to **YOUR CURRENT SYSTEM** (Figure 149).

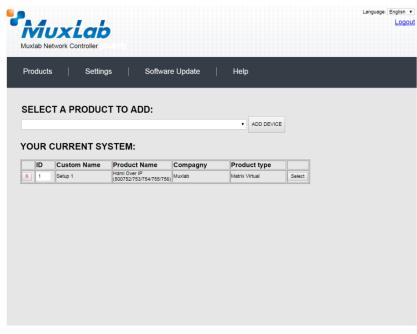


Figure 149: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 150).

Muxlab Network		192.168.10 Do you want	58.50 says: to load previous stor	ed device list ?	Cancel	Lan	guage: Engl
Products	Settings	Softwa	re Update	Help			
	PRODUCT ni Over IP (500)		5/756)   Muxl	ab   Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Set-up Modify any availa	ble settings and clic	k Save to apply you	ir changes				
<ul> <li>Automatic</li> </ul>	O Manual						

Figure 150: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. IR
- 6. Firmware

## 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

Automatic means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 151).

λίυχ						Languagi	e: Eng
Iuxlab Networl Products	Controller	Softwa	re Update	Help			
	D PRODUCT mi Over IP (500		5/756)   Muxla	ab   Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Set-up Modify any avail • Automatic Launch discovery	lable settings and clic O Manual	ck Save to apply you	r changes				

Figure 151: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500756 transmitters) and display side devices (500756 receivers), and will display the scan results in tabular form (Figure 152).

Each 500756 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 153 (orange highlighted fields).

Products	Settings	Softwa	re Update	Help		
- Fullotto			-opune-			
	PRODUCT	-	5/756)   Must	ab   Matrix Virt	ual	
setup 1 : Han	11 Over IP (500	1 32/1 33/1 34/1 3	ואטאן (מכיווכס) אוועצו	ab   Matrix Virt	uai	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
bec-up	macrix	Hideo Hall	NJ-252	in	Timmare	
Set-up Modify any availa Automatic	ble settings and clic	k Save to apply you	ur changes			
Launch discovery						

Figure 152: Products Screen – Set-up Tab

	b Network Controlle									Language	Lo
Prod	lucts   Se	ttings ∣ Soft∖	ware Update	Help							
	ECTED PROI p 1 : Hdmi Over	DUCT : IP (500752/753/754/	755/756)   Mu	ıxlab   Matrix	Virtua	1					
	Set-up Ma	trix Video Wall	R5-232	IR		Fin	nware				
• A		gs and click Save to apply al	your changes								
● A Laur Displ	y any available setting uutomatic Manu hch discovery lay (4 RX)	ai									
Modif A Laur Displ Port#	y any available setting utomatic O Manu Inch discovery lay (4 RX) # Name	al MAC address	IP address	MASK 255 255 0	DHCF		Pahast	Dotai			
Modif A Laur Displ Port# 0	ý any available settin utomatic Manu Ich discovery Iay (4 RX) ≰ Name RX-00-08-78-00-7D-E	MAC address 2 00-08-78-00-70-E2	IP address 192.168.168.64	255.255.255.0			Reboot	Detail			
Modif A Laur Displ Port# 0 0	y any available setting utomatic Manu hch discovery lay (4 RX) # Name RX-00-0B-78-00-7D-E: RX-00-0B-78-00-7D-E:50	MAC address 2 00-0B-78-00-7D-E2 0 00-0B-78-00-7E-59	IP address 192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0	•		Reboot	Detail	]		
Modif A Laur Displ Port# 0	ý any available settin utomatic Manu Ich discovery Iay (4 RX) ≰ Name RX-00-08-78-00-7D-E	MAC address 2 00-08-78-00-70-E2 1 00-08-78-00-7E-59 2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0							
Addit     Addit     Laur     Displ     Port#     0     0     0     0	y any available setting utomatic Manu tch discovery lay (4 RX) # Name RX-00-0B-78-00-7D-E- RX-00-0B-78-00-7E-50 RX-00-0B-78-00-7E-50	MAC address 2 00-08-78-00-70-E2 1 00-08-78-00-7E-59 2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		Reboot Reboot	Detail Detail			
Modif A Laur Displ Port# 0 0 0 0 Sour	Nany available setting           uutomatic         Manu           tich discovery         Manu           lay (4 RX)         RX-00-08-78-00-7D-8           RX-00-08-78-00-7D-8         RX-00-08-78-00-7E-6           RX-00-08-78-00-7E-6         RX-00-08-78-00-7E-6	MAC address 2 00-08-78-00-70-E2 1 00-08-78-00-7E-59 2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		Reboot Reboot	Detail Detail			
Modif A Laur Displ Port# 0 0 0 0 Sour	ý any available settiny utomatic Manu ich discovery lay (4 RX) # Name RX-00-08-78-00-70-E RX-00-08-78-00-7E-50 RX-00-08-78-00-7E-50 RX-00-08-78-00-7E-50 RX-00-08-78-00-7E-50	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-58 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2 address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	5 5 5		Reboot Reboot	Detail Detail			
Modif A Laur Displ Port# 0 0 0 0 0 0 Sour Port#	ý any available settiny utomatic Manu ich discovery ay (4 RX) Name RX-00-08-78-00-7D-E RX-00-08-78-00-7E-51 RX-00-08-78-00-7E-55 RX-00-08-78-00-7E-55 RX-00-08-78-00-7E-55 Ce (2 TX) 4 Name	MAC address 0 00-08-78-00-70-E2 0 00-08-78-00-7E-59 0 00-08-78-00-7E-50 0 00-08-78-00-7E-56 0 00-08-78-00-7E-56 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	DHCF	P DIP	Reboot Reboot Reboot	Detail Detail Detail			

Figure 153: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 154).

Muxla	b Network	Controller									1
Prod		Settings	Softw	vare Update	Help						
		PRODUCT ni Over IP (50		755/756)   Mu	ıxlab   Matrix '	Virtual					
	Set-up	Matrix	Video Wall	RS-232	IR		Fim	nware			
	ay (4 RX)										
	Name		IAC address	ID address	MASK	DHCP	סוח				
	Name RX-1		AC address	IP address 192.168.168.64	MASK 255.255.255.0	DHCP		Reboot	Detail		
Port#		_		192.168.168.64				Reboot Reboot	Detail Detail		
Port# 0	RX-1		00-0B-78-00-7D-E2	192.168.168.64 192.168.168.60	255.255.255.0					UPDATED UPDATED UPDATED	
Port# 0 0	RX-1 RX-2		00-0B-78-00-7D-E2 00-0B-78-00-7E-59	192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	•		Reboot	Detail	UPDATED	
Port# 0 0 0	RX-1 RX-2 RX-3		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E	192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	•		Reboot Reboot	Detail Detail	UPDATED UPDATED	
Port# 0 0 0 0 Sourc	RX-1 RX-2 RX-3 RX-4		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E	192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	•		Reboot Reboot	Detail Detail	UPDATED UPDATED	
Port# 0 0 0 0 Source	RX-1 RX-2 RX-3 RX-4		00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	192.168.168.64 192.168.168.60 192.168.168.63 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0			Reboot Reboot	Detail Detail	UPDATED UPDATED	

Figure 154: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 155).

Device Detai	il
Custom Name:	RX-1
Model:	500756-RX
MAC Address:	00-0B-78-00-7D-E2
IP Address:	
	192.168.168.64 (DHCP: ON)
FW Version:	2.0.8
Group IP:	239.255.1.1
Video Resolution:	
Audio Format:	44.1 khz
Select a screen in	nage: Choose file No file chosen
Upload Image	
Set output Video I	Format:
Auto-detect Reso	lution: 🖉
Show Screen Tex	t: 🖉
Show Screen ima	ge: 🖉
-	
DVI Compatibility	On: 🖉
Save Cancel	

Figure 155: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 156).

		Controller					Lenguage:	English • Logou
Produc	ts	Settings	Softwa	are Update	Help			
		PRODUCT ii Over IP (500		55/756)   Muxla	ıb   Matrix Vi	rtual		
Set	up	Matrix	Video Wall	RS-232	IR	Firmware		
	make th	lays to the desired e connections.	sources below. On	ce you've selected	the displays you v		e "Connect" button at the	
5101 27			COONCE	> Current a				
RX-1			- ¥	No preset s		▼ ID: 1		
				> Save curr	ent connections in fo	llowing preset:		
				> Save curr	ent connections as r	Create		
				> Delete foil	owing preset:	•		
Connect				L			J	

Figure 156: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "RX-1") and selects which source to connect it to (Figure 157).

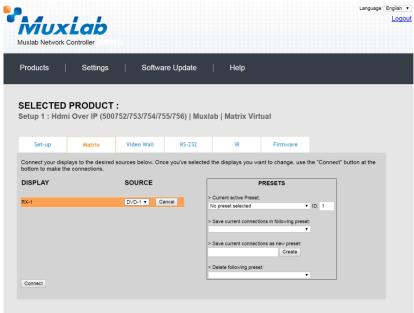


Figure 157: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 158).

•	Muxlab Network	Controller	•					Language:	English •
	Products	Settings	Softwa	ire Upd	ate	Help			
		PRODUCT hi Over IP (500)	-	55/756)	Muxla	ab   Matrix Vii	rtual		
	Set-up	Matrix	Video Wall	RS	-232	IR	Firmware		
	Connect your disp bottom to make th		sources below. On	ce you've	selected	the displays you w	vant to change, use th	ne "Connect" button at the	
	DISPLAY		SOURCE	[		PRESE	TS	]	
	RX-1		DVD-1 V SUC	CESS	> Current a No preset	ctive Preset:	▼ ID: 0		
						ent connections in fo			
					> Save curr	ent connections as n	ew preset: Create		
					> Delete fol	lowing preset:	•		
	Connect			L					

Figure 158: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 159) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS						
> Current active Preset:						
No preset selected  ID: 0						
<ul> <li>&gt; Save current connections in following preset:</li> <li>✓</li> <li>&gt; Save current connections as new preset:</li> </ul>						
Preset 1 Create						
> Delete following preset:						

Figure 159: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 160).

PRESETS	
> Current active Preset:	
[1] Preset 1	▼ ID: 1
<ul> <li>&gt; Save current connections in following present</li> <li>&gt; Save current connections as new present</li> </ul>	V
Create	SUCCESS
> Delete following preset:	T

Figure 160: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 161).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 161: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 162).

192.168.168.50 says:	×
Are you sure to delete this preset ?	
Prevent this page from creating additional dialogues.	
<b>OK</b> Cancel	
	_

Figure 162: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 163).

PRESETS			]
> Current active Preset:			
[1] Preset 1	ID:	1	
> Save current connections in following preset:			
> Save current connections as new preset: Create			
> Delete following preset:			
<b>T</b>	SL	JCCE	SS

Figure 163: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 164).

PRES	TS	
> Current active Preset:		
[1] Preset 1		▼ ID: 1
> Save current connections in f	ollowing pres	et: ▼
[1] Old Preset		
	Create	
> Delete following preset:		
		T

Figure 164: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 165).

PRESETS				
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre-	set:		JCCE	
> Save current connections as new preset:				
Create				
> Delete following preset:				
	۲			

Figure 165: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

### 3. Products Screen - Video Wall Tab

MuxLab's Extender 500756 does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 166).

Muxlab Network	Controller					Language: Engl
Products	Settings	Softwa	re Update	Help		
SELECTED Setup 1 : Hdm			55/756)   Muxla	ab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
NO devices com	atible with video	wall features four	d !			
devices com	patible with video	wall features four	d !			

Figure 166: Video Wall Tab

For more information on the Video Wall tab and its features, refer to the section of this manual dealing with MuxLab Extender 500754 and MuxLab Extender 500759.

#### 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 167). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

)						Language:	English
Auxlab Network							<u>Logo</u>
Products	Settings	Softwa	are Update	Help			
	PRODUCT i Over IP (500		55/756)   Muxl	ab   Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Select a device - Baud rate: - IP header in o - Feedback ON	data: ⊘ I: ⊘		8   Stop bits: 1 ]	Parity : NONE •			
- IP Feedback:		_					
	n HEX (ex: A013						

Figure 167: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 168). The IP Feedback field should also contain the IP address of the Network Controller.

	Settings	Softwar	e Update	Help		
SELECTED P Setup 1 : Hdmi (			5/756)   Muslak	h   Matrix Vie	ual	
Setup 1 : Humi C	Ver IP (500)	132/133/134/13	Jir Joj   wuxiai		uai	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device's	RS-232 connect	tion settings here.				
Select a device:	SDI Cam 1 V					
- Baud rate:	9600 🔻	[ Data bite: ]	B   Stop bits: 1 ] F	Parity : NONE -		
- IP header in dat		[ Data bits. )	b   Stop bits. 1 ] F	anty . None +		
- Feedback ON:	<ul> <li>Image: A start of the start of</li></ul>					
- IP Feedback:	192.168.168.5	56				
	192.168.168.5	56				

Figure 168: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, SDI Cam 1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to SDI Cam 1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to SDI Cam 1. That transmitter will then send the specified data command to SDI Cam 1.

The **Data feedback received in HEX** field displays the HEX version the feedback sent to the Network Controller by SDI Cam 1.

When sending RS-232 commands directly from a PC to any transmitter or receiver, the user must set up a pass-through system for RS-232 signals to be sent to and from devices. This requires two steps:

- (1) The user first tells the local device (the device connected directly to the PC) the IP address of the far device (where the RS-232 commands are being sent). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.
- (2) The user then tells the far device the IP address of the local device (if feedback from the far device is required). This is done by first clicking on the **Select a device** drop-down list and selecting the far device from the list, and then inputting the IP address of the near device in the **IP Feedback** field. The user then clicks on **Save**.

#### 5. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands to a MuxLab transmitter or receiver IR port (Figure 169) via the Network Controller. IR pass-through mode is also supported using an IR handheld remote as the control source.

MuxLab				Language: Eng
Products   Settings	Software Update	Help		
SELECTED PRODUCT : Setup 1 : Hdmi Over IP (500752/7	53/754/755/756)   Muxi	ab   Matrix Virt	tual	
Set-up Matrix Vid	eo Wall RS-232	IR	Firmware	
Update your device's IR settings here.				
- IR Mode:				
Save				
Data to send in HEX (ex: A013B1550	5)			
Send				
IR code received in HEX				
Get IR code				

Figure 169: IR Tab

When sending IR commands through the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 170).

						Lang	uage: En
Mux	Lab						
Muxlab Network C							
Products	Settings	Softwa	re Update	Help			
SELECTED		-					
Setup 1 : Hami	Over IP (500	/52//53//54//3	55/756)   Muxi	ab   Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device	s IR settings here						
	-	•					
Select a device	SDI Cam 1 V						
- IR Mode:	Emitter •						
- IP Feedback:	192.168.168	3.56					
Save							
Data to send in	HEX (ex: A013	B155C5)					
Send							
IR code receive	ed in HEX						
Get IR code							

Figure 170: IR Tab – Selecting a Device

The 500756 supports a bi-directional IR port. The below example is for transmitting IR from the sink side (display side) to the source side, but the 500756 can be configured to transmit IR from the source to the sink side as well.

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, SDI Cam 1 was chosen as the selected device, meaning that a command sent to SDI Cam 1 will travel from the Network Controller to the Ethernet Switch, then from the Ethernet Switch to the transmitter connected to SDI Cam 1. That transmitter will then send the specified IR data command to SDI Cam 1 via the IR Emitter connected to the transmitter IR out port.

The **IR code received in HEX** field displays the HEX version of an IR command send from a handheld remote to an IR receiver IR In port and attached IR Sensor.

When sending IR commands directly from an IR Source device, such as an IR handheld remote, from 500756 receiver through to a transmitter, the user must set up a pass-through for IR signals to be sent to and from devices. This requires the following step:

The user must tell the 500756 receiver (being the device near the IR handheld remote with an attached IR Sensor) the IP address of the 500756 transmitter (where the IR commands are being sent, which has an attached IR Emitter). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.

### 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 171).

Muxlab Network		11)					Language:	English • Logout
Products	Settings	Softv	vare Update	Help				
SELECTED Setup 1 : Hdm			755/756)   Muxla	ıb   Matrix Vir	tual			
Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
DISPLAY		char • r	Displays (RX) pose file No file chose Apply	Source (TX)	to apply your			
RX1 (500756-RX)		v2.0.8	SDI	Cam 1 (500756-T)	X)	v2.0.8		

Figure 171: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

## **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 172) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

Network Administration Network Jse the form below if you'd like to set manual network settings.	xiab Network (				Language: [Eng
Vetwork         Jes the form below if you'd like to set manual network settings.           LAN 1	roducts	Settings	Software Update	Help	
Jase the form below if you'd like to set manual network settings. LAN 1 Use DHCP. Vec ♥ No Peakheas: 102 168 168 50 Network mask 203 189 188 1 Router: LAN 2 LAN	Network	Administration			
Use DHCP:       •       <	Network Use the form bek	ow if you'd like to set ma	nual network settings.		
192       183       184       3         25       25       3       3         103       188       18       1         Marc Meteration       1       1         100       0       0       0       10         100       0       0       0       0       0         100       0       0       0       0       0       0         100       0       0       0       0       0       0       0         100       0       0       0       0       0       0       0       0         100       0       0       0       0       0       0       0       0       0         100       0       0       0       0       0       0       0       0         100       0       0       0       0       0       0       0       0         100       0       0       0       0       0       0       0       0         100       0       0       0       0       0       0       0       0	LAN 1 Use DHCP:	OYes ® No			 
Netlacy math         Very	IP address:				
255         255         265         0           Houser:         Houser:         Houser:         Houser:           House:         Doi:         Doi:         Doi:         B         85           Save:         -         -         -         -         -           LAR 2-Metric:         -         -         -         -         -           Badross:         -         -         -         -         -           Padross:         -         -         -         -         -           Router:         -         -         -         -         -           Marc Adverse:         -         -         -         -         -		168 . 50			
Route:         Idea         Add:		255 0			
Mac Advenue: 00 0E C4 00 89 55 Save LAN 2 UP address: IP address: Mac Advenue: Mac Advenue: 00 0 C C4 00 89 56		200 . 0			
00         00<	192 . 168 .	168 . 1			
LAN 2           UP address:           IP address:           Network mark:           Router:           Marc Address:           00         00           00         00           00         00					
LAN 2 UND DICCP: (c) Yes O No (f) Address: Network mark Router: Mac Address: (0) 0 C C C 4 0 03 89 56	00 : 0E :	C4 : D3 : B9 : 55			
Use DHCP:         ●         Yes         O         No           IP address	Save				
P address Network mark Router Router Mac Address O0 2 C 2 C4 2 D3 2 B9 2 56					 
Network mark Router	Use Drice.	• Yes O No			
Router Router Mac Address 00 : C = C4 : D3 : B9 : 56	IP address:				
Router Router Mac Address 00 : C = C4 : D3 : B9 : 56	Notwork mark				
Mac Address: 00 : C4 : C4 : D3 : B9 : 56	receives & mask.				
00 : 0E : C4 : D3 : B9 : 56	Router:				
00 : 0E : C4 : D3 : B9 : 56					
Save	00 : 0E :	C4 : D3 : B9 : 56			
	Save				

Figure 172: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 173).

	<b>xLab</b> rrk Controller		
roducts		oftware Update   Help	
Network	Administration		
Select a User User Name new password Confirm new p User Type:	User Account Or	т т	
Specify file:	unit with the selected data file Choose File No file chosen	ess of this controller using the same as	the controller this backup file come from !!!
Restore Backup data			
Backup the o	lata and save it in a file		
Get Logs Get all logs in	n a zip file		

Figure 173: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 174). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

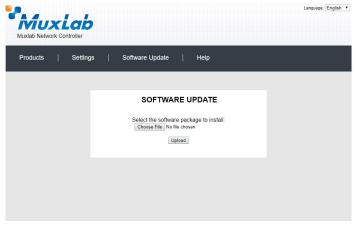


Figure 174: Software Update Screen

## Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 175).

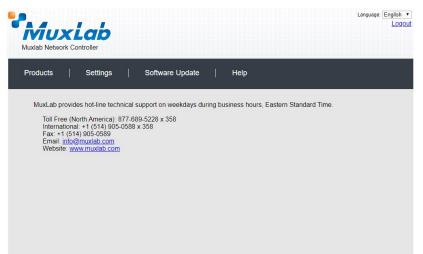


Figure 175: Help Screen

# Extender Model 500757

### **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 176).

				Langua	pe: English Loc
Products   Setting	is   Softwar	re Update	Help		
SELECT A PRODUC	T TO ADD:				
			· ADD DEVICE		
YOUR CURRENT SY	STEM:				
ID Custom Name	Product Name	Compagny	Product type		
ID Custom Name	Product Name	Compagny	Product type		

Figure 176: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP H264 (500757) and then click on ADD DEVICE (Figure 177).

Muxlab Muxlab Network Controller	Language: English ▼ Logout
Products   Settings   Software Update	Help
SELECT A PRODUCT TO ADD:	
	ADD DEVICE
8-Button IP PoE Control Panel (500816-IP) AV Over IP 4K/60 (500760/761) HDMI over IP (500752/753/754/755/756) HDMI over IP 4K (500758/759/770/771/773/777/778) HDMI over IP H264 (500757) HDMI over IP H264/H265 (500762/763) HDMI over IP Uncompressed 4K/60 (500768)	Type Select

Figure 177: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 178). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 176), without a product being added.

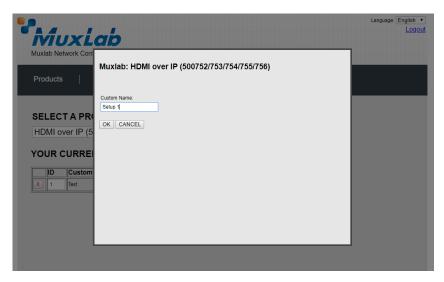


Figure 178: Products Screen – Naming a Product

The custom name has been added to **YOUR CURRENT SYSTEM** (Figure 179).

Ī	iuxLai	5				
	Network Controller	600311				
Produ	ucts   Settii	ngs   Softw	are Update	Help		
SEL	ECT A PRODU					
	LOTATIODO	of to Abb.		ADD DEVICE		
				ADD DEVICE		
rou	R CURRENT S	YSTEM:				
X 1		Hdmi Over IP H264	Compagny	Product type	Select	
<u>~</u> ['	Joedp 1	(500757)	Indiado		Geneer	

Figure 179: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 180).

Muxlab Network		192.168.168 Do you want to	.50 says:	levice list ? OK	Cancel	×	Language:	English • Logout
Products	Settings	Softwa	re Update	Help				
	PRODUCT : ii Over IP H264		xlab   Matrix V	irtual				
Set-up	Matrix	RS-232	Firmware					
Set-up Modify any availat	ole settings and click	Save to apply you	r changes					
<ul> <li>Automatic</li> </ul>	O Manual							

Figure 180: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Four tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. RS-232
- 4. Firmware

### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

Automatic means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 181).

	Controller				Language: <u>E</u>
Products	Settings	Softwa	re Update	Help	
	PRODUCT : i Over IP H264		ıxlab   Matrix V	irtual	
Set-up	Matrix	RS-232	Firmware		
Set-up Modify any availat Automatic Launch discovery	Ole settings and click	Save to apply you	ır changes		

Figure 181: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500757 transmitters) and display side devices (500757 receivers), and will display the scan results in tabular form (Figure 182).

Each 500757 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 183 (orange highlighted fields).

										Loc
$\mathbf{N}$	ux	ab								
luxlab	Network Cor	ntroller 👀	0811)							
Produ	cts	Setting	s   So	ftware Update	Help					
	CTED P									
Setup	1 : Hdmi C	over IP H	264 (500757)	Muxlab   Ma	trix Virtual					
Se	t-up	Matrix	RS-232	Firmwar	e					
Auto	any available	settings and Manual	l click Save to ap	oly your changes						
Modify autory Launch Display	any available omatic O h discovery y (4 RX)	-								
Modify Aute Launch Display Port# N	any available omatic h discovery y (4 RX) Name	Manual	MAC address	IP address	MASK	DHCF				
Modify • Auto Launch Display Port# N 0	any available : omatic O h discovery y (4 RX) Name RX-00-0B-78-00	Manual D-7D-E2	MAC address 00-0B-78-00-7D-	IP address 52 192.168.168.64	255.255.255.0		Reboot	Detail		
Modify Auto Launch Display Port# N 0 0	any available omatic O h discovery y (4 RX) Vame RX-00-0B-78-00 RX-00-0B-78-00	Manual )-7D-E2 )-7E-59	MAC address 00-08-78-00-7D- 00-08-78-00-7E-	IP address 52 192.168.168.64 59 192.168.168.60	255.255.255.0 255.255.255.0	¥ ¥	Reboot	Detail		
Modify Auto Launch Display Port# N 0 0 0	any available omatic h discovery y (4 RX) Vame RX-00-0B-78-00 RX-00-0B-78-00 RX-00-0B-78-00	0-7D-E2 0-7E-59 0-7E-5E	MAC address 00-0B-78-00-7D- 00-0B-78-00-7E- 00-0B-78-00-7E-	IP address E2 192.168.168.64 59 192.168.168.65 E 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *	Reboot Reboot	Detail Detail		
Modify Auto Launch Display Port# N 0 0 0	any available omatic O h discovery y (4 RX) Vame RX-00-0B-78-00 RX-00-0B-78-00	0-7D-E2 0-7E-59 0-7E-5E	MAC address 00-0B-78-00-7D- 00-0B-78-00-7E- 00-0B-78-00-7E-	IP address 52 192.168.168.64 59 192.168.168.60	255.255.255.0 255.255.255.0 255.255.255.0	¥ ¥	Reboot	Detail		
Modify Auto Launch Display Port# N 0 0 0 0 0	any available omatic h discovery y (4 RX) Vame RX-00-0B-78-00 RX-00-0B-78-00 RX-00-0B-78-00	0-7D-E2 0-7E-59 0-7E-5E	MAC address 00-0B-78-00-7D- 00-0B-78-00-7E- 00-0B-78-00-7E-	IP address E2 192.168.168.64 59 192.168.168.65 E 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *	Reboot Reboot	Detail Detail		
Modify Auto Launch Display Port# N 0 0 0 0 0	any available omatic o h discovery y (4 RX) Name RX-00-0B-78-00 RX-00-0B-78-00 RX-00-0B-78-00 RX-00-0B-78-00 e (2 TX)	0-7D-E2 0-7E-59 0-7E-5E	MAC address 00-0B-78-00-7D- 00-0B-78-00-7E- 00-0B-78-00-7E-	IP address E2 192.168.168.64 59 192.168.168.65 E 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *	Reboot Reboot	Detail Detail		
Modify Auti Launch Display Port# N 0 0 0 0 Source Port# N	any available omatic o h discovery y (4 RX) Name RX-00-0B-78-00 RX-00-0B-78-00 RX-00-0B-78-00 RX-00-0B-78-00 e (2 TX)	0-7D-E2 0-7E-59 0-7E-5E	MAC address 00-08-78-00-70- 00-08-78-00-7E- 00-08-78-00-7E- 00-08-78-00-7E- MAC address	IP address 2 192.168.168.64 9 192.168.168.65 192.168.168.65 3 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	5 5 5 5	Reboot Reboot	Detail Detail		
Modify Aute Launch Display Port# N 0 0 0 0 0 0 0 0 0 0 0 0 0	any available omatic O h discovery y y (4 RX) Name RX-00-0B-78-00 RX-00	0-7D-E2 0-7E-59 0-7E-5E	MAC address 00-08-78-00-70- 00-08-78-00-7E- 00-08-78-00-7E- 00-08-78-00-7E- 00-08-78-00-7E- MAC address 00-08-78-00-7D-	IP address 52 192.168.168.64 50 192.168.168.65 51 192.168.168.65 53 192.168.168.65 53 192.168.168.65 54 192.168.168.65 55 192.168.168.65 56 192.168.168.65 57 192.168.168.168.168 57 192.168.168.168.168 57 192.168.168.168.168 57 192.168.168.168.168.168.168.168.168.168.168	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	Ø Ø Ø DHCF	Reboot Reboot Reboot	Detail Detail Detail		

### Figure 182: Products Screen – Set-up Tab

		Lab									L
Prod	b Network (	Settings	Softw	vare Update	Help						
SEL	ECTED	PRODUCT	r:								
Setup	p1:Hdm	i Over IP (50	0752/753/754/	755/756)   Mu	ıxlab   Matrix	Virtua	I.				
		Matrix	Video Wall	RS-232	IR		Firmw	are			
5	Set-up	macrix	rideo iraa								
Set-u Modifi Ai	i <b>p</b> fy any availat sutomatic		lick Save to apply	your changes							
Set-u Modifi Ar Laun	i <b>p</b> Iy any availat	ole settings and c O Manual	lick Save to apply								
Set-u Modify au Laun Displa Port#	IP Iy any availat utomatic nch discovery Iay (4 RX) ≇ Name	ole settings and c Manual	lick Save to apply	IP address	MASK	DHCP	DIP				
Set-u Modify au Laun Displa Port# 0	IP y any availat utomatic inch discovery lay (4 RX) ∉ Name RX-1	ole settings and c Manual	IIck Save to apply IAC address 00-08-78-00-70-E2	IP address 192.168.168.64	255.255.255.0			eboot	Detail		
Set-u Modify All Laun Displa Port# 0 0	IP y any availat automatic ach discovery lay (4 RX) # Name RX-1 RX-2	ole settings and c Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-70-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0	•		eboot	Detail		
Set-u Modify Laun Displa Port# 0 0 0	IP way any availab automatic ach discovery day (4 RX) # Name RX-1 RX-2 RX-3	ole settings and c Manual	IICK Save to apply IAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		eboot eboot	Detail Detail		
Set-u Modify All Laun Displa Port# 0 0	IP y any availat automatic ach discovery lay (4 RX) # Name RX-1 RX-2	ole settings and c Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-70-E2	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	•		eboot	Detail		
Set-u Modif Laun Displ: 0 0 0 0	IP y any availat utomatic ach discovery lay (4 RX) F Name RX-1 RX-2 RX-3 RX-4	ole settings and c Manual	IICK Save to apply IAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		eboot eboot	Detail Detail		
Set-u Modifi () A Laun Displ: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	p y any availat uutomatic hch discovery lay (4 RX) Name RX-1 RX-2 RX-3 RX-4 Ce (2 TX)	Manual	IICK Save to apply IAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	<ul><li>4</li><li>4</li><li>6</li><li>6</li></ul>		eboot eboot	Detail Detail		
Set-u Modifi Laun Displ: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	IP Vy any available who matic who discovery lay (4 RX) F Name RX-1 RX-2 RX-3 RX-4	ole settings and c Manual	AC address 00-08-78-00-70-E2 00-08-78-00-76-59 00-08-78-00-76-63 00-08-78-00-76-63	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.468.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	I DHCP		eboot eboot eboot	Detail Detail Detail		
Set-u Modifi () A Laun Displ: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	p y any availat uutomatic hch discovery lay (4 RX) Name RX-1 RX-2 RX-3 RX-4 Ce (2 TX)	Vie settings and c O Manual	IICK Save to apply IAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.60 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	<ul><li>4</li><li>4</li><li>6</li><li>6</li></ul>		eboot eboot	Detail Detail		

Figure 183: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 184).

	b Network	Controller									
Prod	lucts	Settings	Softv	vare Update	Help						
		PRODUC ni Over IP (50	<b>T :</b> 00752/753/754/	755/756)   Mu	ıxlab   Matrix	Virtua	I				
	Set-up	Matrix	Video Wall	RS-232	IR		Firr	nware			
• A		O Manual	click Save to apply	your changes							
• A Laun Displ	rý any avalla Automatic Inch discovery Iay (4 RX)	O Manual			MASK	DHCP	DIP				
• A Laun Displ	fy any availa Automatic nch discovery	O Manual	Click Save to apply MAC address 00-08-78-00-7D-E2	IP address	MASK 255.255.255.0	DHCF	) DIP	Reboot	Detail	UPDATED	
Modif A Laun Displ Port#	fy any availa Automatic Inch discovery Iay (4 RX) ¥ Name	O Manual	MAC address	IP address 192.168.168.64				Reboot	Detail		
Modif A Laun Displ Port# 0	iy any availa kutomatic nch discovery lay (4 RX) # Name RX-1	O Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0						
Modif A Laun Displ Port# 0 0	iy any availa kutomatic nch discovery lay (4 RX) # Name RX-1 RX-2	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0			Reboot	Detail	UPDATED	
Modif  A Laun Displ Port# 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	y any availa automatic nch discovery lay (4 RX) # Name RX-1 RX-2 RX-3	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* * *		Reboot Reboot	Detail Detail	UPDATED UPDATED	
A     A     Laun     Displ     Port#     0     0     0     Source	y any availation the discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-3	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* * *		Reboot Reboot	Detail Detail	UPDATED UPDATED	
A     A     Laun     Displ     Port#     0     0     0     Source	v any availa wutomatic tich discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 ce (2 TX)	O Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-50 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	8 8 8		Reboot Reboot	Detail Detail	UPDATED UPDATED	

Figure 184: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 185).

Device Detai	1
Custom Name:	RX-1
	500757-RX
	00-0B-78-00-7D-E2
	192.168.168.64 (DHCP: ON)
	0.5.0.0.20160812
Encoder Version:	
Group IP:	239.255.42.207
Video Resolution:	
Audio Format:	
Cancel	

Figure 185: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 186).

Mux	Lab					Language: En
Nuxlab Network (		Softwa	re Update	Help		
	PRODUCT i Over IP (500	: 752/753/754/75	i5/756)   Muxla	b   Matrix V	irtual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Connect your disp bottom to make th		sources below. Onc	e you've selected t	ne displays you	want to change, use the "C	onnect" button at the
DISPLAY		SOURCE		PRESE	ETS	
RX-1		· •	> Current ac No preset s		▼ ID: 1	
				nt connections in f		
			> Save curre	nt connections as	new preset: Create	
			> Delete folio	wing preset:		
Connect					•	

Figure 186: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "RX-1") and selects which source to connect it to (Figure 187).

Products	Settings	Softwa	re Update	Help			
SELECTE	O PRODUCT	·:					
Setup 1 : Hdi	mi Over IP (500	0752/753/754/75	55/756)   Muxla	ab   Matrix Vi	rtual		
				IR	Firmware		
Set-up	Matrix	Video Wall	RS-232				
	splays to the desired	Video Wall d sources below. One SOURCE				the "Conne	ect" button at the
Connect your dis bottom to make	splays to the desired	d sources below. One	ce you've selected		vant to change, use	the "Conne	ect" button at the
Connect your dis bottom to make	splays to the desired	d sources below. One	ce you've selected	the displays you v	vant to change, use PRESETS	the "Conne	ect" button at the
Connect your dis bottom to make	splays to the desired	d sources below. One	ancel	the displays you v Current active Prese Vo preset selected	vant to change, use PRESETS	ID: 1	ect" button at the
Connect your dis bottom to make	splays to the desired	d sources below. One	ancel	the displays you v Current active Prese Vo preset selected	vant to change, use PRESETS at:	ID: 1	ect" button at the
Connect your dis bottom to make	splays to the desired	d sources below. One	ancel	the displays you v Current active Prese No preset selected Save current connect	PRESETS t: t: tions in following prese tions as new preset:	ID: 1	ect" button at the
Connect your dis bottom to make	splays to the desired	d sources below. One	ancel	the displays you v Current active Prese No preset selected Save current connect	PRESETS	ID: 1	ect" button at the

Figure 187: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 188).

luxlab Network	Controller					
Products	Settings	Softwa	nre Update	Help		
Setup 1 : Hdn	PRODUCT ni Over IP (500	752/753/754/75				
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Connect your dis bottom to make the	plays to the desired the connections.	sources below. On	ce you've selected t	he displays you	want to change, use t	he "Connect" button at the
DISPLAY		SOURCE		PRESE	ETS	
RX-1		DVD-1 V SUC	CCESS > Current ad		▼ ID: 0	
			into preserve	ent connections in fe		
			- ouve curr		T	
			> Save curre	ent connections as i		
					Create	
			> Delete foll	owing preset:	Ŧ	
Connect						

Figure 188: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 189) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS
> Current active Preset:
No preset selected <b>v</b> ID: 0
<ul> <li>&gt; Save current connections in following preset:</li> <li>▼</li> <li>&gt; Save current connections as new preset:</li> </ul>
Preset 1 Create
> Delete following preset:

Figure 189: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 190).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
Create SUCCESS
> Delete following preset:

Figure 190: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 191).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 191: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 192).

192.168.168.50 says:	×
Are you sure to delete this preset ?	
Prevent this page from creating additional dialogues.	
<b>OK</b> Cancel	
	_

Figure 192: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 193).

PRESETS			
> Current active Preset:			
[1] Preset 1	ID:	1	
> Save current connections in following preset:			
> Save current connections as new preset: Create			
> Delete following preset:			
<b></b>	SL	JCCE	SS

Figure 193: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 194).

PRESE	TS	
> Current active Preset:		
[1] Preset 1		▼ ID: 1
> Save current connections in fo	bllowing prese	et: ▼
[1] Old Preset		
	Create	
> Delete following preset:		•

Figure 194: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 195).

PRESETS				]
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre-	set:	-	10.05	
	•	S	JCCE	SS
> Save current connections as new preset:				
Create				
> Delete following preset:				
	۲			

Figure 195: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

#### 3. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 196). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

Muxlab Network							Language:	English <u>Logo</u> i
Products	Settings	Softwa	re Update	+	Help			
	PRODUCT hi Over IP H264	-	xlab   Matrix	Virtua	I			
Set-up	Matrix	RS-232	Firmware					
Update your device Select a device - Baud rate:		tion settings here. ▼ bits: 8   Parity bits	: None   Stop bi	ts: 1 ]		 		
Save						 		
Data to send in Send	n HEX (ex: A013	B155C5)						

Figure 196: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 197).

Muxlab Network C						Language:	English <u>Logo</u>
Products	Settings	Softwa	re Update	Help	þ		
SELECTED I Setup 1 : Hdmi		-	ıxlab   Matrix	Virtual			
Set-up	Matrix	RS-232	Firmware				
Update your device	's RS-232 connec	tion settings here.					
Select a device:	DVD-1	•					
- Baud rate: 1	15200 🔻 [ Data t	oits: 8   Parity bits	: None   Stop bi	ts: 1 ]			
Save							
Data ta constitu		D45505)				 	]
Data to send in	HEX (ex: AU13	815505)					
Send							

Figure 197: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, DVD-1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to DVD-1. That transmitter will then send the specified data command to DVD-1.

Note that no RS232 feedback is sent to the Network Controller when sending an RS232 command originating from the Network Controller in the direction of the transmitter (to DVD-1).

When sending RS-232 commands directly from a PC to any transmitter or receiver, in pass-through mode, this is automatically accomplished by the existing connection between the transmitter and receiver. As such this connection must exist for pass-through to operate.

## **IR Pass-through**

Special note concerning IR pass-through. This functions in the same manner as RS232 pass-through above, but is limited in one direction, from receiver to transmitter to control source end devices. Thus a connection between transmitter and receiver, automatically establishes an IR pass-through from the receiver to the transmitter.

Note that IR commands sent from the Network Controller is not supported on the 500757.

### 4. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 198).

Muxlab Network Co						Language:	English • Logou
Products	Settings	Softwa	re Update	Help			
SELECTED F Setup 1 : Hdmi		-	ıxlab   Matrix \	/irtual			
Set-up	Matrix	RS-232	Firmware				
DISPLAY RX-1 (500757-RX) RX-2 (500757-RX) RX-3 (500757-RX) RX-4 (500757-RX) SOURCE DVD-1 (500757-TX) DVD-2 (500757-TX)		ehange Dis	olays (RX)	Source (TX)	ave to apply your		
Set-up DISPLAY RX-1 (500757-RX) RX-2 (500757-RX) RX-3 (500757-RX) RX-4 (500757-RX) SOURCE DVD-1 (500757-TX)	Matrix	RS-232 Modify * Dis Choos v0.5.0.201600 v0.5.0.201600 v0.5.0.201600 v0.5.0.201600 v4.0.0.0201600	Firmware any available settin se file No file chose Apply 312 312 312 312 312	ngs and click S Source (TX)	ave to apply your		

Figure 198: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

## **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 199) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

	Language: 🖻
MuxLab	
Products   Settings   Software Update   H	elp
Network Administration	
Network	
Use the form below if you'd like to set manual network settings.	
LAN 1	
Use DHCP: O Yes ® No	
IP address:	
192 . 168 . 168 . 50	
Network mask:	
255 . 255 . 255 . 0	
Router: 192 . 168 . 168 . 1	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 55	
Save	
_ LAN 2	
Use DHCP:      Yes      No	
IP address:	
Network mask:	
PROBVER HIGH.	
Router:	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 56	
Save	

Figure 199: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 200).

MUX Iuxlab Netwo	rk Controller					Language:	Engl
Products	Settings	Software Upda	te   H	Help			
Network	Administration						
Select a User User Name new password Confirm new p User Type:	Jser Account Or	•					
	nit with the selected data						
WARNING ! Restore	fou MUST FIRST set the	IP address of this contro	oller using the s	same as the con	troller this backup	o file come from !!!	
Backup data Backup the o Backup	ata and save it in a file						
Get Logs Get all logs i Download L							

Figure 200: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 201). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the

update.

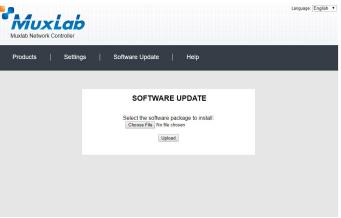


Figure 201: Software Update Screen

## Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 202).

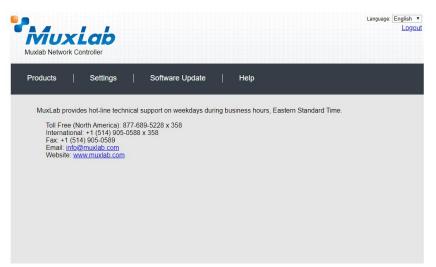


Figure 202: Help Screen

# Extender Model 500758/500778

## **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 203).

Muxlab Ne					
Products		e   Softwar	n Lladato I	Help	
Produce	s   Setting	s   Soitwar	e Update	нер	
SELEC	T A PRODUC	T TO ADD:			
				· ADD DEVICE	
	CURRENT SY	TEM.			
TOUR					
ID	Custom Name	Product Name	Compagny	Product type	

Figure 203: Products Screen – Initial View

In the **SELECT A PRODUCT TO ADD:** drop down box, select **Hdmi Over IP 4K** (500758/759) and then click on **ADD DEVICE** (Figure 204).

Iuxiab Network Controller	Language: English • Logou
Products   Settings   Software Update	Help
SELECT A PRODUCT TO ADD:	
	ADD DEVICE
8-Button IP PoE Control Panel (500816-IP)	
AV Over IP 4K/60 (500760/761) HDMI over IP (500752/753/754/755/756)	Туре
HDMI over IP 4K (500758/759/770/771/773/777/778)	Select
HDMI over IP H264 (500757)	
HDMI over IP H264/H265 (500762/763)	

Figure 204: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 205). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 203), without a product being added.

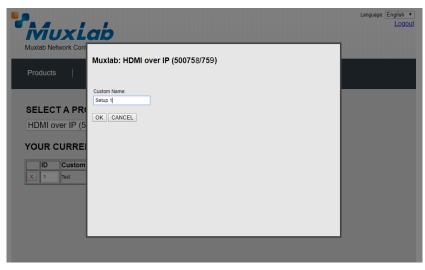


Figure 205: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 206).

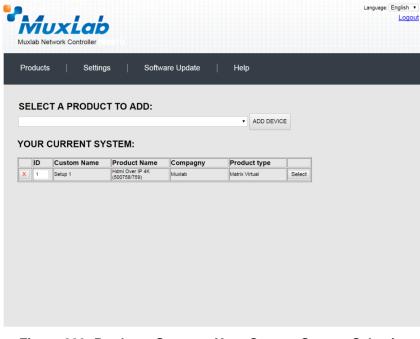


Figure 206: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the **ID** field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 207).

Muxlab Network		192.168.168 Do you want to	.50 says:	ed device list ?	Cancel	Language: En
Products	Settings	Softwar	re Update	Help		
	PRODUCT	-	luxlab   Matr	ix Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Set-up Modify any availa	ble settings and click	k Save to apply you	r changes			
<ul> <li>Automatic</li> </ul>	O Manual					

Figure 207: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. HDMI CEC
- 6. Firmware

### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 208).

Products     Settings     Software Update     Help       SELECTED PRODUCT : Setup 1 : Hdmi Over IP 4K (500758/759)   Muxlab   Matrix Virtual       Set-up     Matrix     Video Walt     RS-232     HDMI-CEC     Firmware       Set-up       Modify any available settings and click Save to apply your changes       • Automatic     Manual       Launch discovery	Muxlab Network						Language	
Setup 1 : Hdmi Over IP 4K (500758/759)   Muxlab   Matrix Virtual       Set-up     Matrix     Video Wall     RS-232     HDMI-CEC     Firmware       Set-up     Matrix     Video Wall     RS-232     HDMI-CEC     Firmware       Set-up     Matrix     Video Wall     RS-232     HDMI-CEC     Firmware       Modify any available settings and click Save to apply your changes <ul> <li>Manual</li> </ul>	Products	Settings	Softwar	e Update	Help			
Set-up Modify any available settings and click Save to apply your changes • Automatic O Manual			-	luxlab   Matri	x Virtual			
Modify any available settings and click Save to apply your changes      Automatic      Manual	Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		

Figure 208: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500758/778 transmitters) and display side devices (500758/778 receivers), and will display the scan results in tabular form (Figure 209).

Each 500758/778 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 210 (orange highlighted fields).

									Canguag	e: English Logo
TV	iuxia	D								
/luxla	ab Network Controll	er (500811)								
Pro	ducts   Se	ettings   So	oftware Update	Help						
SEL	ECTED PRO	DUCT :								
Setu	ıp 1 : Hdmi Over	IP 4K (500758/75	9)   Muxlab   M	atrix Virtual						
	Set-up M	atrix Video Wa	all RS-232	HDMI-CE	c	Firr	nware			
		ngs and click Save to ap	ply your changes							
• . Lau	ný any available settin Automatic Manu nch discovery Iay (4 RX)		ply your changes							
Mod • . Lau Disp	Automatic O Manu		ply your changes IP address	MASK	DHCF	PDIP				
Mod • . Lau Disp	Automatic Mani nch discovery lay (4 RX)	ual MAC address	IP address	MASK 255.255.255.0	DHCF	P DIP	Reboot	Detail		
Mod Lau Disp Port	Automatic Man nch discovery Iay (4 RX) # Name	MAC address 2 00-08-78-00-7D	IP address E2 192.168.168.64				Reboot Reboot	Detail Detail		
Mod Lau Disp Port 0	Automatic Manu nch discovery lay (4 RX) # Name RX-00-0B-78-00-7D-E	MAC address 22 00-08-78-00-7D 39 00-08-78-00-7E	IP address E2 192.168.168.64	255.255.255.0		0				
Mod Lau Disp Port 0 0	Automatic Man nch discovery lay (4 RX) # Name RX-00-08-78-00-7D-E RX-00-08-78-00-7E-5	MAC address 52 00-08-78-00-7D 59 00-08-78-00-7E 50 00-08-78-00-7E	IP address E2 192.168.168.64 59 192.168.168.60	255.255.255.0 255.255.255.0	<ul><li></li><li></li><li></li><li></li><!--</td--><td></td><td>Reboot</td><td>Detail</td><td></td><td></td></ul>		Reboot	Detail		
Mod Lau Disp Port 0 0 0	Automatic Manu nch discovery lay (4 RX) # Name RX-00-0B-78-00-70-6 RX-00-0B-78-00-7E-6 RX-00-0B-78-00-7E-6 RX-00-0B-78-00-7E-6	MAC address 52 00-08-78-00-7D 59 00-08-78-00-7E 50 00-08-78-00-7E	IP address E2 192.168.168.64 59 192.168.168.60 5E 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* * *		Reboot Reboot	Detail Detail		
Mod Lau Disp Port 0 0 0	Automatic Mann nch discovery lay (4 RX) # Name RX-00-08-78-00-7D-6 RX-00-08-78-00-7E-5 RX-00-08-78-00-7E-5	MAC address 52 00-08-78-00-7D 59 00-08-78-00-7E 50 00-08-78-00-7E	IP address E2 192.168.168.64 59 192.168.168.60 5E 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	* * *		Reboot Reboot	Detail Detail		
Mod Lau Disp Port 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Automatic         Manimum           Inch discovery         Iay (4 RX)           # Name         RX-00-06-76-00-7D-6           RX-00-06-78-00-7E-6         RX-00-06-78-00-7E-6           RX-00-06-78-00-7E-6         RX-00-06-78-00-7E-6	MAC address 22 00-08-78-00-7D 39 00-08-78-00-7E 42 00-08-78-00-7E 30 00-08-78-00-7E 30 00-08-78-00-7E	IP address E2 192.168.168.64 59 192.168.168.65 50 192.168.168.65 53 192.168.168.63 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	* * *		Reboot Reboot Reboot	Detail Detail Detail		
Mod Lau Disp Port 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Automatic         Manimum           Inch discovery         Iay (4 RX)           # Name         Rx-00-06-78-00-70-6           Rx-00-06-78-00-70-6         Rx-00-06-78-00-70-6           Rx-00-06-78-00-70-6         Rx-00-06-78-00-70-6           Wame         DVD-1	MAC address 22 00-08-78-00-70 39 00-08-78-00-7E 30 00-08-78-00-7E 30 00-08-78-00-7E 30 00-08-78-00-7E MAC address 00-08-78-00-7D	IP address           E2         192.168.168.64           59         192.168.168.65           63         192.168.168.63           IP address           IP address           D9         192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	\$ \$ \$		Reboot Reboot Reboot	Detail Detail Detail Detail		
Mod Lau Disp Port 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Automatic         Manimum           Inch discovery         Iay (4 RX)           # Name         RX-00-06-76-00-7D-6           RX-00-06-78-00-7E-6         RX-00-06-78-00-7E-6           RX-00-06-78-00-7E-6         RX-00-06-78-00-7E-6	MAC address 22 00-08-78-00-70 39 00-08-78-00-7E 30 00-08-78-00-7E 30 00-08-78-00-7E 30 00-08-78-00-7E MAC address 00-08-78-00-7D	IP address E2 192.168.168.64 59 192.168.168.65 50 192.168.168.65 53 192.168.168.63 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	I DHCF		Reboot Reboot Reboot	Detail Detail Detail		
Mod Lau Disp Port 0 0 0 0 Sou Port 0	Automatic Manine Automatic Manine Addiscovery Market Market RK-00-0B-78-00-7E-5 RX-00-0B-78-00-7E-5 RX-00-0B-78-00-7E-5 RX-00-0B-78-00-7E-4 RX-00-0B-78-00-7E-4 Market Mar	MAC address 22 00-08-78-00-70 39 00-08-78-00-7E 30 00-08-78-00-7E 30 00-08-78-00-7E 30 00-08-78-00-7E MAC address 00-08-78-00-7D	IP address           E2         192.168.168.64           59         192.168.168.65           63         192.168.168.63           IP address           IP address           D9         192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	Ø Ø Ø DHCF		Reboot Reboot Reboot	Detail Detail Detail Detail		

## Figure 209: Products Screen – Set-up Tab

	ab Network	Controller							Languaç	Logina Log
Proc	ducts	Setting	s   Softv	vare Update	Help					
		PRODUC	C (500758/759)	Muxlab   Ma	atrix Virtual					
	Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Fi	rmware			
		ble settings and	click Save to apply	your changes						
Mod • . Lau	lify any availa	O Manual	click Save to apply	your changes						
Mod • . Lau Disp	lify any availa Automatic Inch discovery	O Manual	click Save to apply MAC address	your changes	MASK	DHCP DI	Р			
Mod Lau Disp Port 0	lify any availa Automatic unch discovery blay (4 RX) t# Name RX-1	O Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0	DHCP DI		Detail		
Mod Lau Disp Port 0 0	lifý any availa Automatic unch discovery blay (4 RX) t# Name	O Manual	MAC address	IP address 192.168.168.64 192.168.168.60			Reboot	Detail Detail		
Mod Lau Disp Port 0	lify any availa Automatic unch discovery blay (4 RX) t# Name RX-1	O Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0	2	Reboot Reboot			
Mod Lau Disp Port 0 0	Iffy any availa Automatic Inch discovery Dlay (4 RX) t# Name RX-1 RX-2	O Manual	MAC address 00-0B-78-00-7D-E2 00-0B-78-00-7E-59	IP address 192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0		Reboot Reboot Reboot	Detail		
Mod Lau Disp Port 0 0 0 Sou	Ity any availa Automatic Day (4 RX) t# Name RX-1 RX-2 RX-3 RX-3 RX-4 RX-4	O Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-58 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	2 2 2	Reboot Reboot Reboot	Detail Detail		
Mod Lau Disp Port 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Iny any availa Automatic Jalay (4 RX) It# Name RX-1 RX-2 RX-3 RX-4 RX-3 RX-4 RX-4 RX-1 RX-2 RX-3 RX-4	O Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-70-E2 00-08-78-00-75-6 00-08-78-00-75-6 00-08-78-00-75-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0		P	Detail Detail Detail		
Mod Lau Disp Port 0 0 0 0 Sou Port 0	Iny any availa Automatic Innch discovery Jolay (4 RX) (# Name RX-1 RX-2 RX-3 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4	O Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-68 00-08-78-00-7E-68 MAC address 00-08-78-00-70-D9	IP address 192.168.168.64 192.168.168.65 192.168.168.63 IP2.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0		P Reboot Reboot Reboot	Detail Detail Detail Detail		
Mod Lau Disp Port 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Iny any availa Automatic Jalay (4 RX) It# Name RX-1 RX-2 RX-3 RX-4 RX-3 RX-4 RX-4 RX-1 RX-2 RX-3 RX-4	O Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-70-E2 00-08-78-00-75-6 00-08-78-00-75-6 00-08-78-00-75-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 IP2.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0		P Reboot Reboot Reboot	Detail Detail Detail		

Figure 210: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 211).

īv	fur	Lab									
	b Network (										
Prod	lucts	Settings	Softv	vare Update	Help						
e E I	ECTED	PRODUC	τ.								
			(500758/759)	Muxlab   Ma	atrix Virtual						
	Set-up	Matrix	Video Wall	RS-232	HDMI-CEC		Firm	ware			
• 4		Ole settings and O	click Save to apply	your changes							
Modi A Laur Disp	fý any availat Automatic Inch discovery Iay (4 RX)	O Manual			MACK	DHCD					
Modi A Laur Disp	fy any availat Automatic nch discovery	O Manual	Click Save to apply	your changes IP address 192.168.168.64	MASK 255.255.255.0	DHCP		Reboot	Detail		-0
Modi Laur Disp Porta	fý any availat kutomatic nch discovery l <b>ay (4 RX)</b> # Name	O Manual	MAC address	IP address		DHCP	DIP	Reboot	Detail Detail		
Modi Laur Disp Porta 0	fý any availat kutomatic nch discovery lay (4 RX) # Name RX-1	O Manual	MAC address 00-0B-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0				Detail Detail Detail	UPDATE	ED
Modi Laur Disp Ports 0 0	fý any availat nch discovery lay (4 RX) ¥ Name RX-1 RX-2	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0	•		Reboot	Detail		
Modi Laur Disp Porta 0 0 0 0	fy any availat Automatic Inch discovery Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-4	O Manual	MAC address 00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* * *		Reboot Reboot	Detail Detail		
Modi A Laur Disp Ports 0 0 0 0 Sour	fy any availat wutomatic the h discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 ce (2 TX)	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	5 5 5 5		Reboot Reboot	Detail Detail		
Modi A Lau Disp Ports 0 0 0 0 Sour Ports	tý any availat wutomatic tay (4 RX) ¥ Name RX-1 RX-2 RX-3 RX-3 Ce (2 TX) ¥ Name	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-50 00-08-78-00-7E-50 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	♥ ♥ ♥ DHCP		Reboot Reboot	Detail Detail Detail		
Modi A Lau Disp Ports 0 0 0 0 0 Sour Ports 0	ty any availat wutomatic the discovery tay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 ece (2 TX) # Name DVD-1	O Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address 00-08-78-00-7D-D9	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 MASK 255 255 255 0	€ € DHCP		Reboot Reboot Reboot	Detail Detail Detail		
Modi A Lau Disp Ports 0 0 0 0 Sour Ports	tý any availat wutomatic tay (4 RX) ¥ Name RX-1 RX-2 RX-3 RX-3 Ce (2 TX) ¥ Name	O Manual	MAC address 00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address 00-08-78-00-7D-D9	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	♥ ♥ ♥ DHCP		Reboot Reboot	Detail Detail Detail		

Figure 211: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 212). You can set the output video format and DHCP format, enable or disable auto-detect resolution and HDR.

Device Deta	il de la constant de
Custom Name:	RX-1
Model:	500758-RX
MAC Address:	00-0B-78-00-7D-E2
IP Address:	192.168.168.64 (DHCP: ON)
FW Version:	1.0.1
Group IP:	225.0.102.254
Video Resolution:	Unknown
Audio Format:	
Set output Video	Format:
Auto-detect Reso	lution:
-	
HDR Mode:	Off
-	
Set HDCP Forma	t: HDCP 1.4
Save Cancel	
LI	

Figure 212: Device Detail Dialog (500758 example)

### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 213).

Muxlab Network		n				Language:	English • Logou
Products	Settings	Softwa	are Update	Help			
	PRODUCT hi Over IP 4K (	•	Muxlab   Matri	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th DISPLAY	plays to the desired ne connections.	sources below. On	ce you've selected	the displays you wa		e "Connect" button at the	
RX-1		- <b>T</b>	> Current a	ctive Preset:			
Connect			> Save curr	rent connections in follo rent connections as new	Ŧ		

Figure 213: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "RX-1") and selects which source to connect it to (Figure 214).

						Lan	guage: English
Mux	lab						Logo
Muxlab Network							
Products	Settings	Softwa	re Update	Help			
SELECTED	PRODUCT	:					
Setup 1 : Hdm	i Over IP 4K (	500758/759)   1	/luxlab   Matri	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th		sources below. On	ce you've selected	the displays you wa	nt to change, use the	"Connect" button at	the
DISPLAY		SOURCE	Γ	P	RESETS		
RX-1		DVD-1 V Ca	ancel	Current active Preset:			
BA-1		000-1 •	ancer	No preset selected	▼ ID	: 1	
			,	Save current connectio	ins in following preset:		
					•		
			2	Save current connectio	ns as new preset:		
					Create		
			>	Delete following preset			
				-	•		
Connect							

Figure 214: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 215).

						Langua	ge: Englist
Muxlab Network	Controller						
Products	Settings	Softwa	are Update	Help			
							_
SELECTED	PRODUCT	:					
		500758/759)   I	Muxlab   Matri	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th		sources below. On	ce you've selected	the displays you wa	ant to change, use th	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	s	]	
RX-1		DVD-1 V SU	DOFOO	ctive Preset:			
		300	No preset	selected	▼ ID: 0		
			> Save cur	rent connections in follo	wing preset:		
			> Save cun	rent connections as ner	w preset: Create		
			> Delete fe	llowing preset:			
			Delete IO	lowing preset.	Ŧ		
Connect							

Figure 215: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 216) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS	
> Current active Preset:	
No preset selected V ID	): 0
<ul> <li>&gt; Save current connections in following preset:</li> <li>✓</li> <li>&gt; Save current connections as new preset:</li> </ul>	
Preset 1 Create	
> Delete following preset:	

Figure 216: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 217).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
Create SUCCESS
> Delete following preset:

Figure 217: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 218).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 218: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 219).

192.168.168.50 says:		×
Are you sure to delete this preset ?		
Prevent this page from creating additional	dialogues.	
	ОК	Cancel

Figure 219: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 220).

PRESETS	
> Current active Preset:	
[1] Preset 1	ID: 1
> Save current connections in following preset:	
> Save current connections as new preset: Create	
> Delete following preset:	
<b>T</b>	SUCCES

Figure 220: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 221).

PRES	TS	
> Current active Preset:		
[1] Preset 1		▼ ID: 1
> Save current connections in f	ollowing pres	et: ▼
[1] Old Preset		
	Create	
> Delete following preset:		
		▼

Figure 221: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 222).

PRESETS				]
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre	set:	-	10.05	
	•	S	JCCE	SS
> Save current connections as new preset:				
Create				
> Delete following preset:	•			

Figure 222: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

# 3. Products Screen - Video Wall Tab

MuxLab's Extender 500758/778 does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 223).

Muxlab Network						Language: English
Products	Settings	Softwa	re Update	Help		
SELECTED Setup 1 : Hdm			1uxlab   Matri	x Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
NO devices comp	atible with video	wall features foun	d !			
O devices comp	atible with video	wall features foun	d !			

Figure 223: Video Wall Tab

For more information on the Video Wall tab and its features, refer to the section of this manual dealing with MuxLab Extender 500754 and MuxLab Extender 500759.

#### 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 224). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

Iuxlab Network						Language:	English • Logo
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdm		: 500758/759)	/luxlab   Matri	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Update your device Select a device - Baud rate:	: -	tion settings here. ▼ bits: 8   Parity bits	s: None   Stop bi	its: 1 ]			
Data to send in	n HEX (ex: A013	3B155C5)					

Figure 224: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 225).

Iuxlab Network C						Language: E	inglish • Logoi
Products	Settings	Softwa	re Update	Help			
ELECTED		: 500758/759)	/luxlab   Matri	ix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Select a device	DVD-1	tion settings here.	:: None   Stop b	its: 1 ]			
Data to send in	HEX (ex: A013	B155C5)					

Figure 225: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, DVD-1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to DVD-1. That transmitter will then send the specified data command to DVD-1.

Note that no RS232 feedback is sent to the Network Controller when sending an RS232 command originating from the Network Controller in the direction of the transmitter (to DVD-1).

When sending RS-232 commands directly from a PC to any transmitter or receiver, in pass-through mode, this is automatically accomplished by the existing connection between the transmitter and receiver. As such this connection must exist for pass-through to operate.

# IR Pass-through

Special note concerning IR pass-through. This functions in the same manner as RS232 pass-through above, but is limited in one direction, from receiver to transmitter to control source end devices. Thus a connection between transmitter and receiver, automatically establishes an IR pass-through from the receiver to the transmitter.

Note that IR commands sent from the Network Controller is not supported on the 500758/778.

### 5. Products Screen – HDMI CEC Tab

The **HDMI CEC** tab of the Products screen enables the user to support CEC commands including Standby, Power ON, Volume Up, Volume Down, & Mute (Figure 226).

Muxlab Network						Language:	English • Logout
Products	Settings	Software	e Update	Help			
	PRODUCT : i Over IP 4K (5		uxlab   Matrix \	Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Select the devic	es you want to co	ontrol, then click	on the command	d link.			
DEVICE		Γ	COMMANDS				
758-rx			Stand By Power On				
			Volume Up				
			Volume Down				
		L	mute				

Figure 226: HDMI CEC Tab

#### 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen (Figure 227) enables the user to update the firmware:

Muxlab Network Co	100 C						Langua	ge: English • Logou
Products	Settings	Softwa	e Updat	te   I	lelp			
SELECTED P Setup 1 : Hdmi (	Over IP 4K (5	00758/759)   N						
Set-up	Matrix	change * Disp	s	ble settings and		Firmware apply your		
			,	Apply				
DISPLAY				SOURCE				
RX-1 (500757-RX) RX-2 (500757-RX) RX-3 (500757-RX) RX-4 (500757-RX)		v0.5.0.0.201608 v0.5.0.0.201608 v0.5.0.0.201608 v0.5.0.0.201608	12 🗌 12 🗍	DVD-1 (500 DVD-2 (500			0.0.20160812	

Figure 227: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

# **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 228) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

	Language: [Eng
roducts   Settings   Software Update   He	łþ
Network Administration	
History de	
Network	
Use the form below if you'd like to set manual network settings.	
LAN 1	
IP address:	
192 . 168 . 168 . 50	
Network mask: 255 , 255 , 255 , 0	
Router:	
192 . 168 . 168 . 1	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 55	
Save	
_LAN 2	
Use DHCP:   Yes O No	
Use Drice: • Yes O No	
IP address:	
Network mask:	
Router:	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 56	
Save	

Figure 228: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 229).

						Language: Er
roducts	Settings	Software	e Update	Help		
Network	Administration					
User Accounts Create a new User Select a User to ed User Name new password: Confirm new passw User Type: Create Updat	kord:	•				
Specify file: Cho	with the selected da pose File No file of MUST FIRST set	iosen	is controller usi	ng the same as ti	he controller this bac	ckup file come from !!!
Backup data	and save it in a file					

Figure 229: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 230). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

Muxlab Network Controller	,	Language.  English ▼
Products   Settings	s   Software Update   Help	
	SOFTWARE UPDATE Select the software package to install:	
	Choose File No file chosen	

Figure 230: Software Update Screen

#### Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 231).

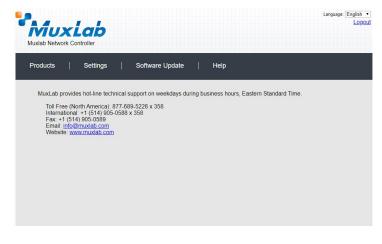


Figure 231: Help Screen

# **Extender Model 500759**

## **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 232).

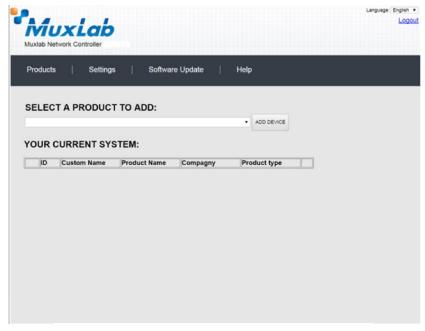


Figure 232: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP 4K (500758/759) and then click on ADD DEVICE (Figure 233).

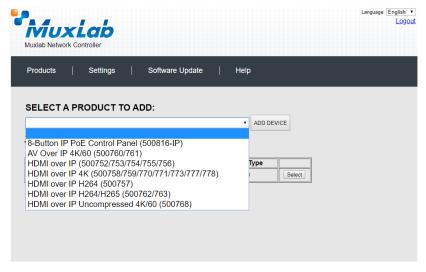


Figure 233: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 234). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 232), without a product being added.

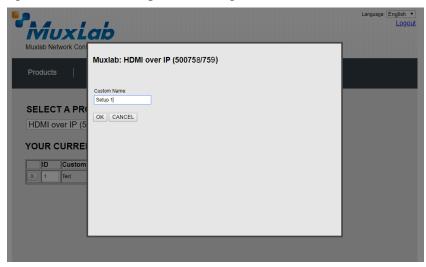


Figure 234: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 235).

M		,				Langu	uage: Engli Lo
Product	etwork controller		are Update	Help			
Floador				нер			
SELEC	T A PRODUC	T TO ADD:					
				ADD DE	/ICE		
YOUR	CURRENT SY	STEM:					
ID	Custom Name	Product Name	Compagny	Product type		1	
X 1	Setup 1	Hdmi Over IP 4K (500758/759)	Muxlab	Matrix Virtual	Select		
					Select		
		(500758/759)					

Figure 235: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 236).

Muxlab Network		192.168.168 Do you want to	50 says:	Cancel	Language: En	
Products	Settings	Softwar	re Update	Help		
SELECTED	PRODUCT	:				
Setup 1 : Hdn	ni Over IP 4K (S	500758/759)   N	luxlab   Matr	ix Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Automatic	ble settings and clici	k Save to apply you	r cnanges			

Figure 236: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Five tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. HDMI CEC
- 6. Firmware

### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 237).

IXIab Network	Controller					
roducts	Settings	Softwar	e Update	Help		
	PRODUCT ni Over IP 4K (5	: 500758/759)   M	luxlab   Matri	x Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
<ul> <li>Automatic</li> <li>aunch discover,</li> </ul>	Manual					

Figure 237: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500759 transmitters) and display side devices (500759 receivers), and will display the scan results in tabular form (Figure 238).

Each 500759 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 239 (orange highlighted fields).

			0011)								Lo
Prod	lucts	Setting	s   Softv	vare Update	Help						
		PRODUC Over IP 4	<b>∶T :</b> < (500758/759)	Muxlab   Ma	trix Virtual						
	Set-up	Matrix	Video Wall	RS-232	HDMI-CEC		Firm	wate			
• A	ify any availab	le settings and O Manual	I click Save to apply	your changes							
Modif A Laur Displ	ifý any availab Automatic nch discovery I <b>lay (4 RX)</b>	-									
Modif A Laur Displ Port#	ify any availab Automatic nch discovery I <b>ay (4 RX)</b> # Name	O Manual	MAC address	IP address		DHCP		Deheat	Deteil		
Modif A Laur Displ Port# 0	fý any availab Automatic Inch discovery Iay (4 RX) # Name RX-00-0B-78	- Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0			Reboot	Detail		
Modif A Laur Displ Port#	ify any availab Automatic nch discovery Iay (4 RX) # Name RX-00-0B-78 RX-00-0B-78	- Manual -00-7D-E2 -00-7E-59	MAC address	IP address 192.168.168.64 192.168.168.60		<b>9</b>		Reboot	Detail		
Modif A Laur Displ Port# 0 0 0	fý any availab Automatic Inch discovery Iay (4 RX) # Name RX-00-0B-78	- Manual -00-7D-E2 -00-7E-59 -00-7E-5E	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0						
Modif	fy any availab Automatic nch discovery Iay (4 RX) # Name RX-00-0B-78 RX-00-0B-78 RX-00-0B-78	- Manual -00-7D-E2 -00-7E-59 -00-7E-5E	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	*		Reboot Reboot	Detail Detail		
Modifier A A A A A A A A A A A A A A A A A A A	fy any availab Automatic Inch discovery Iay (4 RX) # Name RX-00-0B-78 RX-00-0B-78 RX-00-0B-78 RX-00-0B-78 RX-00-0B-78 RX-00-0B-78	- Manual -00-7D-E2 -00-7E-59 -00-7E-5E	MAC address 00-08-76-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-63 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0	8 8 8		Reboot Reboot	Detail Detail		
Modifier A A A A A A A A A A A A A A A A A A A	fy any availab Automatic Inch discovery Iay (4 RX) # Name RX-00-0B-78 RX-00-0B-78 RX-00-0B-78 RX-00-0B-78 RX-00-0B-78	- Manual -00-7D-E2 -00-7E-59 -00-7E-5E	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.468.168.63	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0	*	0 [ 0 [ 0 ]	Reboot Reboot	Detail Detail Detail		
Modifier A A A A A A A A A A A A A A A A A A A	rý any availab Automatic Iay (4 RX) # Name RX-00-08-78 RX-00-08 RX-08 RX-00-08 RX-00-08 RX-08 RX-00-08 RX-00-08 RX-08 RX-00-08 RX-08	- Manual -00-7D-E2 -00-7E-59 -00-7E-5E	MAC address 00-06-78-00-70-E2 00-08-78-00-7E-63 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 IP2.168.168.63 IP2.168.168.63	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 MASK	S DHCP		Reboot Reboot	Detail Detail		

# Figure 238: Products Screen – Set-up Tab

	b Network C	Lab Controller	) 0811)							Langua	
Prod	ucts	Settings	s ∣ Softv	vare Update	Help						
		PRODUC	<b>T :</b> (500758/759)	Muxlab   Ma	atrix Virtual						
		Matrix	Video Wall	RS-232	HDMI-CEC		Firm	nware			
	Set-up	Matrix	video watt								
Set-u Modif	i <b>p</b> Iy any availab		click Save to apply	your changes							
Set-u Modif • A Laun	i <b>p</b> Iy any availab	le settings and		your changes							
Set-u Modif A Laun Displ	i <b>p</b> Iy any availab utomatic inch discovery	le settings and		your changes	MASK	DHCP	DIP				
Set-u Modif A Laun Displ	IP Iy any availab utomatic ich discovery lay (4 RX)	le settings and	click Save to apply	IP address	MASK 255.255.0	DHCP	DIP	Reboot	Detail		
Set-u Modif A Laun Displ Port#	IP ly any availab utomatic ich discovery lay (4 RX) ≇ Name	le settings and	click Save to apply MAC address 00-0B-78-00-7D-E2	IP address				Reboot	Detail		
Set-u Modif A Laun Displ Port# 0	IP y any availab utomatic ich discovery lay (4 RX) # Name RX-1	le settings and	click Save to apply MAC address 00-0B-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0	۲					
Set-u Modif A Laun Displ Port# 0 0	IP y any availab utomatic ich discovery lay (4 RX) # Name RX-1 RX-2	le settings and	click Save to apply MAC address 00-08-78-00-7D-52 00-08-78-00-7D-52	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	* *		Reboot	Detail		
Set-u Modif A Laun Displ Port# 0 0 0 0 0	IP y any availab utomatic inch discovery day (4 RX) # Name RX-1 RX-2 RX-3	le settings and	Click Save to apply MAC address 00-08-78-00-70-52 00-08-78-00-70-59 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *		Reboot Reboot	Detail Detail		
Set-u Modif A Laun Displ Port# 0 0 0 0 Source	IP y any availab utomatic inch discovery lay (4 RX) 4 Name RX-1 RX-2 RX-3 RX-4	le settings and	Click Save to apply MAC address 00-08-78-00-70-52 00-08-78-00-70-59 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *		Reboot Reboot	Detail Detail		
Set-u Modif A Laun Displ Port# 0 0 0 0 Source	p y any availab utomatic ich discovery ay (4 RX) Name RX-1 RX-2 RX-3 RX-4 Ce (2 TX)	le settings and	Click Save to apply MAC address 00-08-78-00-70-52 00-08-78-00-7E-59 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255,255,255,0 255,255,255,0 255,255,255,0 255,255,255,0	5 5 5 5		Reboot Reboot	Detail Detail		

# Figure 239: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 240).

	b Network	Controller								
Prod	ucts	Settings	i ∣ Softv	vare Update	Help					
SEL	ECTED	PRODUC	т.							
			(500758/759)	Muxlab   Ma	atrix Virtual					
5	Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Fir	mware			
. Ai		O Manual	click Save to apply	your changes						
Modify and Laun Displa	ý any availa utomatic ich discovery <b>ay (4 RX)</b>	O Manual								
Modify and Laun Displa	ý any availa utomatic ich discovery	O Manual	click Save to apply MAC address	IP address	MASK 255 255 0	DHCP DI		Detail		
Modify and Laun Displa Port#	y any availa utomatic ich discovery <b>ay (4 RX)</b> Name	O Manual	MAC address	IP address 192.168.168.64			Reboot	Detail Detail		
Modify Ar Laun Displa Port# 0	y any availa utomatic ich discovery <b>ay (4 RX)</b> Name RX-1	O Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0	<b>e</b> -	Reboot Reboot	Detail Detail Detail	UPDATED UPDATED UPDATED	
Modify and And Laun Displa Port# 0 0	y any availa utomatic ch discovery ay (4 RX) Name RX-1 RX-2	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	2 2	Reboot Reboot Reboot	Detail	UPDATED	
Addify     Addify     Addify     Laun     Displ:     Port#     0     0     0     0	y any availa utomatic ch discovery <b>ay (4 RX)</b> Name RX-1 RX-2 RX-3 RX-4	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	2   2   2	Reboot Reboot Reboot	Detail Detail	UPDATED UPDATED	
Modify and Adding Laun Displi Port# 0 0 0 Source Source	y any availa utomatic ch discovery ay (4 RX) * Name RX-1 RX-2 RX-3 RX-4 See (2 TX)	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	9 9 9	Reboot Reboot Reboot	Detail Detail	UPDATED UPDATED	
Modify Au Laun Displi Port# 0 0 0 0 0 0 0 0 0 0 0 0 0	y any availa utomatic ch discovery ay (4 RX) Name RX-1 RX-2 RX-3 RX-4 RX-4 Ex (2 TX) Name	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-58 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	U DHCP DI	Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Modify and Adding Laun Displi Port# 0 0 0 Source Source	ý any availa utomatic ch discovery ay (4 RX) * Name RX-1 RX-2 RX-3 RX-4 See (2 TX)	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.65 192.168.168.63 IP2.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	9 9 9	Reboot Reboot Reboot Reboot	Detail Detail	UPDATED UPDATED	

Figure 240: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 241).

Model: 500759-RX	
MAC Address: 00-0B-78-00-7D-E2	
MAC Address: 00-0B-78-00-7D-E2	
IP Address: 192.168.168.64 (DHCP: ON)	
FW Version: 1.0.1	
Group IP: 225.0.102.254	
Video Resolution: Unknown	
Audio Format:	
Set output Video Format:	Ŧ
Auto-detect Resolution:	
•	
HDR Mode: Off	۲
-	
Set HDCP Format: HDCP 1.4	•
Save Cancel	

Figure 241: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 242).

Muxlab Network						Language:	English •
Products	Settings	Softwa	are Update	Help			
	PRODUCT hi Over IP 4K (	•	Muxlab   Matri:	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th		sources below. On	ce you've selected	the displays you wa	ant to change, use th	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	S	]	
			> Current a	ctive Preset:			
RX-1		- •	No preset :	selected	▼ ID: 1		
			> Save curr	ent connections in follo	wing preset:		
			> Save curr	ent connections as nev	« preset:		
					Create		
			> Delete fol	lowing preset:			
					•		
Connect							

Figure 242: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "RX-1") and selects which source to connect it to (Figure 243).

xlab Network	Controller Controller	) Softwar	e Update	Help			
00000	- Cettings		<del>e opu</del> ate				
	PRODUCT	-					
tup 1 : Hdı	ni Over IP 4K (5	500758/759)   M	luxlab   Mat	rix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
	plays to the desired	sources below. Once	e you've selecte	d the displays you wa	nt to change, use the	"Connect" butt	on at the
ottom to make	the connections.						
DISPLAY	ne connections.	SOURCE		F	RESETS		
	are connections.	SOURCE	ncel	> Current active Preset:		<b>5</b> 1	
ISPLAY	are connections.		ncel			2: 1	
ISPLAY			icel	<ul> <li>Current active Preset:</li> <li>No preset selected</li> </ul>	▼ II ins in following preset: ▼	2: 1	
ISPLAY	ine connections.		icel	<ul> <li>&gt; Current active Preset:</li> <li>No preset selected</li> <li>&gt; Save current connection</li> </ul>	It following preset:     Create :	2: 1	
ISPLAY	ue connections.		icel	<ul> <li>Current active Preset:</li> <li>No preset selected</li> <li>Save current connection</li> <li>Save current connection</li> </ul>	If following preset:     T	D: 1	

Figure 243: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 244).

						Langua	ge: English Logo
Products	Settings	Softwa	ire Update	Help			
	PRODUCT ni Over IP 4K (	•	Muxlab   Matr	ix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your dis bottom to make t		sources below. On	ce you've selected	I the displays you wa	ant to change, use the	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	S	]	
RX-1		DVD-1 V SUC	CESS > Current	active Preset:	▼ ID: 0		
				rrent connections in follo	owing preset:		
			> Save cu	rrent connections as ne	v preset: Create		
			> Delete fo	bllowing preset:			
Connect			Ľ			1	

Figure 244: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 245) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS	
> Current active Preset:	
No preset selected  V ID: 0	
<ul> <li>&gt; Save current connections in following preset:</li> <li>✓</li> <li>&gt; Save current connections as new preset:</li> </ul>	
Preset 1 Create	
> Delete following preset:	

Figure 245: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 246).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset: ▼
> Save current connections as new preset:
Create SUCCESS
> Delete following preset:

Figure 246: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 247).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 247: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 248).

192.168.168.50 says:	×
Are you sure to delete this preset ?	
Prevent this page from creating additional dialogues.	
<b>OK</b> Cancel	

Figure 248: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 249).

PRESETS	
> Current active Preset:	
[1] Preset 1	ID: 1
> Save current connections in following preset:	
> Save current connections as new preset: Create	
> Delete following preset:	
<b>T</b>	SUCCES

Figure 249: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 250).

PRESE	TS	
> Current active Preset:		
[1] Preset 1	▼ ID:	1
> Save current connections in fo           [1] Old Preset	llowing preset: ▼	
	Create	
> Delete following preset:		
	•	

Figure 250: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 251).

PRESETS				
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre-	set:	-		
	•	S	JCCE	SS T
> Save current connections as new preset:				
Create				
> Delete following preset:				
	۲			

Figure 251: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

#### 3. Products Screen - Video Wall Tab

The **Video Wall** tab enables the user to configure an NxM video wall consisting of NxM monitors, all of the same size (Figure 252).

Muxlab MNC	Home	Setup site	Video Wall	Devices -	Logout
Video Wall Set-u	p				Settings
Saved V-Wall + V-Wall Selected: Save Apply Save as: new Configuration Create Delete		ID::		Drag n drop here a video wall template or Select a previous configuration from the "Saved Configuration" list	
			Select all 📄		
				┿ Video Wall Set-Up : Step #2	

Figure 252: Video Wall Tab

This screen is laid-out in a 3-step pattern, with a display pane that shows the NxM video wall setup:

1. The user clicks on +Video Wall Set-Up: Step #1, which expands to provide the user with video wall size options (Figure 253).

Muxlab MNC Home Setup site	Video Wall Devices -	Logout
Video Wall Set-up		Settings
Saved V-Wall - V-Wall Selected: ID: Save Apply Save as: new Configuration Create Delete	Drag n drop here a video wall template or Select a previous configuration from the "Saved Configuration" list	
	— Dess a dess a video uvil tamalate	
2x2 3x3 4x4 Cust	- Drag n drop a video wall template vm Size	
	+ Video Wall Set-Up : Step #2	
	➡ Video Wall Set-Up : Step #3	

Figure 253: Video Wall Tab

a. By clicking on <u>and dragging</u> any of the N*x*N preconfigured boxes into the display pane, the user creates a video matrix of the same size. In the example shown in Figure 254, a 2x2 video wall consisting of 4 monitors is created. Custom video wall sizes may also be created.

Muxlab MNC	Home	Setup site	Video Wall	Devices -	Logout
Video Wall Set-	up				Settings
Saved V-Wall		ID::		Drag n drop here a video wall template or Select a previous configuration from the "Saved Configuration" list	
Save App Save as: new Configuratio Create Delete				2x2	
			Select all 📄		
				- Drag n drop a video wall template	
2x2 3x3	4x4	Cust	tom Size		
				+ Video Wall Set-Up : Step #2	
				+ Video Wall Set-Up : Step #3	

Figure 254: Video Wall Tab – Dragging to Create a 2x2 Video Wall

b. Once dragged into the display pane, the user is asked for display dimensions (Figure 255).

Display din	nension	×
Unit of measure:	inch •	
Screen diagonal length:	þiagonal length	
	Ok	

Figure 255: Video Wall Tab – Newly Created 2x2 Video Wall

c. Once created, the display panel shows an empty (unpopulated) video wall consisting of 4 monitors (Figure 256).

Muxiab MNC Home	Setup site	Video Wall	Devices -	Logout
Video Wall Set-up				Settings
Saved V-Wall +				
V-Wall Selected:	ID::			
Save Apply				
Save as:		<u> </u>		
new Configuration				
Delete				
		Select all		
			- Drag n drop a video wall template	
2x2 3x3 4x4	Cust	om Size		
			✤ Video Wall Set-Up : Step #2	
			+ Video Wall Set-Up : Step #3	

Figure 256: Video Wall Tab – Newly Created 2x2 Video Wall

2. The user clicks on +**Video Wall Set-Up: Step #2**, which expands to provide the user with display mapping options (Figure 257).

Muxlab MNC Home	Setup site Vide	eo Wall Devices -		Logo
Video Wall Set-up				Settings
Saved V-Wall - V-Wall Selected: Save Apply Save as:	ID::			
new Configuration Create Detete				
	Sel	lect all		
			n drop a video wall template	
2x2 3x3 4	Custom Si	ze		
		<b>-</b> 5	Select and place Displays	
RX-1	RX-2	RX-3	RX-4	
		<b>+</b> Vi	deo Wall Set-Up : Step #3	

Figure 257: Video Wall Tab – Newly Created 2x2 Video Wall

- a. The user clicks on a given display in the lower section of the screen. This highlights the display in a light blue box. (Note that dragging and dropping displays into the display pane is not allowed.)
- b. The user clicks on any one of the cells in the display pane.
- c. The clicked cell in the display pane is now mapped to the given display.
- d. The user must continue mapping the remaining displays to the remaining cells. The display pane then becomes fully display mapped (Figure 258).

RX-3	RX-2
Sh H:0,V:0	Sh H:0,V:0
Sc H:0,V:0	Sc H:0,V:0
RX-1	RX-4
Sh H:0,V:0	Sh H:0,V:0
Sc H:0,V:0	Sc H:0,V:0

Figure 258: Video Wall Tab – Fully Display Mapped Video Wall

3. The user clicks on +Video Wall Set-Up: Step #3, which expands to provide the user with source mapping options (Figure 259).

Saved V-Wall - /-Wall Selected: ID::	RX-3 Sh H:0,V0	RX-2
Save Apply	Sc H:0,V:0	Sh H.0,V.0 Sc H.0,V.0
ave as: new Configuration Create Detete	RX-1 Sh H:0,V0 Sc H:0,V0	RX-4 Sh H:0,V:0 Sc H:0,V:0
Select	t all 📄 🗕 Drag n drop a video wall template	
2x2 3x3 4x4 Custom Size		
	Select and place Displays	
RX-1 RX-2	RX-3 RX-4	
RX-1 RX-2	RX-3 RX-4	

Figure 259: Video Wall Tab – Connecting Sources to Receivers

- a. The user clicks on one or more cells in the display pane. Once clicked, the panes will change to blue to indicate that they are now actively selected.
- b. The user clicks on any single source shown in the lower part of the screen.
- c. The clicked cell(s) in the display pane is (are) now mapped to the given source.
- d. The user maps some or all sources to all cells. The display pane then becomes fully source mapped (Figure 260).



Figure 260: Video Wall Tab – Fully Source Mapped Video Wall

To configure the display size and bezel dimensions of all the displays (assumed to be all equal) comprising the video wall, the user clicks on **Settings** in the top right hand side of the **Video Wall** tab. This brings up the display setting options (Figure 261).

Video Wal	ll Set-up										Settings
Unit inch <b>v</b>	screen width 36.54	screen height	bezel top	bezel bottom	bezel left	bezel right	scale+	scale -	Shift .	Shift .	Reset 🛞
		20.58		0.1			scale+	scale -	Shift .	Shift .	
							↔	↔	+	+	

Figure 261: Video Wall Tab – Display Setting Options

Since the video wall consists of only one type of display (all displays are the same), the user only needs to modify the dimensions for only one representative display.

Note that **Unit**, **screen width**, and **screen height** values are derived from the information provided by the user when first creating the video wall (Figure 255). Also, **Bezel top**, **bezel bottom**, **bezel left**, and **bezel right** are all set to 0.1 inch by default, but these values may be changed.

Display settings options also allow the user to scale or shift the image of one or several displays at the same time. The user must first selects the display(s) to be modified in the display plane, and then clicks on any of the eight buttons (Scale/Shift) in the display setting options. Clicking on **Reset** resets any changes made to these eight buttons, not to **Unit**, screen width, screen height, or bezel values.

The settings of any video wall can be saved as a named configuration by using the options shown in the left hand side of the **Video Wall** tab. Video wall configurations can be named, saved, deleted, or activated.

Note that not all displays in an actual video wall need to be included in a given saved configuration, simply start the three steps mentioned above, but only include the required subset of the displays to define as a given configuration, and save this configuration. For example, if the actual video wall consists of four (4) horizontal displays by four (4) vertical displays (4x4 video wall), a 2x2 configuration can be created consisting of only the upper-left corner four displays. To do so create a 2x2 video wall configuration in Step #1 above, then assign the corresponding four displays in the upper-left corner in Step #2 above, then in Step #3 assign the initial source, and save this configuration. Tip, use a configuration name that is representative of the actual setup, such as "Upper Left 2x2" in this case.

Any saved configuration can be activated and displayed on the video wall with the initial assigned source by simply loading it. Once activated, the initial source can easily be changed by repeating Step #3 above with a different source selected, after which you can either save this change or choose not to save it so the next time this configuration is activated the initial source remains unchanged.

### 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 262). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

Muxlab Network	Controller					L
Products	Settings	Softwa	re Update	Help		
	PRODUCT hi Over IP 4K (	: 500758/759) N	luxlab   Matri	x Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Select a device		Dits: 8   Parity bits	: None   Stop bi	ts: 1 ]		
Save						
Care		B155C5)				
Data to send i	n HEX (ex: A013					
	n HEX (ex: A013					
Data to send i	n HEX (ex: A013					

Figure 262: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 263).

Products	Settings	Softwar	e Update	Help		
SELECTED PI Setup 1 : Hdmi C			uxlab   Matri	x Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Update your device's Select a device: - Baud rate: 115	DVD-1	•	None   Stop bi	ts: 1 ]		
Save						
Data to send in H	EX (ex: A013)	3155C5)				

Figure 263: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, DVD-1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to DVD-1. That transmitter will then send the specified data command to DVD-1.

Note that no RS232 feedback is sent to the Network Controller when sending an RS232 command originating from the Network Controller in the direction of the transmitter (to DVD-1).

When sending RS-232 commands directly from a PC to any transmitter or receiver, in pass-through mode, this is automatically accomplished by the existing connection between the transmitter and receiver. As such this connection must exist for pass-through to operate.

### IR Pass-through

Special note concerning IR pass-through. This functions in the same manner as RS232 pass-through above, but is limited in one direction, from receiver to transmitter to control source end devices. Thus a connection between transmitter and receiver, automatically establishes an IR pass-through from the receiver to the transmitter.

Note that IR commands sent from the Network Controller is not supported on the 500759.

# 5. Products Screen – HDMI CEC Tab

The **HDMI CEC** tab of the Products screen enables the user to support CEC commands including Standby, Power ON, Volume Up, Volume Down and Mute (Figure 264).

Muxlab Network C						Language: English Logo
Products	Settings	Softwar	re Update	Help		
SELECTED						
Setup 1 : Hdmi	Over IP 4K (	500758/759)   M	luxlab   Matrix \	Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Select the device	es you want to c	ontrol, then click	on the command	d link.		
DEVICE		ſ	COMMANDS			
			Stand By			
758-rx			Power On			
			Volume Up			
			Volume Down			
			volume Down			

Figure 264: HDMI CEC Tab

# 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 265).

Auxiab Network C						Language: En
Products	Settings	Softwa	re Update	Help		
SELECTED						
Setup 1 : Hdmi	Over IP 4K (	500758/759)   N	Auxiab   Ma	atrix Virtual		
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
	Matrix	Modify change * Disp	any available	settings and click Save to Source (TX)		
	Matrix	Modify change * Disp	any available s plays (RX)	settings and click Save to Source (TX) chosen		
	Matrix	Modify change * Disp	any available es plays (RX) se file No file o App	settings and click Save to Source (TX) chosen		

Figure 265: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

# **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 266) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

	Language: Englis
MuxLab	
luxlab Network Controller	
Products   Settings   Software Update   Help	
······································	
Network Administration	
Network	
Use the form below if you'd like to set manual network settings.	
-LAN 1	
Use DHCP: O Yes ® No	
IP address:	
192 . 168 . 168 . 50 Network mask:	
255 . 255 . 255 . 0	
Router:	
192 . 168 . 168 . 1	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 55	
Save	
LAN 2	
Use DHCP:	
IP address:	
Network mask:	
Router:	
Mac Address: 00 : 0E : C4 : D3 : B9 : 56	
00 : 0E : C4 : D3 : BA : D0	
Save	

Figure 266: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 267).

					Language: [English Lo
luxlab Netwo		Software Update	e   Help		
Network	Administration				
Select a User User Name new password Confirm new p User Type:	User Account Or	<b>T</b>			
	ta unit with the selected data f Choose File No file chose				
WARNING ! Restore	You MUST FIRST set the	IP address of this control	ler using the same as t	he controller this backup fil	e come from !!!
Backup dat Backup the Backup	ta data and save it in a file				
Get Logs Get all logs i Download L					

Figure 267: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 268). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

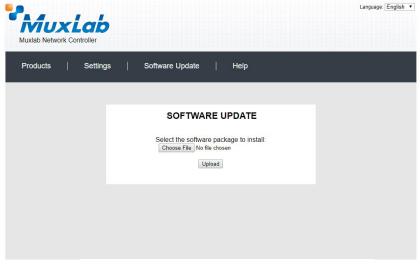


Figure 268: Software Update Screen

### Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 269).

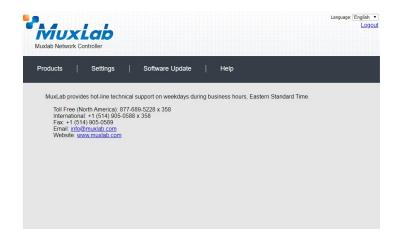


Figure 269: Help Screen

# Extender Model 500770

## **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 270).

A 4.					Language: En
<b>NII</b>	ıxLab				1
	twork Controller				
MUXIBO NO	NAMER CONSIDER				
-					
Products	Setting:	s   Sonwar	e Update	Help	
SELEC	T A PRODUCT	T TO ADD:			
				· ADD DEVICE	
YOUR	CURRENT SYS	STEM:			
ID	Custom Name	Product Name	Compagny	Product type	

Figure 270: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select HDMI over IP (500758/759/770/771/773/777) and then click on ADD DEVICE (Figure 271).

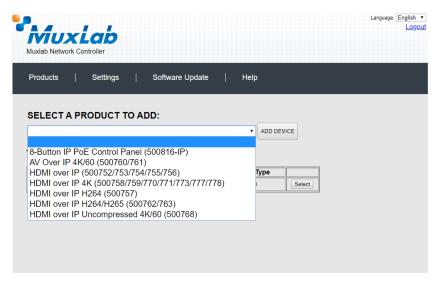


Figure 271: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 272). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 270), without a product being added.

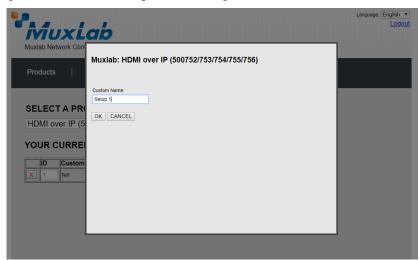


Figure 272: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 273).

	uxLab					Language: English Logo
	etwork Controller	() ()()()				
Products	s   Setting	∣s   Software Up	odate	Help		
ELEC	T A PRODUC	T TO ADD:				
				ADD DEV	ICE	
	CURRENT SY	STEM				
ID	Custom Name	Product Name	Company	Product Type		
X 14	Meeting Room	HDMI over IP 4K	Muxlab	Matrix Virtual	Select	
-			Company Muxlab	Product Type Matrix Virtual	Select	

Figure 273: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 274).

Mux	192	.168.168.50 say				Language: English
Νυχ	LO Do y	ou want to load	previous stored	device list ?		
Muxlab Network	Controller			o	K Cancel	
Products	Settings	Sonwa	re update	нер		
SELECTED	PRODUCT	:				
		IP 4K (500758/	759/770/771/7	73/777)   Muxia	ab   Matrix Virt	tual
Ŭ				· · ·	1.1	
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
Satur						
Set-up Select the type of	of setup to use.					
Set-up Select the type o	of setup to use.					
Select the type of						
Select the type of						
Select the type of						
Select the type of						
Select the type of						
Select the type of						
Select the type of						
Select the type of						
Select the type of						
Select the type of						

Figure 274: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. HDMI CEC
- 6. Firmware

#### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 275).

Products   Setti	ngs   Software Upd	ate   Help		
	JCT: over IP 4K (500758/759/77)	)/771/773/777)   Muxla	b   Matrix Virtual	
Set-up Matri	x Video Wall R5-	232 HDMI-CEC	Firmware	
Set-up Modify any available setting: Automatic Manua Launch discovery	and click Save to apply your chang	es		

Figure 275: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500770 transmitters) and display side devices (500770 receivers), and will display the scan results in tabular form (Figure 276).

Each 500770 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 277 (orange highlighted fields).

Produ	icts	Settings	Softw	are Update	Help				
		RODUCT	: IP 4K (500758		772/777)   84	dala I B	América Virek		
leetii	ng Room .	HDIVII OVEI	IF 4K (000/08	S// 28///0///1/	<i>(()</i> () () () () () () () () () () () () ()	kiab   N		lai	
S	et-up	Matrix	Video Wall	RS-232	HDMI-CEC	F	irmware		
• 4	ip fy any availab utomatic	le settings and ( Manual	click Save to apply	your changes					
Modi A	ip fy any availab	-	click Save to apply	your changes					
Modi a Lau Displ	ip fy any availab sutomatic nch discovery	O Manual	click Save to apply MAC address	your changes	MASK	DHCP	DIP		
Modi a Lau Displ	ip fy any availab utomatic nch discovery lay (3 RX)	O Manual			MASK 255.255.0	DHCP (	DIP	Detail	
Modi a A Lau Displ Port#	Ip fy any availab utomatic nch discovery lay (3 RX) ≄ Name	O Manual	MAC address	IP address		DHCP (		Detail Detail	
Modi A Lau Displ Port# 0	ip fy any availab utomatic nch discovery lay (3 RX) # Name Display 2 MR	O Manual	MAC address 00-15-25-08-01-11	IP address 192.168.168.127	255.255.255.0	DHCP (	Reboot		
Modi A Lau Displ Port# 0 0 0	ip fy any availab utomatic nch discovery lay (3 RX) # Name Display 2 MR RX	O Manual	MAC address 00-15-25-08-01-11 00-0b-78-00-7c-17	IP address 192.188.188.127 192.188.188.65	255.255.255.0 255.255.255.0	DHCP (	Reboot Reboot	Detail	
Modi A Lau Displ Port# 0 0 0 Sour	Ip fy any availab utomatic Inch discovery Iay (3 RX) * Name Display 2 MR RX TV 1	O Manual	MAC address 00-15-25-08-01-11 00-0b-78-00-7c-17	IP address 192.188.188.127 192.188.188.65	255.255.255.0 255.255.255.0	DHCP ( v v	Reboot Reboot Reboot	Detail	
Modi A Lau Displ Port# 0 0 0 Sour	ip fy any availab utomatic inch discovery lay (3 RX) # Name Display 2 MF RX TV 1 ce (2 TX)	O Manual	MAC address 00-15-25-08-01-11 00-0b-78-00-76-17 00-0b-78-00-95-14	IP address 192.186.188.127 192.186.188.65 192.186.188.83	255.255.255.0 255.255.255.0 255.255.255.0	DHCP ( * * DHCP (	Reboot Reboot Reboot	Detail	

Figure 276: Products Screen – Set-up Tab

VĪ	UX	lab								L
	Network Co		h11)							
rodu	icts	Settings	Softw	vare Update	Help					
		RODUCT								
eetir	ng Room :	HDMI over	r IP 4K (500758	8/759/770/771/	773/777)   Mu	ixiab   Ma	trix Virt	ual		
Se	et-up	Matrix	Video Wall	RS-232	HDMI-CEC	Fim	nware			
	fy any availab	-	click Save to apply	your changes						
A		le settings and O Manual	click Save to apply	your changes						
Modif A Laur Displ Port#	fy any availab kutomatic nch discovery lay (3 RX) # Name	O Manual	MAC address	IP address	MASK	DHCP DIF				
Modif A Laur Displ Port# 0	fy any availab Automatic nch discovery lay (3 RX) # Name Display 2 MR	O Manual	MAC address 00-15-25-08-01-11	IP address 192.168.168.127	255.255.255.0	<b>e</b> –	Reboot		Detail	
Modif A Laur Displ Port# 0 0	fy any availab kutomatic nch discovery lay (3 RX) # Name Display 2 MF Conference F	O Manual	MAC address 00-15-25-08-01-11 00-0b-78-00-7c-17	IP address 192.168.168.127 192.168.66.65	255.255.255.0 255.255.255.0			Cancel	Detail Detail	
Modif A Laur Displ Port# 0	fy any availab Automatic nch discovery lay (3 RX) # Name Display 2 MR	O Manual	MAC address 00-15-25-08-01-11	IP address 192.168.168.127 192.168.66.65	255.255.255.0 255.255.255.0	<b>e</b> –	Reboot Reboot	Cancel		
Modif A Laur Displ Port# 0 0 0	fy any availab automatic nch discovery lay (3 RX) # Name Display 2 MR Conference F TV 1	O Manual	MAC address 00-15-25-08-01-11 00-0b-78-00-7c-17	IP address 192.168.168.127 192.168.66.65	255.255.255.0 255.255.255.0	8 C	Reboot Reboot	Cancel	Detail	
Modif A Laur Displ Port# 0 0 0	fy any availab kutomatic nch discovery lay (3 RX) # Name Display 2 MF Conference F	O Manual	MAC address 00-15-25-08-01-11 00-0b-78-00-7c-17	IP address 192.168.168.127 192.168.66.65	255.255.255.0 255.255.255.0	8 C	Reboot Reboot	Cancel	Detail	
Modif a A Laur Displ Port# 0 0 0 Sour	fy any availab automatic nch discovery lay (3 RX) # Name Display 2 MR Conference F TV 1	O Manual	MAC address 00-15-25-08-01-11 00-0b-78-00-7c-17	IP address 192.168.168.127 192.168.66.65	255.255.255.0 255.255.255.0	8 C	Reboot Reboot Reboot	Cancel	Detail	
Modif a A Laur Displ Port# 0 0 0 Sour	fy any availab Automatic Inch discovery Iay (3 RX) # Name Display 2 MR Conference F TV 1 TV 1	O Manual	MAC address 00-15-25-08-01-11 00-05-78-00-76-17 00-05-78-00-95-14	IP address 192.168.168.127 192.168.168.65 192.168.168.63 IP address	255.255.255.0 255.255.255.0 255.255.255.0 MASK	8 - 8 -	Reboot Reboot Reboot	Cancel	Detail	
Modif A Laur Displ Port# 0 0 0 Source Port#	fý any availab kutomatic Iay (3 RX) # Name Display 2 MR Conference f TV 1 cce (2 TX) # Name	O Manual	MAC address 00-15-25-08-01-11 00-06-78-00-76-17 00-06-78-00-96-14 MAC address	IP address 192.168.168.127 192.168.168.65 192.168.168.63 IP2 address 192.168.168.188	255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0		Reboot Reboot Reboot	Cancel	Detail Detail	

Figure 277: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 278).

	CTED PROD		Software Updat 500758/759/770/		p Muxlab   Matrix Vi
			500758/759/770/	771/773/777)   N	Muxlab   Matrix Vi
			500758/759/770/	771/773/777)   N	Muxlab   Matrix Vi
leeun	Ig Room . How		500158115511101		
		10.4			50 Einen 1
Se	t-up Ma	trix Vide	o Wall RS-23	32 HDMI-CE	EC Firmware
Set-ur	-				
Modify		us and click Save	to apply your change	s	
Modify		igs and click Save	to apply your change	s	
		-	to apply your change	s	
⊛ Au	ý any available settin utomatic OMan	-	to apply your change:	s	
⊛ Au	ý any available settin	-	to apply your change:	s	
Au     Laun	y any available settin utomatic Man nch discovery	-	to apply your change	s	
Au     Laun	ý any available settin utomatic OMan	-	to apply your change	S	
Au     Laun     Displa	ý any available settin utomatic Man nch discovery ay (3 RX)	ual			
Au     Laun     Displa	y any available settin utomatic Man nch discovery	-	ress IP address	MASK	DHCP DIP
Au     Laun     Displa     Port#	ý any available settin utomatic Man ich discovery ay (3 RX) : Name Conference Room	ual MAC addr	ress IP address 30-7c-17 192.188.188	MASK 3.65 255.255.255.0	Rebo
<ul> <li>Au</li> <li>Laun</li> <li>Displa</li> <li>Port#</li> <li>0</li> </ul>	ý any available settin utomatic Man Ich discovery ay (3 RX) t Name	- ual MAC addr 00-0b-78-0	ress IP address 30-7c-17 192.188.168 38-01-11 192.188.168	MASK 8.66 255.255.255.0 8.127 255.255.0	Rebo
Au     Laun     Displa     Port#     0     0	ý any available settin utomatic Man nch discovery ay (3 RX) Name Conference Room Display 2 MR	- ual MAC addr 00-0b-78-0 00-15-25-0	ress IP address 30-7c-17 192.188.168 38-01-11 192.188.168	MASK 8.66 255.255.255.0 8.127 255.255.0	Rebo
Au     Laun     Displa     Port#     0     0     0	ý any available settin utomatic Man hch discovery ay (3 RX) Name Conference Room Display 2 MR TV 1	- ual MAC addr 00-0b-78-0 00-15-25-0	ress IP address 30-7c-17 192.188.168 38-01-11 192.188.168	MASK 8.66 255.255.255.0 8.127 255.255.0	Rebo
Au     Laun     Displa     Port#     0     0     0	ý any available settin utomatic Man nch discovery ay (3 RX) Name Conference Room Display 2 MR	- ual MAC addr 00-0b-78-0 00-15-25-0	ress IP address 30-7c-17 192.188.168 38-01-11 192.188.168	MASK 8.66 255.255.255.0 8.127 255.255.0	Rebo
Au     Laun     Displa     Port#     0     0     0     Source	ý any available settin utomatic Man hch discovery ay (3 RX) Name Conference Room Display 2 MR TV 1	- ual MAC addr 00-0b-78-0 00-15-25-0	IP address         IP address           30-7c-17         192.168.168           80-111         192.168.168           30-9c-14         192.168.168	MASK 8.05 255.255.255.0 8.03 255.255.255.0	Rebo
Au     Laun     Displa     Port#     0     0     0     Source	ý any available settin utomatic Man hch discovery ay (3 RX) : Name Conference Room Display 2 MR TV 1 : Conference Room	MAC addr 00-0b-78-0 00-0b-78-0 00-0b-78-0	ress IP address 10-70-17 102.168.168 18-01-11 102.168.168 100-65-14 102.168.168 ress IP address	MASK 206.205.205.00 1127 255.255.05 3.03 266.205.205.0 MASK	DHCP DIP

Figure 278: Saving Name Changes

To view component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 279).

Device Det	ail
Custom Name:	KVM System RX
	500770-RX
	00-0b-78-00-94-28
	192.168.168.68 (DHCP: ON)
FW Version:	
Group IP:	
Close	

Figure 279: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 280).

Muxlab Network						Language:	English • Logou
Products	Settings	Softwa	re Update	Help			
SELECTED Meeting Room			759/770/771/7	73/777)   Muxl	ab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th DISPLAY Display 2 MR KVM System RX RX TV 1 Connect	e connections.	sources below. Onc	e you've selected			▼ ns as new preset: Create	

Figure 280: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "KVM System RX") and selects which source to connect it to (Figure 281).

	Settings	Softwar	e Update	Help		
	: HDMI over		59/770/771/77	73/777)   Mux	lab   Matrix Virtual	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
oppect your disp	ave to the desired	sources below. Once	a voulve selected i	the dieplaye you w	ant to change, use the "C	"onnect" button at the
ottom to make the	e connections.	sources below. Once	s you ve selecteu i	ine uispiays you vi	ant to change, use the c	Johneet Datton at the
ISPLAY	SO	URCE		Γ	PRESI	ETS
				>	Current active Preset:	
isplay 2 MR		eting Room VW 🔻	Cancel		No preset selected	▼ ID: 0
VM System RX	TX	*	Cancel	>	Save current connections in	following preset:
		•				<b>v</b>
x		•		>	Save current connections as	new preset:
X V 1						
	-	·				Create
				>	Delete following preset:	Create

Figure 281: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 282).

Products	Settings   Softv	ware Update	Help		
	ODUCT				
SELECTED PR Meeting Room : HI	DDUC I: DMI over IP 4K (50075	8/759/770/771/7	73/777)   Mux	lab   Matrix Virl	tual
Set-up	Matrix Video Wall	RS-232	HDMI-CEC	Firmware	
Connect your displays to	o the desired sources below. O	Once you've selected	the displays you y	want to change use t	the "Connect" button at the
bottom to make the con	nections.		ine include you you y	in the strange, use i	
DISPLAY	SOURCE		[	P	RESETS
				Current active Preset:	
Display 2 MR	Meeting Room VW				TID: 0
Display 2 MR KVM System RX	Meeting Room VW • TX	SUCCESS		Current active Preset:	▼ ID: 0
Display 2 MR KVM System RX RX	Meeting Room VW • TX •	SUCCESS		Current active Preset: No preset selected	▼ ID: 0
Display 2 MR KVM System RX	Meeting Room VW • TX	SUCCESS	p	Current active Preset: No preset selected	ID: 0
Display 2 MR KVM System RX RX	Meeting Room VW • TX •	SUCCESS	p	Current active Preset: No preset selected     Save current connection	▼ ID: 0

Figure 282: Change Success

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 283) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS				
> Current active Preset:				
No preset selected	▼	ID:	1	
> Save current connections in following pres	et: ▼			
> Save current connections as new preset:				
10:00 AM Meeting Create				
> Delete following preset:	•			

Figure 283: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 284).

PRESE	rs			
> Current active Preset:				
[2] 10:00 AM Meeting		▼	ID:	2
<ul> <li>&gt; Save current connections in fo</li> <li>&gt; Save current connections as n</li> </ul>		set: ▼		
	Create	S	UC	CESS
> Delete following preset:		•		

Figure 284: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 285).

PRESETS
> Current active Preset:
[2] 10:00 AM Meeting VID: 2
> Save current connections in following preset:
<b>•</b>
> Save current connections as new preset:
Create
> Delete following preset:
[2] 10:00 AM Meeting

Figure 285: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 286).

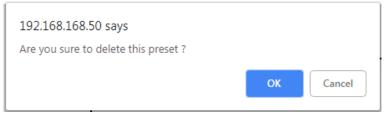


Figure 286: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 287).

PRESETS					
> Current active Preset:					
No preset selected	¥	ID:	0		
> Save current connections in following prese	et: ▼				
> Save current connections as new preset:					
Create					
> Delete following preset:					
	▼	SL	JCC	ES	38

Figure 287: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 288).

PRESETS	
> Current active Preset:	
[1] 10:00 AM Meeting •	ID: 1
> Save current connections in following preset:	]
[1] 10:00 AM Meeting	
[2] 10:00 AM Meeting with Sales Team	
> Delete following preset:	

Figure 288: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 289).

PRESETS	
> Current active Preset:	
[2] 10:00 AM Meeting with Sales Team V ID: 2	
> Save current connections in following preset:	
▼ SUCCES	SS
> Save current connections as new preset:	
Create	
> Delete following preset:	

Figure 289: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

#### 3. Products Screen - Video Wall Tab

MuxLab's KVM HDMI Extender 500770 does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 290)

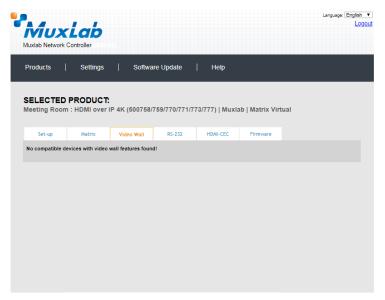


Figure 290: Video Wall Tab

#### 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver. However, the 500770 does not support RS232 commands. Clicking on this tab will display the following screen (Figure 291)



#### 5. Products Screen – HDMI CEC Tab

The **HDMI CEC** tab of the **Products** screen enables the user to support CEC commands on supported products. However, this feature is not supported on the 500770. Clicking on this tab will display the following screen (Figure 292).

Mux	Lab					Langu	age: El
luxlab Network	Controller Settings	Softwar	re Update	Help			
	PRODUCT: n : HDMI over I		759/770/771/7	73/777)   Muxi:	ab   Matrix Virl	tual	
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware		
No compatible re	eceiver detected!						

Figure 292: HDMI CEC Tab

#### 6. Products Screen - Firmware Tab

The **Firmware** tab of the **Products** screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 293).

Mux	Lab					L	anguage: En
Muxlab Network Products	Controller Settings	Softwar	e Update	Help			
	PRODUCT: n : HDMI over I	P 4K (500758/7	59/770/771/7	73/777)   Muxl	ab   Matrix Vi	rtual	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
DISPLAY		<ul> <li>changes</li> <li>Displ</li> </ul>	ays (RX) File No file chos Apply	ngs and click Save Source (TX) en URCE			
KVM System RX	(500770-RX)	v1.0.3		/ System 1-A (500	770-TX)	v1.0.2	

Figure 293: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

#### **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 294) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.



Figure 294: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 295).

	Language: Englis
	1
uxlab Network Controller	
Products   Settings   Software Update   Help	
Network Administration	
User Accounts Create a new User Account Or	
Create a new User Ancount Or Select a User to edit:	
new password:	
Confirm new password:	
User Type:	
Create Update Delete	
Restore data	
Restore the unit with the selected data file	
Specify file: Choose File No file chosen	
WARNING ! You MUST FIRST set the IP address of this controller using the same as the co	ntroller this backup file come from !!!
Restore	
reavie	
Backup data	
Backup the data and save it in a file	
Backup	
Get Logs	
Get all logs in a zip file	
Download Logs Delete Logs	

Figure 295: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 296). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

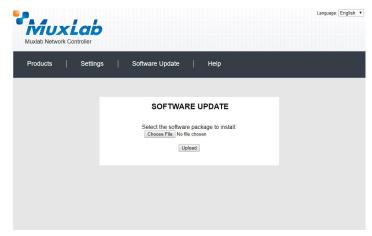


Figure 296: Software Update Screen

#### Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 297).



Figure 297: Help Screen

# Extender Model 500771

## **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 298).

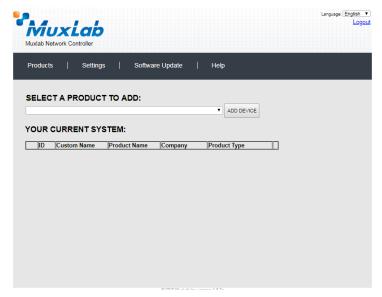


Figure 298: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select HDMI Over IP 4K (500758/759/770/771/773/777) and then click on ADD DEVICE (Figure 299).

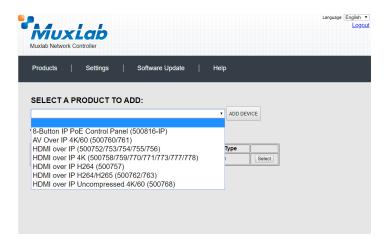


Figure 299: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 300). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 298), without a product being added.

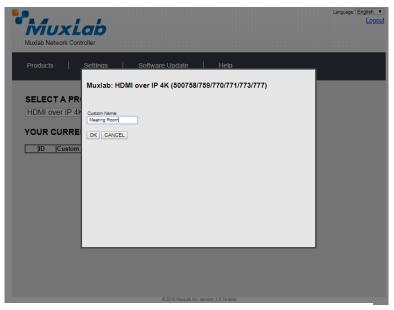


Figure 300: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 301).

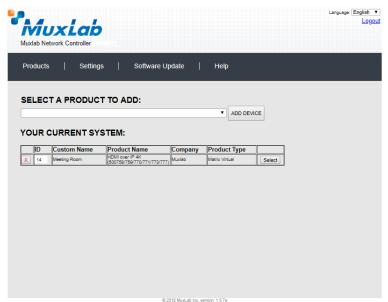


Figure 301: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 302).

Muxiab Network Products SELECTED Conference R	Controlle Setungs		previous stored ( re Update	Help		Language (English • Logout
Set-up Setect the type of Or Automatic	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
			© 2018 Mag			

Figure 302: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. HDMI-CEC
- 6. Firmware

#### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

Automatic means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 303).

Produc							
	cts	Settings	Softwa	are Update	Help		
		PRODUCT	•				
onfer	rence Ro	om 1A : HDI	ll over IP 4K (	500758/759/7	70/771/773)   N	/uxlab   Matrix \	Virtual
Set	t-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
• Au		O Manual	lick Save to apply ;	your changes			
Displa	ay (1 RX)						
			MAC address	IP address	MASK	DHCP DIP	
Port#					255.255.255.0	Reboot	Detail
	Name TV 1		00-0b-78-00-95-f4	100.00			
Port#			00-0b-78-00-95-f4				
				IP address	MASK 255.255.255.0	DHCP DIP	Detail

Figure 303: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500771 transmitters), and display side devices (500758 receivers), and will display the scan results in tabular form (Figure 304).

Each 500771 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 304 (orange highlighted fields).

uxlab Network	Controller					
roducts	Settings	Softw	are Update	Help		
ELECTED						
		-	500758/759/77	70/771/773)   N	luxlab   Matrix '	/irtual
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
Set-up	ilable settings and Manual	Video Wall		HDMI-CEC	Firmware	
Set-up Modify any ava Automatic Launch discov	ilable settings and Manual			HDMI-CEC	Firmware	
Set-up Modify any ava Automatic Launch discov Display (1 RX)	ilable settings and Manual	click Save to apply	your changes		DHCP DIP	Gancel Detail
Set-up Modify any ava Automatic Launch discov Display (1 RX) Port# Name	ilable settings and Manual	click Save to apply MAC address	your changes IP address	MASK	DHCP DIP	Cancel Detail

Figure 304: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 305).

	Network Controll					Lo
Produ	cts   Se	ettings   Soft	ware Update	Help		
	CTED PRO	DUCT: A : HDMI over IP 4M	(500758/759/7	70/771/773)   N	luxlab   Matrix \	/irtual
Se	t-up Ma	atrix Video Wall	R5-232	HDMI-CEC	Firmware	
⊛ A	utomatio Ma nch discovery ay (1 RX)	ings and click Save to app	, ,			
			1D a ddaraa	MACK	DHCP DIP	
Pon#	Name TV	MAC address 00-06-78-00-95-f4	IP address 192.168.168.63	MASK 255.255.255.0	Reboot	Detail UPDATED
Sourc	ce (1 TX)					
	ce (1 TX) Name	MAC address	IP address	MASK	DHCP DIP	
		MAC address 00-0b-78-00-98-e6		MASK 255.255.255.0	OHCP DIP     Reboot	Detail UPDATED

#### Figure 305: Saving Name Changes

To view component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 306).

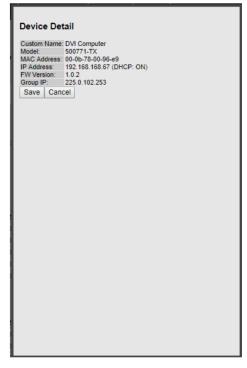


Figure 306: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 307).

	Settings	Softwa	re Update	Help		
ELECTED F eeting Room		P 4K (500758/7	759/770/771/7	73/777)   Mux	lab   Matrix Virtual	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
ottom to make the	connections.	IRCE		[	vant to change, use the " PRES	
isplay 2 MR		٣			No preset selected	▼ ID: 0
VM-RX		•		>	Save current connections in	following preset:
VM-RX-4	•	T				•
	-	•		>	Save current connections as	
VM-RX1						Create
	-					
/M-RX1	-				Delete following preset:	

Figure 307: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "Display 2 MR") and selects which source to connect it to (Figure 308).

Products	Settings	Softwa	are Update	Help			
SELECTED							
leeting Room	: HDMI over I	P 4K (500758	1759/770/771/7	73/777)   Mux	dab   Matrix Virtua	al	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
DISPLAY	SO	JRCE		[	PRE	SETS	
Display 2 MR	KVI	I/-TX2 ▼	Cancel		No preset selected	▼ ID: 0	
KVM-RX		•			> Save current connections	in following preset:	
KVM-RX-4		•				*	
KVM-RX1		•			> Save current connections		
KVM_00:0B:78:00:95:	F4 -	•				Create	
					> Delete following preset:	*	
						•	

Figure 308: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 309).

						Language:	E
Products	Settings	Softw	are Update	Help			
SELECTED	PRODUCT:						
Meeting Roon	n : HDMI over I	IP 4K (500758	/759/770/771/	773/777)   Mux	(lab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
DISPLAY	300	URCE			> Current active Preset:	RESETS	
Display 2 MR	KVI	M-TX2 V SU	CCESS		No preset selected	▼ ID: 0	
KVM-RX	-	Ŧ			> Save current connection	ns in following preset:	
KVM-RX-4	-	Ŧ				T T	
KVM-RX1	-	•			> Save current connection	ns as new preset:	
KVM_00:0B:78:00:9	5:F4 -	Ŧ				Create	
					> Delete following preset:		
				l		•	J
Connect							
			@ 2018 MuxLab II				

Figure 309: Change Successful

To create a new preset, the user clicks the > Save current connections as new preset field (Figure 310) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESE	TS		
> Current active Preset:			
No preset selected		۲	ID: 1
<ul> <li>&gt; Save current connections in fo</li> <li>&gt; Save current connections as n</li> </ul>		set: ▼	
10:00 AM Meeting	Create		
> Delete following preset:		•	

Figure 310: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 311).

PRESET	rs			
> Current active Preset:				
[2] 10:00 AM Meeting		V	ID:	2
<ul> <li>&gt; Save current connections in fol</li> <li>&gt; Save current connections as ne</li> </ul>		set: ▼		
	Create	SI	JCC	CESS
> Delete following preset:		¥		

Figure 311: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 312).

PRESETS
> Current active Preset:
[2] 10:00 AM Meeting VID: 2
> Save current connections in following preset:
<b>•</b>
> Save current connections as new preset: Create
> Delete following preset:
L
[2] 10:00 AM Meeting

Figure 312: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 313).

192.168.168.50 says		
Are you sure to delete this preset ?		
	ОК	Cancel

Figure 313: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 314).

PRESETS		
> Current active Preset:		
No preset selected	ID: 0	
<ul> <li>Save current connections in following preset:</li> <li>Save current connections as new preset:</li> </ul>		
Create		
> Delete following preset:		
▼	SUCCES	SS

Figure 314: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 315).

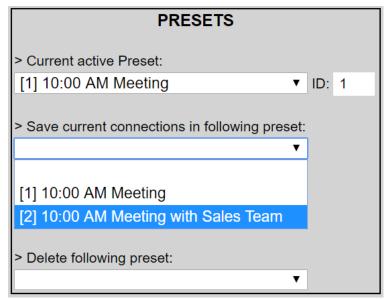


Figure 315: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 316).

PRESETS	
> Current active Preset:	
[2] 10:00 AM Meeting with Sales Team V ID: 2	
> Save current connections in following preset:	
▼ SUCCES	S
> Save current connections as new preset:	
Create	
> Delete following preset:	

Figure 316: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

#### 3. Products Screen - Video Wall Tab

MuxLab's KVM DVI Extender 500771 does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 317).

Muxlab Network						Language: English
Products	Settings	Softwa	ire Update	Help		
SELECTED Meeting Room			759/770/771/7	73/777)   Muxia	ab   Matrix Virt	ual
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
No compatible d	evices with video	wall features foun	@ 2018 Munitab Inc. v	ersion: 1.5.7e beta		

Figure 317: Video Wall Tab

#### 4. Products Screen - RS-232 Tab

MuxLab's KVM DVI Extender 500771 does not support RS232. Clicking on this tab will display the following screen (Figure 318).

uxlab Network	Controller					
Products	Settings	Softwa	re Update	Help		
	<b>PRODUCT</b> : m : HDMI over		759/770/771/77	73/777)   Muxia	ab   Matrix Virt	tual
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
lo compatible o	levice detected!					

Figure 318: RS-232 Tab

### 5. Products Screen – HDMI-CEC Tab

MuxLab's KVM DVI Extender 500771 does not support HDMI-CEC feature. Clicking on this tab will display the following screen (Figure 319).

	DUCT: I over IP 4K (50075 rix Video Wall	ware Update 58/759/770/77 R5-232	Неір 1/773/777)   Ми НDMI-СЕС	xlab   Matrix Virt	ual
set-up Mat	l over IP 4K (50075				ual
		RS-232	HDMI-CEC	Firmware	
compatible receiver de	tected!				

Figure 319: HDMI CEC Tab

#### 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 320).

Muxlab Network	and the second se						Language: Englis
Products	Settings	Softw	are Update	Help			
	PRODUCT: 1 : HDMI over IF	P 4K (500758	1759/770/771/7	73/777)   Muxia	ab   Matrix Vi	rtual	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
DISPLAY Display 2 MR (50 KVM-RX (500755 KVM-RX4 (5007 KVM-RX1 (50075 KVM-00:0B:78:00	-RX) 59-RX)	v1.0.3 v1	splays (RX) ose File No file chos Apply SO DVI KVM	Source (TX)	-TX)	v1.0.2 v1.0.3 v1.0.2 v1.0.1	

Figure 320: Firmware Tab

The user first selects either Display (RX) or Source (TX), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under DISPLAY and SOURCE) targeted for firmware upgrade, and then clicks Apply.

# **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The **Network** tab (Figure 321) is used to change the IP address of the MuxLab Network Controller, the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP.

				Language: En
AUX dab Network Co	lab			
dab Network Co	ntroller			
oducts	Settings	Software Update	e   Help	
Network	Administration			
letwork	a	inual network settings.		
-I AN 1-	in you on the to set that	indar network settings.		
Use DHCP:	⊖ Yes ® No			
IP address:				
192 . 168 . 16	8.50			
Network mask:				
255 . 255 . 25	5.0			
Router: 192 . 168 . 16				
Mac Address:				
	: D3 : B9 : 55			
Save				
-LAN 2				
Use DHCP:	Yes O No			
IP address:				
Network mask:				
Router:				
Router:				
Mac Address:				
	I : D3 : B9 : 56			
	: D3 : B9 : 56			

Figure 321: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 322).

	Language: Englis
	L
uxlab Network Controller	
Products   Settings   Software Update   Help	
Network Administration	
User Accounts	
Create a new User Account Or Select a User to edit:	
User Name	
new password:	
Confirm new password: User Type:	
Create Update Delete	
Restore data	
Restore the unit with the selected data file	
Specify file: Choose File No file chosen	
WARNING ! You MUST FIRST set the IP address of this controller using the same as the	he controller this backup file come from !!!
Restore	
Backup data	
Backup the data and save it in a file	
Backup	
Get Logs	
Get all logs in a zip file	
Download Logs Delete Logs	

Figure 322: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 323). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.



Figure 323: Software Update Screen

# Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 324).

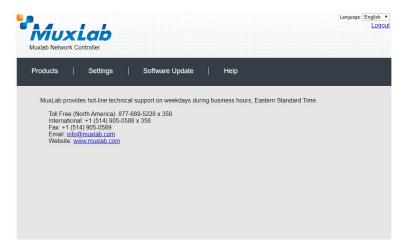


Figure 324: Help Screen

# Extender Model 500773 Products Screen

Once the user has logged in, the Products screen will appear (Figure 325).

MuxLa Muxlab Network Controller	6			Language: English Logo
Products   Sett	ngs   Softwa	are Update	Help	
SELECT A PRODU			ADD DEVICE	
ID Custom Name	Product Name	Company	Product Type	
		© 2018 Muvi ab Inc		

Figure 325: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP 4K (500758/759/770/771/773/777) and then click on ADD DEVICE (Figure 326).

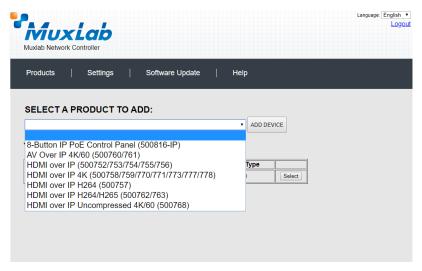


Figure 326: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 327). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 325), without a product being added.

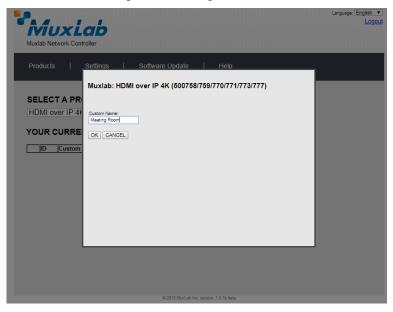


Figure 327: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 328).

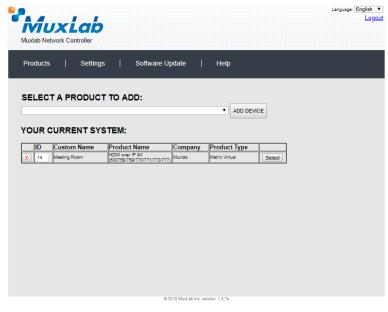


Figure 328: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multitabbed screen (Figure 329).

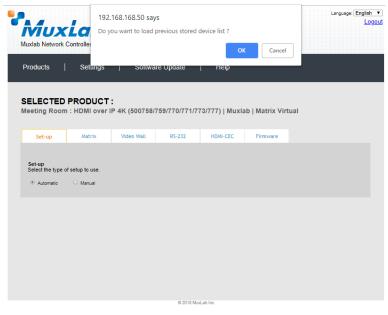


Figure 329: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Five tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. HDMI CEC
- 6. Firmware

#### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 330).

Muxlab Network						Language: English Logo
Products	Settings	Softwa	re Update	Help		
	PRODUCT: n : HDMI over I		759/770/771/7	73/777)   Muxia	ab   Matrix Virt	ual
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
Set-up Modify any avai Automatic Launch discove	lable settings and cl Manual	ick Save to apply y	our changes			

Figure 330: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500773 transmitters), and will display the scan results in tabular form (Figure 331).

Each 500773 transmitter can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 332 (orange highlighted fields).

	UXL letwork Cont						Language	
oduc	ts	Settings	Softwa	are Update	Help			
	CTED PR Room : H		P 4K (500758	/759/770/771/	773/777)   Mux	(lab   Matrix Virt	ual	
Set	up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
<ul> <li>Aut</li> <li>Launcl</li> </ul>		settings and cli Manual	ick Save to apply y	our changes				
Port# N	leme		IAC address	IP address	MASK	DHCP DIP		
	4			192.168.168.127	255.255.255.0	C C Reboot	Detail	
Source	(1 TX)							
Port# N			IAC address	IP address	MASK	DHCP DIP		
0	TX-00:0B:78:04:	7C:0B	00-0b-78-04-7c-0b	192.168.168.65	255.255.255.0	Reboot	Detail	
Save								

Figure 331: Products Screen – Set-up Tab

WUX uxlab Network							Language: English  Logot
Products	Settings	Softwa	are Update	Help			
	PRODUCT	IP 4K (500758/	1759/770/771/7	773/777)   Mux	(lab   Matri	x Virtual	
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmwa	are	
<ul> <li>Automatic</li> <li>Launch discove</li> <li>Display (1 RX)</li> </ul>							
Port# Name			IP address	MASK	DHCP DIP		
0 Display 2 Source (1 TX)	WR .	00-15-25-08-01-11	192.168.168.127	255.255.255.0		Reboot Cancel	Detail
Port# Name		MAC address	IP address	MASK	DHCP DIP		
0 Meeting P	toom VW	00-0b-78-04-7c-0b	192.168.168.65	255.255.255.0		Reboot Cancel	Detail
Save							

Figure 332: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 333).

	<b>xLab</b> ork Controller					
roducts	Settings	;   Softwa	are Update	Help		
ELECTE		T:				
		r IP 4K (500758	/759/770/771/	773/777)   Mux	ilab   Matrix Virt	tual
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Set-up	vailable settings and	Video Wall		HDMI-CEC	Firmware	
Set-up Modify any a • Automatic	vailable settings and Manual			HDMI-CEC	Firmware	
Set-up Modify any a automatic Launch disc Display (1 R	vailable settings and Manual overy X)	i click Save to apply :	your changes			
Set-up Modify any a automatic Launch disc Display (1 R Port# Name	vailable settings and Manual overy X)				DHCP DIP Reboot	Detail UPDATED
Set-up Modify any a automatic Launch disc Display (1 R Port# Name	vailable settings an Manual overy X) y 2 MR	d click Save to apply MAC address	your changes	MASK	DHCP DIP	Detail UPDATED
Set-up Modify any a Automatic Launch disc Display (1 R Port# Name Displa	vailable settings an Manual overy X) y 2 MR	d click Save to apply MAC address	your changes	MASK 255,255,255,0	DHCP DIP	Detail UPDATED

Figure 333: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 334).

Device Detail
Custom Name: Meeting Room VW Model: 500773-TX
MAC Address: 00-0b-78-04-7c-0b IP Address: 192.168.168.65 (DHCP: ON) FW Version: 1.0.2
Group IP: 225.0.102.253
Switch Video Port :  Save Cancel AUTO
HDMI VGA

Figure 334: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 335).

uxlab Network (		Softwa	re l Indate	Help		
roducts	Settings	Softwa	re Update	Help		
ELECTED	PRODUCT					
eeting Room	: HDMI over	IP 4K (500758/	759/770/771/7	73/777)   Mux	xlab   Matrix Virtual	
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
onnect your displ ottom to make the		sources below. One	e you've selected	the displays you	want to change, use the "Conne	ect" button at the
SPLAY	50	URCE			PRESETS	
					> Current active Preset:	
		•			No preset selected	▼ ID: 0
isplay 2 MR	-					• ID: 0
isplay 2 MR VM System RX	•	•				
	• • •				> Save current connections in follow	
VM System RX	- - -	۲			> Save current connections in follow	ing preset:
VM System RX X	•	۲ ۲			> Save ourrent connections in follow	ing preset:
VM System RX X	•	۲ ۲			> Save current connections in follow > Save current connections as new p	ing preset:
VM System RX X	•	۲ ۲			> Save ourrent connections in follow	ing preset:
VM System RX X V 1		۲ ۲			> Save current connections in follow > Save current connections as new p	ing preset: veset: reate
VM System RX X V 1	-	۲ ۲			> Save current connections in follow > Save current connections as new p	ing preset: veset: reate
VM System RX X V 1	-	۲ ۲			> Save current connections in follow > Save current connections as new p	ing preset: veset: reate

Figure 335: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "Display 2 MR") and selects which source to connect it to (Figure 336).

	Settings	Softwar	re Update	Help		
	PRODUCT: : HDMI over I	P 4K (500758/7	59/770/771/77	(3/777)   Mux	lab   Matrix Virtu	al
in the second						
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
annan unur d'aut	we to the dealer th	aauraaa balauu Ooo		he displays your	ant to change up the	"Connect" hullon at the
ottom to make the		sources below. Once	e you ve selected t	ne displays you w	vani to change, use the	"Connect" button at the
ISPLAY	SOL	JRCE		Г	PRE	SETS
					Current active Preset:	
Display 2 MR		ting Room VW 🔻	Cancel		No preset selected	▼ ID: 0
WM System RX	TX	*	Cancel	<b>–</b> >	Save current connections	in following preset:
	-	•				<b>T</b>
ex.	-					
	-	٣		>	Save current connections	as new preset:
ex.		•		>	Save current connections	as new preset: Create
x		¥			Save current connections	

Figure 336: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 337).

roducts	Settings	Softwa	re Update	Help			
	PRODUCT						
	PRODUCT: 1 : HDMI over		759/770/771/7	73/777)   Mu	xlab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware		
onnect your disp ottom to make th	e connections.	sources below. Onc	e you've selected	the displays you	want to change, use t	he "Connect" butto	n at the
JISFLAT	30	UNCL				RESETS	
isplay 2 MR	Me	eting Room VW 🔻	SUCCESS		> Current active Preset: No preset selected	•	ID: 0
VM System RX	ТХ		SUCCESS				
x	-	•			> Save current connection	ns in tollowing preset:	
V 1	-	¥			> Save current connection	ns as new preset.	
						Create	
					> Delete following preset:		
Connect					belete following preset	•	

Figure 337: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 338) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESE	TS			
> Current active Preset:				
No preset selected		¥	ID:	1
> Save current connections in fo	llowing pres	et: ▼		
> Save current connections as n	ew preset:			
10:00 AM Meeting	Create			
> Delete following preset:		•		

Figure 338: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 339).

PRESE	TS			
> Current active Preset:				
[2] 10:00 AM Meeting		▼	ID:	2
<ul> <li>&gt; Save current connections in fo</li> <li>&gt; Save current connections as n</li> </ul>		set: V		
	Create	S	UCC	CESS
> Delete following preset:		•		

Figure 339: Confirmation of New Preset

To delete a preset, the user clicks the **> Delete following preset** drop-down box and selects a preset name from the list shown (Figure 340).

PRESETS
> Current active Preset:
[2] 10:00 AM Meeting V ID: 2
> Save current connections in following preset:
<b></b>
> Save current connections as new preset:
Create
> Delete following preset:
[2] 10:00 AM Meeting

Figure 340: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 341).



Figure 341: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 342).

PRESETS			
> Current active Preset:			
No preset selected	ID:	0	
<ul> <li>&gt; Save current connections in following prese</li> <li>&gt; Save current connections as new preset:</li> <li>Create</li> </ul>	t:		
> Delete following preset:			
	S	JCCE	SS

Figure 342: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 343).

PRESETS	
> Current active Preset:	
[1] 10:00 AM Meeting •	ID: 1
> Save current connections in following preset:	
[1] 10:00 AM Meeting [2] 10:00 AM Meeting with Sales Team	
> Delete following preset: ▼	

Figure 343: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 344).

PRESETS	
> Current active Preset:	
[2] 10:00 AM Meeting with Sales Team ▼ ID: 2	
> Save current connections in following preset:	
▼ SUCCES	SS
> Save current connections as new preset:	
Create	
> Delete following preset:	
<b>▼</b>	

Figure 344: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

## 3. Products Screen - Video Wall Tab

The HDMI/VGA wall plate transmitter 500773 will require the 500759-RX to be able to do **Video Wall**, please refer to the 500759 Video Wall for further details on the configuration.

#### 4. Products Screen - RS-232 Tab

MuxLab's HDMI/VGA wall plate transmitter 500773 does not support RS232. Clicking on this tab will display the following screen (Figure 345).

Muxlab Network	Controller					Language: [	English Logo
Products	Settings	Softwa	re Update	Help			
SELECTED Meeting Roon		IP 4K (500758/	759/770/771/7	73/777)   Muxi:	ab   Matrix Virt	tual	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
No compatible d	evice detected!						

Figure 345: RS-232 Tab

## 5. Products Screen – HDMI CEC Tab

**HDMI CEC** feature is not supported in the HDMI/VGA wall plate transmitter 500773 as there is not IR connector on it.

## 6. Products Screen - Firmware Tab

The Firmware tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 346).

Muxlab Network							Language: English ▼ Logou
Products	Settings	Softwa	are Update	Help			
SELECTED Meeting Room			759/770/771/7	73/777)   Muxi	ab   Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
DISPLAY Display 2 MR (50)	0759-RX)	Change O Dis	es plays (RX) se File No file chos Apply SO	ngs and click Save Source (TX) sen URCE sting Room VW (50		1.0.2	
			© 2018 MuxLab Inc. v	ersion: 1.5.7e beta			

Figure 346: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

## **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The **Network** tab (Figure 347) is used to change the IP address of the MuxLab Network Controller, the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP.

Administration  Administration  below if you'd like to set manual network settings.  Vess 10 Nos  to the solution of the	
Settings   Software Update   Help  Administration  below if you'd like to set manual network settings.  C Update No  Software No  Soft	
Administration  n below if you'd like to set manual network settings.  P O Yes 8 No	
n below if you'd like to set manual network settings.	
n below if you'd like to set manual network settings.	
. Ves ⊛ No 5 105 _ 50	
. Ves ⊛ No 5 105 _ 50	
88 , 168 , 50	
88 , 168 , 50	
58 . 168 . 50	
ask:	
55 . 255 . 0	
33 . 233 . 0	
68 . 168 . 1	
85.	
E : C4 : D3 : B9 : 55	
	]
≥. ® Yes O No	
ask:	
mms. E : C4 : D3 : B9 : 56	

Figure 347: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 348).

	Language: Eng
MuxLab	
Auxiab Network Controller	
Products Settings Software Update Help	
Network Administration	
User Accounts	
Create a new User Account Or	
Select a User to edit: User Name	
new password:	
Confirm new password:	
User Type:	
Create Update Delete	
Restore data	
Restore the unit with the selected data file	
Specify file: Choose File No file chosen	
WARNING ! You MUST FIRST set the IP address of this controller using the same as th	e controller this backup file come from !!!
Restore	
Backup data	
Backup the data and save it in a file	
Backup	
Dackop	
Get Logs	
Get all logs in a zip file	

Figure 348: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 349). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

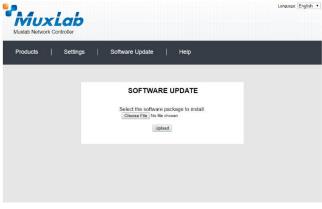


Figure 349: Software Update Screen

# Extender Model 500777

#### **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 350).

Muxiab Network Controller	Language: [English ▼] Logout
Products   Settings   Software Update	Нер
SELECT A PRODUCT TO ADD: YOUR CURRENT SYSTEM:	
ID Custom Name Product Name Company	Product Type
© 2018 MuxLab Inc. ve	rsion: 1.5.7a

Figure 350: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select HDMI Over IP 4K (500758/759/770/771/773/777) and then click on ADD DEVICE (Figure 351).

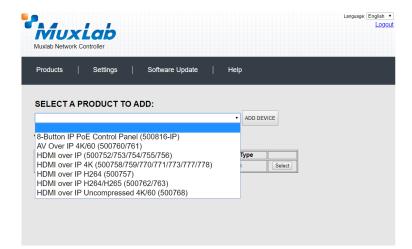


Figure 351: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 352). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 350), without a product being added.

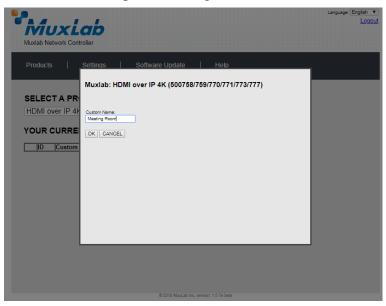


Figure 352: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 353).

	twork Controller	,				
roducts	;   Setting:	s   Software Up	odate	Help		
ELEC	T A PRODUC	T TO ADD:		ADD DEV	ICE	
		STEM:				
ID	Custom Name	Product Name	Company	Product Type		
14	Meeting Room	HDMI over IP 4K (500758/759/770/771/773/777)	Muxlab	Matrix Virtual	Select	

Figure 353: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multitabbed screen (Figure 354).

Muxiab Network Products SELECTED Conference R	Controlle Settings PRODUCT		previous stored ( re Update	0)   Help		Language (English ▼ Loggout
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
Set-up Select the type of Automatic	of setup to use. O Manual					
			© 2018 Mu	d_ab Inc		

Figure 354: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Five tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. HDMI CEC
- 6. Firmware

#### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

Automatic means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 355).

Auxiab Network	Controller					Languaç	e: English Logo
Products	Settings	Softwa	re Update	Help			
	PRODUCT: n : HDMI over I		759/770/771/7	73/777)   Muxia	ab   Matrix Virt	tual	
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware		
Set-up Modify any avai Automatic Launch discove	lable settings and c Manual	lick Save to apply y	our changes				

Figure 355: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500777 transmitters), and will display the scan results in tabular form (Figure 356).

Each 500777 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 357 (orange highlighted fields).

						Language: English
MuxL						<u>Log</u>
uxlab Network Con	troller					
Products	Settings	Softwa	are Update	Help		
leeting Room : H	HDMI over	IP 4K (500758/	759/770/771/7	73/777)   Mux	lab   Matrix Virt	ual
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
Set-up						
Modify any available	settings and c	lick Save to apply y	our changes			
Modify any available		lick Save to apply y	our changes			
Modify any available Automatic		lick Save to apply y	our changes			
Modify any available • Automatic Launch discovery	Manual		our changes	MASK	DHCP DIP	
Modify any available • Automatic Launch discovery Display (1 RX)	Manual		-	MASK 255 255 255 0	DHCP DIP	Detsi
Modify any available  Automatic  Launch discovery  Display (1 RX)  Port# Name	Manual	MAC address	IP address			Deteil
Modify any available  Automatic  Launch discovery  Display (1 RX)  Port# Name	Manual	MAC address	IP address			Detai
Modify any available automatic Launch discovery Display (1 RX) Port# Name 0 4 Source (1 TX)	Manual	MAC address 00-15-25-08-01-11	IP address 192.168.168.127	255.255.255.0	C Reboot	Detoi
Modify any available Automatic Launch discovery Display (1 RX) Port# Name 0 4	) Manual	MAC address 00-15-25-08-01-11	IP address	255.255.255.0		
Modify any available <ul></ul>	) Manual	MAC address 00-15-25-08-01-11 MAC address	IP address 192.188.188.127 IP address	255.255.255.0 MASK	DHCP DIP	
Modify any available Automatic Launch discovery Display (1 RX) Port# Name 4 Source (1 TX) Port# Name	) Manual	MAC address 00-15-25-08-01-11 MAC address	IP address 192.188.188.127 IP address	255.255.255.0 MASK	DHCP DIP	
Modify any available <ul></ul>	) Manual	MAC address 00-15-25-08-01-11 MAC address	IP address 192.188.188.127 IP address	255.255.255.0 MASK	DHCP DIP	

Figure 356: Products Screen – Set-up Tab

Auxlab Network	Controller							1
Products	Settings	Softw	are Update	Help				
			8/759/770/771/	773/777)   Mux	lab   Matrix Vi	rtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware			
Set-up	ilable settings and ( Manual			HDMI-CEC	Firmware			
Set-up Modify any ava Automatic	ilable settings and o Manual			HDMI-CEC	Firmware			
Set-up Modify any ava Automatic Launch discow Display (1 RX) Port# Name	Ilable settings and ( Manual	lick Save to apply	your changes	MASK	DHCP DIP			
Set-up Modify any ava • Autometic Launch discow Display (1 RX)	Ilable settings and ( Manual	lick Save to apply	your changes		DHCP DIP	t Cancel	Detail	
Set-up Modify any ava Automatic Launch discow Display (1 RX) Port# Name	Ilable settings and ( Manual	lick Save to apply	your changes	MASK	DHCP DIP	t Cancel	Detail	
Set-up Modify any ava Automatic Launch discov Display (1 RX) Port# Name Display 2 Source (1 TX) Port# Name	ilable settings and i Manual ery	MAC address 00-15-25-08-01-11 MAC address	your changes IP address 192.168.168.127 IP address	MASK 265 255 255 0 MASK	DHCP DIP Reboo			
Set-up Modify any ava Automatic Launch discov Display (1 RX) Port# Name Display 2 Source (1 TX) Port# Name	ilable settings and ( Manual ery :MR	Hick Save to apply MAC address 00-15-25-08-01-11	your changes IP address 192.168.168.127	MASK 286 286 286 0	DHCP DIP Reboo	t Cancel		

Figure 357: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 358).

Automatic     O Manual     Launch discovery	roducts	s   Settings	s   Softw	are Update	Help		
eeting Room : HDMI over IP 4K (500758/759/770/771/773/777)   Muxlab   Matrix Virtual Set-up Matrix Video Wall R5-232 HDM-CEC Firmware Modify any available settings and click Save to apply your changes Adomatic Manual Launch discovery Display (1 RX) PortR Name MAC address IP address MASK DHCP DIP							
Set-up     Matrix     Video Wall     RS-232     HDM-CEC     Firmware       Set-up     Modify any available settings and click Save to apply your changes     Automatic     Manual       Automatic     Manual     Manual     Display (1 RX)       Port# Name     MAC address     IP address     MASK     DHCP DIP	ELEC	TED PRODUC	:т:				
Set-up Modify any available settings and click Save to apply your changes	eting	Room : HDMI ove	er IP 4K (500758	759/770/771/	773/777)   Mux	lab   Matrix Virt	ual
Set-up Modify any available settings and click Save to apply your changes							
Modify any available settings and click Save to apply your changes	Set-u	p Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Porte Name MAC address IP address MASK DHCP DIP	Modify ar	natic O Manual	id click Save to apply	your changes			
Port# Name MAC address IP address MASK DHCP DIP							
0 Display 2 MR 00-15-25-08-01-11 192.188.188.127 255.255.255.0 C Reboot Detail UPDATED		1 RX)					
	Display (		MAC address	IP address	MASK	DHCP DIP	
A (1710)	Display ( Port# Na	ame					Detail UPDATED
Source (1 1X)	Display ( Port# Na 0 D	ame isplay 2 MR					Detail UPDATED
Port# Name MAC address IP address MASK DHCP DIP	Display ( Port# Na	ame isplay 2 MR					Detail UPDATED
	Port# Na	ame isplay 2 MR					Detail UPDATED

Figure 358: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 359).

Device Det	ail
Custom Name:	Meeting Room VW
	500777-TX
MAC Address:	00-0b-78-00-a7-17
IP Address:	192.168.168.104 (DHCP: ON)
FW Version:	
Group IP:	225.0.102.253
Multicast IP: 2	25.0.102.253 Save
Switch Video P	ort : HDMI 🔻
Save Canc	AUTO
	НОМІ
	VGA

Figure 359: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 360)

Products	Settings	Softwa	re Update	Help			
	PRODUCT: 1 : HDMI over I	P 4K (500758/7	759/770/771/7	73/777)   Mu	xlab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
DISPLAY	SO	JRCE			> Current active Preset:	RESETS	ID: 0
KVM System RX		•			No preset selected		10:0
RX		•			> Save current connection	ns in following preset:	
TV 1		•			> Save current connection	ns as new preset: Create	
Connect					> Delete following preset:	<b>•</b>	

Figure 360: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "Display 2 MR") and selects which source to connect it to (Figure 361).

	Settings	Softwa	re Update	Help			
ELECTED	PRODUCT:						
leeting Room	I : HDMI over li	P 4K (500758/	759/770/771/77	3/777)   Mu	klab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th	lays to the desired s e connections.	sources below. On	e you've selected t	ne displays you	want to change, use th	ne "Connect" butto	n at the
DISPLAY	SOU	IRCE				RESETS	
Display 2 MR	Mee	ting Room VW 🔻	Cancel		> Current active Preset: No preset selected	•	ID: 0
KVM System RX	TX	•	Cancel		> Save ourrent connection		
RX	-	۲			Save current connection	ts in tollowing preset	
TV 1		T			> Save current connection	is as new preset	
						Create	
Connect					> Delete following preset:		
					> Delete following preset:		

Figure 361: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 362)

Nuxlab Network (	Controller Settings	Softwa	re Update	Help		
SELECTED			759/770/771/7	73/777)   Muxl	ab   Matrix Virtu	ıal
Set-up	Matrix	Video Wall	R5-232	HDMI-CEC	Firmware	
Connect your disp bottom to make th	e connections.					
Connect your disp bottom to make th DISPLAY	e connections.	URCE		[		ESETS
bottom to make th	e connections.	URCE	SUCCESS		PR Current active Preset: Io preset selected	ESETS
bottom to make th	e connections.	eting Room VW 🔻	SUCCESS SUCCESS		Current active Preset: Io preset selected	▼ ID: 0
bottom to make th DISPLAY Display 2 MR	e connections. SO	eting Room VW 🔻			Current active Preset:	▼ ID: 0
bottom to make th DISPLAY Display 2 MR KVM System RX	e connections. SOI Me TX	eting Room VW 🔻		>	Current active Preset: Io preset selected	▼ ID: 0 s in following preset: ▼
bottom to make th DISPLAY Display 2 MR KVM System RX RX	e connections. SO Mei TX	eting Room VW ▼ ▼		>	Current active Preset: lo preset selected Save current connection	▼ ID: 0 s in following preset: ▼
bottom to make th DISPLAY Display 2 MR KVM System RX RX TV 1	e connections. SO Mei TX	eting Room VW ▼ ▼		 	Current active Preset: Io preset selected Save current connection	▼ ID: 0 s in following preset: ▼ s as new preset:
bottom to make th DISPLAY Display 2 MR KVM System RX RX	e connections. SO Mer TX	eting Room VW ▼ ▼		 	Current active Preset: lo preset selected Save current connection	▼ ID: 0 s in following preset: ▼ s as new preset:
bottom to make th DISPLAY Display 2 MR KVM System RX RX TV 1	e connections. SO Mer TX	eting Room VW ▼ ▼		 	Current active Preset: Io preset selected Save current connection	ID: 0
bottom to make th DISPLAY Display 2 MR KVM System RX RX TV 1	e connections. SO Mer TX	eting Room VW ▼ ▼		 	Current active Preset: Io preset selected Save current connection	ID: 0

Figure 362: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 363) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS
> Current active Preset:
No preset selected   ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
10:00 AM Meeting Create
> Delete following preset:

Figure 363: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 364)

PRESE	rs			
> Current active Preset:				
[2] 10:00 AM Meeting		▼	ID:	2
<ul> <li>&gt; Save current connections in for</li> <li>&gt; Save current connections as no</li> </ul>		set: V		
	Create	S	UC	CESS
> Delete following preset:		•		

Figure 364: Confirmation of New Preset

To delete a preset, the user clicks the **> Delete following preset** drop-down box and selects a preset name from the list shown (Figure 365)

PRESETS
> Current active Preset:
[2] 10:00 AM Meeting V ID: 2
> Save current connections in following preset:
• •
> Save current connections as new preset:
Create
> Delete following preset:
<b></b>
[2] 10:00 AM Meeting

Figure 365: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 366).



Figure 366: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 367)

PRESETS	
> Current active Preset:	
No preset selected	ID: 0
> Save current connections in following preset:	
> Save current connections as new preset:	
Create	
> Delete following preset:	
▼	SUCCES

Figure 367: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 368)

PRESETS	
> Current active Preset:	
[1] 10:00 AM Meeting •	ID: 1
> Save current connections in following preset	:
[1] 10:00 AM Meeting	
[2] 10:00 AM Meeting with Sales Team	
> Delete following preset:	
▼	

Figure 368: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 369).

PRESETS	
> Current active Preset:	
[2] 10:00 AM Meeting with Sales Team V ID: 2	
> Save current connections in following preset:	
SUCCES	SS
> Save current connections as new preset:	
Create	
> Delete following preset: ▼	

Figure 369: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

# 3. Products Screen - Video Wall Tab

The HDMI/VGA/USB wall plate transmitter 500777 will require either the 500758-RX or 500759-RX to be able to do **Video Wall**, please refer to the Video Wall section for further details on the configuration.

## 4. Products Screen - RS-232 Tab

MuxLab's HDMI/VGA/USB wall plate transmitter 500777 does not support RS232. Clicking on this tab will display the following screen (Figure 370)

Products   Settings   Software Update   Help SELECTED PRODUCT: leeting Room : HDMI over IP 4K (500758/759/770/771/773/777)   Muxlab   Matrix Virtual Set-up Matrix Video Wall R5-232 HDM-CEC Firmware
leeting Room : HDMI over IP 4K (500758/759/770/771/773/777)   Muxlab   Matrix Virtual
Seturn Matrix Video Wall BC-222 HDMU-CFC Firmware
See up matrix made matrix R3-232 mom ded minimate
No compatible device detected!

Figure 370: RS-232 Tab

## 5. Products Screen – HDMI CEC Tab

**HDMI CEC** feature is not supported in the HDMI/VGA wall plate transmitter 500773 as there is not IR connector on it.

## 6. Products Screen - Firmware Tab

The Firmware tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receivers (Figure 371).

								Language:	
Muxi	lab								
luxlab Network Co									
Products	Settings	\$	Software	e Update	Help				
SELECTED P									
TV Room : HDM	l over IP 4K	(500758)	759/77	0/771/773/77	7)   Muxlab   N	latrix Virtua	I		
Set-up	Matrix	Video V	Vall	RS-232	HDMI-CEC	Firmware			
Set-up	Matrix	Video V							
Set-up	Matrix	Video V	Modify a changes	ny available setti	ings and click Save				
Set-up	Matrix	Video V	Modify a changes O Displa	ny available setti ays (RX) •	ings and click Save				
Set-up	Matrix	Video V	Modify a changes O Displa	ny available setti ays (RX) File No file cho	ings and click Save				
Set-up	Matrix	Video V	Modify a changes O Displa	ny available setti ays (RX) •	ings and click Save				
	Matrix	Video V	Modify a changes O Displa	ny available setti ays (RX) File No file cho Apply	ings and click Save				
DISPLAY			Modify a changes O Displa	ny available setti ays (RX) <u>File</u> No file cho Apply SO	ings and click Save Source (TX) sen URCE		v1.0.3		
Set-up DISPLAY 758-RX (500758-RX KVM-RX (500771-R2)	)		Modify a changes Displa Choose	ny available setti ays (RX) File No file cho Apply SO 758	ings and click Save Source (TX) sen	to apply your	v1.0.3 v1.0.2		
DISPLAY 758-RX (500758-RX	)	v1.0.3	Modify a changes Displa Choose	ny available setti ays (RX) File No file cho Apply SO 758 KVI	Source (TX) sen URCE -TX (500758-TX)	to apply your			

Figure 371: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

#### **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The **Network** tab (Figure 372) is used to change the IP address of the MuxLab Network Controller, the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP.



Figure 372: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 373).

MU luxlab Netwo	<b>xLab</b> ork Controller				Language:	Englis
Products	Settings	Software U	pdate	Help		
Network	Administration					
Select a User User Name new password Confirm new p User Type:	User Account Or to edit:	•				
Specify file:	unit with the selected of Choose File No file of	tosen	ontroller using the	same as the controller th	nis backup file come from !!!	
Backup dat Backup the Backup	a data and save it in a fil					
Get Logs Get all logs i Download L						

Figure 373: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 374). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.



Figure 374: Software Update Screen

#### **Help Screen**

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 375)

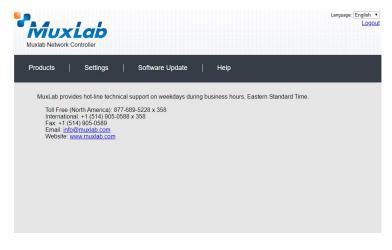


Figure 375: Help Screen

# Extender Model 500755-AMP

# **Product Screen**

Once the user has logged in, the **Products** screen will appear (Figure 376).

MuxLab				Language: En	glish ▼ Logou
Products   Settings	;   Softwa	re Update	Help		
SELECT A PRODUC			ADD DEVICE		
ID Custom Name	Product Name	Company	Product Type	]	
		© 2018 MuxLab Inc	version: 1.5.7a		

Figure 376: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP (500752/753/754/755/756) and then click on ADD DEVICE (Figure 377).

Products   Settings   Software Update	Help
ELECT A PRODUCT TO ADD:	
	ADD DEVICE
3-Button IP PoE Control Panel (500816-IP)	
AV Over IP 4K/60 (500760/761) HDMI over IP (500752/753/754/755/756)	Type
HDMI over IP 4K (500758/759/770/771/773/777/778)	I Select
HDMI over IP H264 (500757)	
HDMI over IP H264/H265 (500762/763) HDMI over IP Uncompressed 4K/60 (500768)	
Divit over iP Uncompressed 4K/60 (500766)	

Figure 377: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 378). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 376), without a product being added.

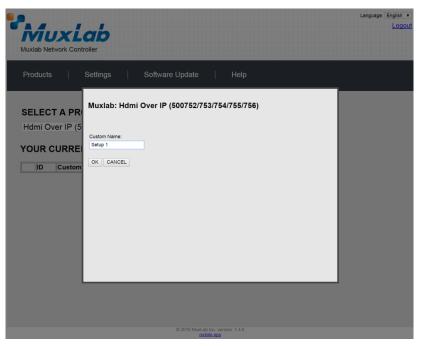


Figure 378: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 379).

	UXLOR letwork Controller	,				Langu	age: English ▼ Logou
Product	ts   Setting	gs ∣ Software	e Update 🛛 🗍	Help			
				ADD DEVICE			
	CURRENT SY		Compagny	Due duet trine	,		
ID				Product type			
	Custom Name	Product Name	Compagny	Dreeduct fring			
	Setup 1	Hdmi Over IP (500752/753/754/755/756)	Muxlab	Product type Matrix Virtual	Select		
		Hdmi Over IP	1		Select		
		Hdmi Over IP	1		Select		

Figure 379: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 380).

Muxlab Network			68.50 says: t to load previous stor	ed device list ? OK	Cancel	Language: English
Products	Settings	Softwa	re Update	Help		
SELECTED Setup 1 : Hdm			55/756)   Muxla	ab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Set-up Modify any availat	ole settings and clic	k Save to apply you	ur changes			
			© 2016 MuxLab In	warrion: 1.4.9		

Figure 380: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. IR
- 6. Firmware

#### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 381).

roducts	Settings	Softwa	re Update	Help		
	PRODUCT					
etup 1 : Hdmi	Over IP (500	752/753/754/75	5/756)   Muxla	ab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
	le settings and clic	k Save to apply you	ir changes			

Figure 381: Products Screen – Set-up Tab

# Note: The term "Display" is used in this 500755-AMP section to reference the sink side (RX), the actual sink devices are speakers.

The system will scan the network for all source side devices (500755-AMP "transmitters") and display side devices (500755-AMP "receivers"), and will display the scan results in tabular form (Figure 382). Note that the 500755-AMP consists of a transmitter and receiver unit (supporting a 50W per channel amplifier), whereby one transmitter can connect with multiple receivers supporting a one-to-many architecture for a distributed system. One or more sources (via transmitters) can easily be distributed to multiple zoned locations with speakers (via receivers).

Each 500755-AMP transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any speaker sink (RX) or audio source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 383 (orange highlighted fields).

									Logo
ĪV	ĪUX	Lab							
	b Network (								
Proc	lucts	Settings	Softw	vare Update	Help				
SFI	ECTED	PRODUCT	· .						
				755/756) I Mi	ıxlab   Matrix	Virtual			
selu	p i . Huili	I Over IP (500	01 02 11 00 11 04	755/750)   Wit		VIItuai			
	Set-up	Matrix	Video Wall	RS-232	IR	F	irmware		
Set-u Modi		le settings and cli	ck Save to apply y	our changes					
Modi		le settings and cli	ck Save to apply y	your changes					
Modif	fy any availab	-	ck Save to apply y	/our changes					
Modif A	fy any availab kutomatic	-	ck Save to apply y	your changes					
Modif A Lau Displ	fy any availab automatic nch discovery	O Manual	ck Save to apply y	your changes	MASK	DHCP D	IP		
Modif A Lau Displ	fy any availab automatic nch discovery lay (1 RX)	Manual	1AC address	-	MASK 255.255.255.0			Detail	
Modif A Lau Displ Port#	ý any availab kutomatic nch discovery lay (1 RX) ≇ Name	Manual	1AC address	IP address				Detail	
Modif A Laur Displ Port# 0	y any availab automatic nch discovery lay (1 RX) # Name TX1	Manual	1AC address	IP address				Detail	
Modif A Laur Displ Port# 0	ý any availab kutomatic nch discovery lay (1 RX) ≇ Name	Manual	1AC address	IP address				Detail	
Modif Laur Displ Port# 0 Sour	y any availab automatic nch discovery lay (1 RX) # Name TX1	Manual	1AC address	IP address			Reboot	Detail	
Modif Laur Displ Port# 0 Sour	y any availab automatic Inch discovery Iay (1 RX) ≇ Name TX1 ce (1 TX)	Manual M	1AC address 00-08-78-00-7D-2A	IP address 192.168.168.72	255.255.255.0	DHCP D	Reboot	Detail	
Modif A Laur Displ Port# 0 Sour Port# 0	ty any availab wutomatic lay (1 RX) # Name TX1 # Name TX1 # Name TX1	Manual M	IAC address 00-08-78-00-7D-2A IAC address	IP address 192.168.168.72 IP address	255.255.255.0 MASK	DHCP D	Reboot		
Modif A Laur Displ Port# 0 Sour Port#	ty any availab wutomatic lay (1 RX) # Name TX1 # Name TX1 # Name TX1	Manual M	IAC address 00-08-78-00-7D-2A IAC address	IP address 192.168.168.72 IP address	255.255.255.0 MASK	DHCP D	Reboot		

Figure 382: Products Screen – Set-up Tab

									Lar	nguage:	English
	b Network C	Controller									Log
Prod	ucts	Settings	Softw	vare Update	Help						
		PRODUCT	-	755/756)   Mu	ıxlab   Matrix	Virtual					
5	Set-up	Matrix	Video Wall	RS-232	IR	Firr	nware				
Set-u Modif		le settings and cli	ck Save to apply :	your changes							
Modif	y any availab utomatic	le settings and cli Manual	ck Save to apply :	your changes							
Modif A Laun	y any availab	-	ck Save to apply <u>;</u>	your changes							
Modif Ar Laun Displa	ý any availab utomatic nch discovery	Manual	ck Save to apply y	your changes IP address	MASK	DHCP DIP					
Modif Ar Laun Displa	y any availab utomatic nch discovery ay (1 RX)	O Manual		IP address	MASK 255.255.255.0		Reboot	Cancel	Detail		
Modif All Laun Displa Port# 0 Source	y any availab utomatic ach discovery ay (1 RX) t Name RX1 ce (1 TX)	Manual	IAC address 00-08-78-00-7D-2A	IP address 192.168.168.72	255.255.255.0	2	Reboot	Cancel	Detail		
Modif All Laun Displa Port# 0 Source	y any availab utomatic nch discovery ay (1 RX) t Name RX1	Manual M	1AC address	IP address			Reboot	Cancel	Detail		
Modify a Al Laun Displa Port# 0 Source Port# 0	y any availab utomatic the discovery ay (1 RX) E Name RX1 Ce (1 TX) E Name TX1	Manual M	IAC address 00-08-78-00-7D-2A IAC address	IP address 192.168.168.72 IP address	255.255.255.0 MASK				Detail		
Modify and Laun Displa Port# 0 Source Port#	y any availab utomatic the discovery ay (1 RX) E Name RX1 Ce (1 TX) E Name TX1	Manual M	IAC address 00-08-78-00-7D-2A IAC address	IP address 192.168.168.72 IP address	255.255.255.0 MASK				Detail		

Figure 383: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 384).

	Network C									
Produ	ucts	Settings	Softw	/are Update	Help					
		PRODUCT Over IP (500	-	755/756)   Mu:	xlab   Matrix \	/irtual				
Set-up		Matrix le settings and cliq	Video Wall	RS-232	IR	Fir	mware			
Set-up Modify					IR	Fir	mware			
Set-up Modify • Aut Launc	any availab	le settings and clic			IR	Fir	mware			
Set-up Modify • Aut Launc	any availab tomatic ch discovery yy (1 RX)	le settings and clic Manual			IR	DHCP DIF				
Set-up Modify	any availab tomatic ch discovery yy (1 RX)	le settings and clic Manual	ck Save to apply y	iour changes				Detail	UPDATED	
Set-up Modify • Aut Launc Display Port# 0	any availab tomatic ch discovery yy (1 RX) Name	le settings and clic Manual	sk Save to apply y IAC address	iour changes	MASK	DHCP DIF		Detail	UPDATED	
Set-up Modify Aut Launc Display Port# 1 0 Source Port# 1	any availab tomatic ch discovery <b>y (1 RX)</b> Name RX1 e (1 TX)	le settings and clic Manual M 0	AC address	iour changes	MASK	DHCP DIF	Reboot	Detail	UPDATED	

Figure 384: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 385). This allows for control of TX settings for volume/volume attenuation (if mic is detected)/bass/treble/mic gain/mic bass/mic treble/mic auto detect level, and for selection of input port 1 or 2/mic type. It also allows for control of RX settings for volume/bass/treble within each zone.

Custom Name:       TX1         Model:       500755-TX AMP         MAC Address:       00-05-78-00-8A-60         IP Address:       192,168,168,111 (DHCP: OFF)         FW Version:       2.1.1         Group IP:       239,255.1.18         Video Resolution: Not Applicable       Audio Format:       4.1.1 khz         Volume:       -       + (0)         Secondary volume attenuation:       -       + (0)         Bass:       -       + (0)         Input select:       Imput = + (0)       Save         Microphone treble:       -       + (0)         Microphone treble:       -       + (0)         Microphone detection level:       -       + (0)         Microphone detection level:       -       + (0)         Save       Cancel       -	Device Detail			Device Detail
Secondary volume attenuation: <ul> <li></li></ul>	Model:         500755-T>           MAC Address:         00-0B-78-0           IP Address:         192.168.16           FW Version:         2.1.1           Group IP:         239.255.1.           Video Resolution: Not Applica	00-8A-66 58.111 (DHCP: OFF) 18		Model:         500755-RX AMP           MAC Address:         00-0B-76-00-8A-60           IP Address:         192,168,168,61 (DHCP: OFF)           FW Version:         2.1.1           Group IP:         239,255.1.1           Video Resolution: Not Applicable
Bass:     -     -     +     (0)       Treble:     -     -     +     (0)       Input select:     Input #1     -     +       Microphone type:     Microphone electret     -       Microphone bass:     -     +     (0)       Microphone treble:     -     +     (0)       Microphone detection levet:     -     +     (0)	Volume:	-0	+ (0)	Volume:
Treble:     -     -     +     (0)       Input select:     Input +1     -     -       Microphone type:     Microphone electret     -       Microphone gain:     -     +     +       Microphone bass:     -     +     +       Microphone treble:     -     +     +       Microphone detection level:     -     +     +	Secondary volume attenuation	on: _	<b>■+</b> (0)	Bass: _ = + (0)
Input select:     Input select:     Input select:     Input select:       Microphone gain:     -     + (0)       Microphone bass:     -     + (0)       Microphone treble:     -     + (0)       Microphone detection level:     -     + (0) [0=off]	Bass:		+(0)	Treble: _ = (0)
Microphone type:         Microphone electret         •           Microphone gain:         -         + (0)           Microphone bass:         -         =         + (0)           Microphone treble:         -         =         + (0)           Microphone detection level:         -         =         + (0) [0=off]	Treble:		+(0)	Save Cancel
Microphone bass:       _       _       ↓ (0)         Microphone treble:       _       ↓ (0)         Microphone detection level:       _       ↓ (0) [0=off]				
Microphone treble:	Microphone gain:	-	+(0)	
Microphone detection levet: + (0) [0=off]	Microphone bass:		+ (0)	
	Microphone treble:	- 3	+ (0)	
Save Cancel	Microphone detection level:	-0	+ (0) [0=off]	
	Save Cancel			

Figure 385: Device Detail Dialog for TX and RX

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display (sink device) to any source. The user has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 386).

Muxlab Network						Language	κÐ
Products	Settings	Softwar	e Update	Help			
	PRODUCT hi Over IP (500	: 752/753/754/75	5/756)   Muxla	ıb   Matrix Viri	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th		sources below. Once	e you've selected	the displays you wa	ant to change, use the	"Connect" button at the	
DISPLAY		SOURCE		PRESET	S		
RX1		· •	> Current as No preset s		▼ ID: 1		
				ent connections in foli			
			> Save curr	ent connections as ne	w preset: Create		
Connect			> Delete fol	owing preset:			
			© 2016 MuxLab In	version: 1.4.8			

Figure 386: Matrix Tab

To connect a sink to a source, the user first clicks on the drop-down list next to the given sink (for example "RX1") and selects which source to connect it to (Figure 387).

							Language
Iuxlab Network	Controller						
Products	Settings	Software	e Update	Help			
	PRODUCT : ni Over IP (5007		i/756)   Mux	lab   Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp pottom to make th	plays to the desired s ne connections.	sources below. Once	you've selecte	d the displays you wa	ant to change, use th	he "Connect	" button at the
DISPLAY		SOURCE		1	PRESETS		
RX1		Audio 1 V Can	cel	> Current active Preset: No preset selected		ID: 1	
				> Save current connect	tions in following preset:		
				> Save current connect	tions as new preset: Create		
				> Delete following prese	et:		
					•		

Figure 387: Change Connection

Once the selection is made (the user can change any or all connections between sinks and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 388).

Muxlab Network C						Language	English ▼ Logou
Products	Settings	Softwa	ire Update	Help			
SELECTED Setup 1 : Hdm		-	55/756)   Muxla	ab   Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your displ bottom to make the		sources below. On	ce you've selected	the displays you w	ant to change, use t	he "Connect" button at the	
DISPLAY		SOURCE		PRESET	rs	7	
RX1		Audio 1 V SUC	CESS > Current at	tive Preset:	▼ ID: 0		
				ent connections in fol			
			> Save curr	ent connections as ne	ow preset: Create		
Connect			> Delete fol	lowing preset:	¥		
			© 2016 MuxLab In mobile				

Figure 388: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 389) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS
> Current active Preset:
No preset selected <b>v</b> ID: 0
<ul> <li>&gt; Save current connections in following preset:</li> <li>&gt; Save current connections as new preset:</li> </ul>
Preset 1 Create
> Delete following preset:

Figure 389: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 390).

PRESETS						
> Current active Preset:						
[1] Preset 1 • ID: 1						
> Save current connections in following preset:						
> Save current connections as new preset:						
Create SUCCESS						
> Delete following preset:						

Figure 390: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 391).

PRESETS						
> Current active Preset:						
[1] Preset 1 V ID: 1						
> Save current connections in following preset:						
> Save current connections as new preset: Create						
> Delete following preset:						
[1] Preset 1						

Figure 391: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 392).

192.168.168.50 says:         Are you sure to delete this preset ?         Prevent this page from creating additional dialogues.         OK		×
	Are you sure to delete this preset ?	
	Prevent this page from creating additional dialogues.	
	<b>OK</b> Cancel	

Figure 392: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 393).

PRESETS			
> Current active Preset:			
[1] Preset 1	ID:	1	
> Save current connections in following preset:			
> Save current connections as new preset: Create			
> Delete following preset:			
<b></b>	SL	JCCE	SS

Figure 393: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 394).

PRESETS								
> Current active Preset:								
[1] Preset 1		▼ 10	D: 1					
<ul> <li>&gt; Save current connections in following preset:</li> <li>              ¶             [1] Old Preset      </li> </ul>								
	Create							
> Delete following preset:								
		T						

Figure 394: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 395).

PRESETS				
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre	set:	_	10.05	
	•	S	JCCE	SS
> Save current connections as new preset:				
Create				
> Delete following preset:	¥			

Figure 395: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

# 3. Products Screen - Video Wall Tab

MuxLab's Extender 500755-AMP does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 396).

Muxlab Network						Langua	ge: English Log
Products	Settings	Softwar	e Update	Help			
	PRODUCT hi Over IP (500	: 752/753/754/75	5/756)   Muxla	ab   Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
NO devices com	patible with video	wall features found					
			© 2016 MuxLab Ini				

Figure 396: Video Wall Tab

For more information on the Video Wall tab and its features, refer to the section of this manual dealing with MuxLab Extender 500754 and MuxLab Extender 500759.

#### 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 397). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

Muxlab Network C						Language: Engli La
Products	Settings	Software	e Update 🛛 🗍	Help		
SELECTED Setup 1 : Hdmi		: 752/753/754/755	5/756)   Muxla	b   Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device Select a device: - Baud rate: - IP header in d - Feedback ON: - IP Feedback:	ata:		Stop bits: 1 ]	Parity : NONE ¥		
Save						
Data to send in	HEX (ex: A013)	B155C5)				
Data feedback	received in HEX	(				
Send						
			© 2016 MuxLab Inc.			

Figure 397: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 398). The IP Feedback field should also contain the IP address of the Network Controller.

MUXL						Language: English
Products	Settings	Softwa	ire Update	Help		
SELECTED PR Setup 1 : Hdmi Ov			55/756)   Muxl	ab   Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device's R	S-232 connectio	on settings here.				
Select a device:	Audio 1 ¥					
- Baud rate: - IP header in data - Feedback ON: - IP Feedback:	9600 V		8   Stop bits: 1 ]	Parity : NONE ¥		
- IP Feedback:	192.100.100.00					
Save						
	X / 4042D	45505				
Save Data to send in HE	X (ex: A013B	155C5)				
		155C5)				
Data to send in HE		155C5)				

Figure 398: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, source "Audio 1" connected to the transmitter was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to source "Audio 1" will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to source "Audio 1". The transmitter will then send the specified data command to source "Audio 1".

The **Data feedback received in HEX** field displays the HEX version the feedback sent to the Network Controller by source "Audio 1".

When sending RS-232 commands directly from a PC to any transmitter or receiver, the user must set up a pass-through system for RS-232 signals to be sent to and from devices. This requires two steps:

- (3) The user first tells the local device (the device connected directly to the PC) the IP address of the far device (where the RS-232 commands are being sent). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.
- (4) The user then tells the far device the IP address of the local device (if feedback from the far device is required). This is done by first clicking on the Select a device drop-down list and selecting the far device from the list, and then inputting the IP address of the near device in the IP Feedback field. The user then clicks on Save.

#### 5. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands to a MuxLab transmitter or receiver IR port (Figure 399) via the Network Controller. IR pass-through mode is also supported using an IR handheld remote as the control source.

Muxlab Network						Language	Engli
Products	Settings	Softwa	re Update	Help			
	PRODUCT ii Over IP (500		55/756)   Mux	lab   Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Select a device - IR Mode: - IP Feedback:		_					
	n HEX (ex: A013	B155C5)					
IR code receiv	ed in HEX						

Figure 399: IR Tab

When sending IR commands through the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 400).

IP (500752/753/754/755/756)   Muxlab   Matrix Virtual rtx Video Wall R5-232 IR Firmware undo 1 •	Products	Settings	Softwar	re Update ∣	Help		
P (500752/753/754/755/756)   Muxlab   Matrix Virtual rtx Video Wall R5-232 IR Firmware udgo 1 •		PRODUCT					
tings here. udo 1 ▼ 10.0			-	5/756)   Muxlat	)   Matrix Vir	tual	
nter *	Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
wither v	Update your devic	e's IR settings here	ŧ.				
	Select a device	Audio 1 V					
	- IR Mode:	Emitter 🔻					 1
x: A013B155C5)	- IP Feedback:	0.0.0					
x: A013B155C5)							
	Save		B155C5)				1
		1 HEX (ex: A013					
		n HEX (ex: A013	,				
	Save		B155C5)				
		n HEX (ex: A013	,				
	Data to send in						 J
x	Data to send i						

Figure 400: IR Tab – Selecting a Device

The 500755-AMP supports a bi-directional IR port. The below example is for transmitting IR from the sink side (display/speaker side) to the source side, but the 500755-AMP can be configured to transmit IR from the source to the sink side as well.

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, source "Audio 1" was chosen as the selected device, meaning that a command sent to source "Audio 1" will travel from the Network Controller to the Ethernet Switch, then from the Ethernet Switch to the transmitter connected to source "Audio 1". The transmitter will then send the specified IR data command to source "Audio 1" via the IR Emitter connected to the transmitter IR out port.

The **IR code received in HEX** field displays the HEX version of an IR command send from a handheld remote to an IR receiver IR In port and attached IR Sensor.

When sending IR commands directly from an IR Source device, such as an IR handheld remote, from 500755-AMP receiver through to a transmitter, the user must set up a pass-through for IR signals to be sent to and from devices. This requires the following step:

The user must tell the 500755-AMP receiver (being the device near the IR handheld remote with an attached IR Sensor) the IP address of the 500755-AMP transmitter (where the IR commands are being sent, which has an attached IR Emitter). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.

## 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 401).

Muxlab Network C							Logo
Products	Settings	Softv	vare Update	Help			
SELECTED Setup 1 : Hdm		-	755/756)   Muxla	b   Matrix Vir	rtual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
		char • 1	Displays (RX) oose file No file chose	Source (TX)	e to apply your		
			Apply				
DISPLAY			SOL	IRCE			
RX1 (500755-RX A	MP)	v2.1.1	TX1	(500755-TX AMF	P)	v2.1.1	

Figure 401: Firmware Tab

The user first selects either **Display** (**RX**) which is the sink unit (connected to speakers), or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

#### **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The **Network** tab (Figure 402) is used to change the IP address of the MuxLab Network Controller, the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP.



Figure 402: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 403).

		Language: English
Yoducts       Settings       Software Update       Help         Network       Administration         User Accounts       Image: Comparison of the set of the s	MuxLab	Lo
Network       Administration         User Accounts       Image: Ima	uxlab Network Controller	
Network       Administration         User Accounts       Image: State	roducts   Settinos   Software Lodate   Helo	
User Accounts	······ / ·····························	
User Accounts		
Create a new law Account Or Stells a law law Account Or Stells a law law Account Or Inter Name Inter Name Create Update Delete <ul> <li>Create Update Delete</li> <li>Create Update Delete</li> <li>Restore data Restore the unit with the selected data file Specify file: Choose File No file chosen</li> <li>WARNING I You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore</li> <li>Backup data Backup the data and save it in a file Backup</li> <li>Get Logs Get Logs Get all logs in a zip file</li> </ul>	Network Administration	
Baketa due toekt. Low Hame mere passaved: Confirm mere passaved: Confirm mere passaved: Confirm mere passaved: Confirm mere passaved: Create Updata Delete Restore the unit with the selected data file Specify file: Choose File No file chosen WARNING I You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Backup data Backup data Backup per data and save it in a file Backup file Backup file come file Backup file come file Backup file data and save it in a file Backup file	User Accounts	
ree passand: Confirm we passand: Unry Type: Create Update Delete Restore data Restore data Restore the unit with the selected data file Specify file; Choose File No file chosen WARNING You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Backup data Backup data Backup the data and save it in a file Backup Get Logs Get all logs in a zip file		
Confirm mere presented: User Type: Create Update Delate Restore data Restore data Restore data file Specify file: Choose File No file chosen WARNING / You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Backup data Backup data Backup data Backup file data and save it in a file Backup Get Logs Get all logs in a zip file		
User Type:		
Create       Update       Delete         Restore data       Restore the unit with the selected data file       Specify file; Choose File; No file chosen         WARNING You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!!       Restore         Backup data       Backup the data and save it in a file       Backup         Get Logs       Get Logs       Get all logs in a zip file		
Restore data Resto		
Restore the unit with the selected data file Specify file; Choose File No file chosen WARNING I You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Backup data Backup data Get Logs Get all logs in a zip file	Create Update Delete	
Backup the data and save it in a file Backup Get Logs Get all logs in a zip file	Restore the unit with the selected data file Specify file: Choose File No file chosen WARNING I You MUST FIRST set the IP address of this controller using the same as the cont	roller this backup file come from !!!
Backup the data and save it in a file Backup Get Logs Get all logs in a zip file	Backup data	
Backup Get Logs Get all logs in a zip file		
Get all logs in a zip file		
Get all logs in a zip file		
	Get Logs	
Download Logs Delete Logs	Get all logs in a zip file	
	Download Logs Delete Logs	

Figure 403: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 404). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

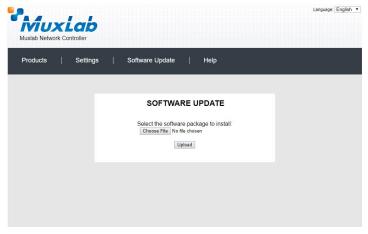


Figure 404: Software Update Screen

## **Help Screen**

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 405).

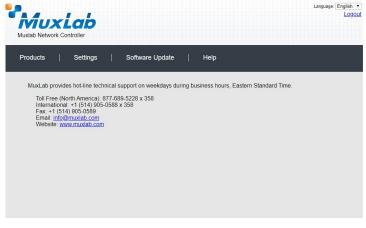


Figure 405: Help Screen

# Extender Model 500762

## **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 406).

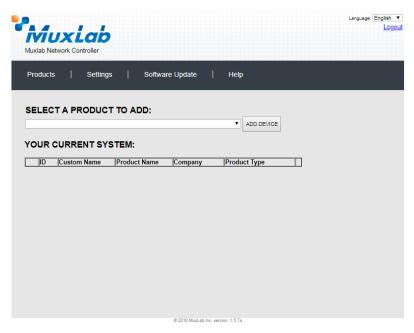


Figure 406: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP H264/H.265 (500762) and then click on ADD DEVICE (Figure 407).

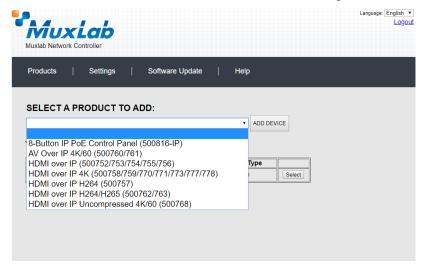


Figure 407: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 408). The user then types a name in the **Custom Name:** field and clicks **OK**. Note that if the user decides to click **CANCEL**, the previous screen appears (Figure 406), without a product being added.

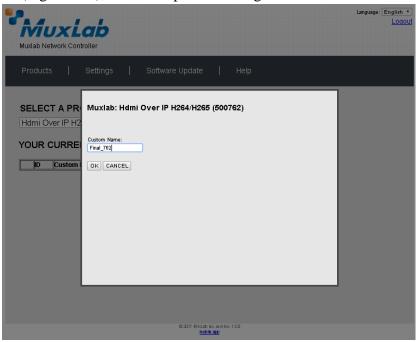


Figure 408: Products Screen – Naming a Product

The custom name has been added to **YOUR CURRENT SYSTEM** (Figure 409).

Muxiab Network Controller	,				Language: English ▼ LoqoL
Products   Settin	gs   Softw	are Update	Help		
SELECT A PRODUC			* ADD DEVIC	E	
D Custom Name	Product Name	Compagny	Product type		
2 Final_762	H284/H265 (500762)	Muxiab	Matrix Virtual	Select	
		© 2017 Mixtab ho.uen mobile app	sion:150		

Figure 409: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 410).

uxlab Network	Controller			ок	Cancel	
Products	Settings	Software Upda	ate   He	ар		
	PRODUCT Imi Over IP H	264/H265 (500762)   Mi	uxlab   Matrix \	/irtual		
Set-up	Mat/tx	Multiview/Videowaii	R5-232	IR	Pirmware	
Set-up Select the type	of setup to use.					
* Automatic	O Manual					

Figure 410: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved. Select **OK** if appropriate.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Multiview/Videowall
- 4. RS-232
- 5. IR
- 6. Firmware

#### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 411).

roducts	Settings	Software Upda	ite   He	lp		
	PRODUCT mi Over IP H	264/H265 (500762)   Mu	ıxlab   Matrix \	/irtual		
Set-up	Matrix	Multiview/Videowall	R5-232	IR	Firmware	
Set-up Modify any availa	able settings and	click Save to apply your change	-			
* Automatio	O Manual					
Leunch discover	y.	Add Remote	Source			

Figure 411: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500762 transmitters) and display side devices (500762 receivers), and will display the scan results in tabular form (Figure 412).

Each 500762 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 413 (orange highlighted fields).

			,						Language	Lo
	ducts	Settin	igs   Sol	ftware Updati	е   не	lp				
Fina	.ECTED F		CT : IP H264/H265 ( MulthSew/Y		uxlab   Matri PS-212	ix Virtual	Firmwa	re		
• /	fy any availabl Automatic	e settings ar O Manual	nd click Save to appl							
Modi + /	fy any availabl Automatic Inch discovery	1000		ly your changes ADD Remote So	urce					
Modi + /	fy any availabl Automatic	1000			urce					
Modi + / Lao Disp Porta	fý any availabi Actomatic Inch discovery I <b>lay (3 RX)</b> # Name	O Manual	MAC address	ADD Remote So IP address	MASK	GATEWAY	DHCPI			
Modi + / Lau Disp Porta 0	fy any availabl Inch discovery I <b>lay (3 RX)</b> # Name RX-35-88-50	Manual	MAC address 36-09-5A-4C-A7-47	ADD Remote So IP address 192.100.100.00	MASK 255 255 255 0	192.168.168.1		Reboot		
Modi + / Lao Disp Porta	fý any availabi Actomatic Inch discovery I <b>lay (3 RX)</b> # Name	Manual A.4C.A7.47 F-70-90-A3	MAC address	ADD Remote So IP address 192 198 198 96 192 198 198 96	MASK				Detail	
Modi + / Lau Disp Porta 0 0 0	fy any availabl Inch discovery Ilay (3 RX) # Name RX-35-85-5 RX-C2-19-3	Manual A.4C.A7.47 F-70-90-A3	MAC eddress 36-89-5A-4C-47-47 C2-19-37-70-90-40	ADD Remote So IP address 192 198 198 96 192 198 198 96	MASK 265.255.255.0 265.256.256.0	192.168.168.1 192.168.168.1		Reboot Reboot	Detail	
Modi + 7 Lao Disp Porta 0 0 Sour	fy any availabl keomatic inch discovery itay (3 RX) # Name RX-35-85-5 RX-62-19-3 RX-42-81-80	Manual A.4C.A7.47 F-70-90-A3	MAC eddress 36-89-5A-4C-47-47 C2-19-37-70-90-40	ADD Remote So IP address 192 198 198 96 192 198 198 96	MASK 265.255.255.0 265.256.256.0	192.168.168.1 192.168.168.1		Reboot Reboot Reboot	Detail	
Modi + 7 Lao Disp Porta 0 0 Sour	fy any availabl Accomatic Inch discovery Hey (3 RX) # Name RX:35:85:5 RX:35:85:5 RX:42:41:6 RX:42:41:6 RX:42:41:6	Manual A.4C.A7.47 F-70-90-A3	MAC address 38-89-5A4C-87-47 C2:18-37-70-80-40 42-81-80-70-08-4C	ADD Remote So IP address 192,100,100,90 192,108,106,90 192,108,100,97	MASK 255.255.255.0 255.256.256.0 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1	0.0.0	Reboot Reboot Reboot	Detail Detail	
Modi + 7 Lao Disp Port2 0 0 0 Sour	fy any availabl lutomatic inch discovery itay (3 RX) # Name RX-35-85-5 RX-22-19-3 RX-42-81-6 rce (2 TX) # Name	Manual A.4C.A7.47 F-70-90-A3	MAC address 26/05/44C-79-07-0 42/01-90-70-08-4C 42/01-90-70-08-4C MAC address	ADD Remote So IP address 192, 108, 108, 98 192, 108, 108, 98 192, 108, 108, 97 IP address	MASK 265.265.265.0 265.265.265.0 265.265.265.0 MASK	192 198 198 1 192 198 198 1 192 198 198 1 192 199 199 1 0 ATEWAY	DHCPI	Reboot Reboot Reboot	Detail Detail	

Figure 412: Products Screen – Set-up Tab

	b Network C		,						Language	LO
Prod	jucts	Settin	gs   Sol	ftware Updati	e   He	ip				
1000	ECTED F			(200722)   11		a betancia i				
-inal	1_762 ; Hd	ni Over I	IP H264/H265 (	(500762)   M	uxiab   Matri	ix virtual				
	Set-up	Matrix	Multiview/	/Ideoviall.	R5-232	IR	Firmware			
Set-u Modif	qu	e settings an O Marval	id click Save to app	ly your changes						
Set-L Modif	up y any availabi	01000070000		ly your changes ADD Remote So	urce					
Set-L Modif + A	up y any availabi utomatic	01000070000			urce					
Set-u Modif Laur Displ	ip ly any availabi utomatic nch discovery	01000070000			urce MASK	GATEWAY	DHCP DF	,		
Set-L Modif + A Laur Displ Port# 0	up y any availabil utomatic nch discovery lay (3 PX) Name RX-1	01000070000	MAC address 20-88-5A-4C-A7-47	ADD Remote So IP address 192,168,169,98	MASK 255 255 255 0	192,168,168,1	DHCP DF	Reboot	Detail	
Set-L Modif # A Laur Displ Port# 0 0	up y any available utomatic nch discovery lay (3 RX) Name R0-1 SX-2	01000070000	MAC address 20-30-54-40- A7-47 C2-10-37-70-00-A0	ADD Remote So IP address 192 168 169 98 192 168 169 96	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1		Reboot Reboot	Detail	
Set-L Modif + A Laur Displ Port# 0	up y any availabil utomatic nch discovery lay (3 PX) Name RX-1	01000070000	MAC address 20-88-5A-4C-A7-47	ADD Remote So IP address 192 168 169 98 192 168 169 96	MASK 255 255 255 0	192,168,168,1	0.0	Reboot		
Set-L Modif Displ Displ Port# 0 0	up y any available utomatic nch discovery lay (3 RX) Name R0-1 SX-2	01000070000	MAC address 20-30-54-40- A7-47 C2-10-37-70-00-A0	ADD Remote So IP address 192 168 169 98 192 168 169 96	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1		Reboot Reboot	Detail	
Set - L Modif Port# 0 0 0 0 Sour	utomatio nch discovery lay (3 RX) Name RX-2 RX-3	01000070000	MAC address 20-30-54-40- A7-47 C2-10-37-70-00-A0	ADD Remote So IP address 192 168 169 98 192 168 169 96	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1		Reboot Reboot Reboot	Detail	
Set - L Modif Port# 0 0 0 0 Sour	up y any available utomatic hoh discovery lay (3 RX) Name RX-1 RX-2 RX-2 RX-2 RX-2 RX-2 RX-2 RX-2 RX-2	01000070000	MAC address 36-00-54-4C-AZ-47 C2 10-37-70-00-4C 42-81-90-7D-00-4C	ADD Remote So IP address 192,168,169,96 192,168,169,97 192,168,169,97	MASK 255 255 255 0 255 255 255 0 255 255 255 0	192,168,168,1 192,168,168,1 192,168,168,1		Reboot Reboot Reboot	Detail	

## Figure 413: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 414).

	AUX ab Network		,						Langua	ge English Logi
Pro	ducts	Settir	ngs   Sot	ftware Updati	e   He	Ip				
Fina	LECTED		CT : IP H264/H265 ( Muth4ew/)		uxlab   Matri R5-232	x Virtual	Firmware			
	Sec-up	Macrox	MULTIVIEW/V	ngeowalt	10-232	-IK	Firmware			
		ble settings a	nd click Save to appi	ly your changes						
Modi	ify any availai	🖓 Manual		ly your changes ADD Remote So	utoe					
Modi Lau	ity any availal Automatic	🖓 Manual			utoe					
Modi Lau Disp	ify eny availai Automatic Inch discovery	🖓 Manual			uroe MASK	GATEWAY	DHCP DP			
Modi Lau Disp	ifý any availaí Automatic Inch discovery Dilay (3 RX)	🖓 Manual	(	ADD Remote So		GATEWAY 192.108.15.1	DHCP DIP	Reboot	Detail	UPDATE
Modi Lau Disp	ifý any availaí Automatic Inch discovery <b>Slay (3 RX)</b> # Name	🖓 Manual	MAC address	ADD Remote So P address 192 168 168 98	MASK			Reboot	Detail	And the second second
Modi Lau Disp Porta 0	ity any availa Automatic unch discovery <b>slay (3 RX)</b> # Name RX1	🖓 Manual	MAC address 28-85-54-4C-47-47	ADD Remote So P address 192 108 108 98 192 108 108 98	MASK 255 255 255 0	192,168.168.1	0.0		Detail	UPDATE
Modi Lau Disp Ports 0 0 0	ify any availa Automatic Inch discovery <b>play (3 RX)</b> # Name RX1 R02	🖓 Manual	MAC address 30-89-5A-40-A7-47 C2:19-3F-70-9D-A0	ADD Remote So P address 192 108 108 98 192 108 108 98	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1		Reboot	Detail	UPDATE
Modi Lau Disp Porti 0 0 0 Sou	ity eny availal Automatic anch discovery olay (3 RX) # Name RX1 R02 R03 rce (2 TX) # Name	🖓 Manual	MAC address 39:05:54:42:47-47 52:19:37:70:00-40 42:81:40:770:00-40 MAC address	ADD Remote So P address 192 108 108 98 192 108 108 98	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1		Reboot	Detail	UPDATE
Modi Lau Disp Porti 0 0 0 Sou	ity eny availa Automatic Inch discovery <b>play (3 RX)</b> # Name RX1 RX2 RX2 RX3 RX3 RX3 RX3 RX3 RX3 RX3 RX3 RX3 RX3	🖓 Manual	MAC address 20-05-54-4C-87-47 C2:16-37-70-00-40 42-81-90-70-08-4C	ADD Remote So P address 192 108 109 90 192 108 109 90 192 108 109 97	MASK 255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0	192,168,168,1 192,168,168,1 192,168,168,1		Reboot	Detail	UPDATE
Modi Lau Disp Porta 0 0 0 0 0 0 0 0 0 0 0	ity eny availal Automatic anch discovery olay (3 RX) # Name RX1 R02 R03 rce (2 TX) # Name	🖓 Manual	MAC address 39:05:54:42:47-47 52:19:37:70:00-40 42:81:40:770:00-40 MAC address	ADD Remote So P address 192.105.105.98 192.105.105.96 192.105.105.97 P address	MASK 255 255 255 0 255 255 255 0 255 255 255 0 MASK	192.108.108.1 192.108.108.1 192.108.108.1 192.108.108.1	DHCP DIP	Reboot Reboot	Detail Detail	UPDATE

Figure 414: Saving Name Changes

Remote sources may also be used with the 500762-RX decoder. Start by pressing on the "Add Remote Source" button in Figure 414. This will bring up a popup menu to fill-in relating to the remote source, as shown in Figure 415, and followed by Figure 416.

odel:	Select a product model ·	Model:	TX-Other •
ustom Name:	Enter a name of your choice	Custom Name:	Enter a name of your choice
AC Address:	Optional (Ex: 00-78-02-00-ab-5d)	MAC Address	Optional (Ex: 00-78-02-00-ab-5d)
IP Address:	Optional (Ex: 192.168.168.99)	IP Address:	Optional (Ex: 192.168.168.99)
		RTSP: Dis URL: rtsp Port:	:// <ip domain="" name="" or="">:<port>/path_to_file</port></ip>
		SAVE CAN	NCEL

Figure 415: Add a remote source Figure 416: Add a remote source & protocol

Fill in the menu as follows:

- Select a product model, which may either be a 500762-TX or a different brand transmitter. This will display additional information as shown in Figure 416.
- Assign a name to this device.
- Enter the unit MAC address and IP address.
- Select the protocol to be used, enable it, and set the Port as needed.
- Save the settings.

To view and modify component parameters, click on the **Detail** button next to the given AV over IP device. A dialog appears (Figure 417 for TX, and 418 for RX).

Justom Name:	DO		
Aodel:	TH-500762		
AC Address	00-22-33-4B	-50-09	
P Address:	192.168.168	94 (DHCP:	OFF)
W Version:	1.1.2		
Ideo Resolution:	1920×1080		
PU Usage (%):	22		
Amory Usage (bytes):	357548/3838	124	
Nink LED	On Off		
actory Reset	Reset		
/deo Codec:	H.254-HigH	-	-
ideo Output Resolution		Totals	-
Adeo Bitrate control:	CIR		•
Ideo Bit Rate (kbps):	16000	[32-32000	1
Ideo Frame per seo:	60	[5-60]	
aroup of Picture:	60	(5-300)	
adio Input:	HDBI		•
udio Codec:	AAC		
udio Bit Rate (bps):	320000	[48000-32	0000
Audio frequency (Hz):	43333		٠
RTMP RTSP HLS	TS FLV N	ULTICAST	
Multicast : Ena	bled +		
Multicast IP : 239	100.0.17		
Nulticast Port : 370	10		
Humeast Fort : 3701	W		

Custom Name:	BX1
Model:	RX-500762
MAC Address:	36-88-5A-4C-A7-47
IP Address:	192.168.168.98 (DHCP: OFF)
FW Version:	1.2.3
Mdeo Resolution:	1920 x 1072
CPU Usage (%):	
Memory Usage (byte	s):
Blink LED:	On Off
Factory Reset:	Reset
Multicast : E	anabled 🔻
RTSP HLS TS F	EY MOLINCASI
Multicast : E Multicast IP : 23	
Multicast IP : 23 Multicast Port : 37	
municast POR 137	000
Save Cancel	
Contraction Contraction of	

Figure 417: TX Device Detail Dialog

Figure 418: RX Device Detail Dialog

#### Transmitter (500762-TX) Parameters:

- Custom Name: Device name defined by user (info only)
- Model: Device model number (info only)
- Mac Address: Device MAC Address (info only)
- IP Address: Device IP Address (info only)
- FW Version: Installed firmware version (info only)
- Video Resolution: Video resolution at input (info only)
- CPU Usage: Device CPU usage in percentage (info only)
- Memory Usage: Device memory usage in bytes (info only)
- Blink LED: On / Off control to help to locate a device
- Factory Reset: Perform a Factory Reset of the device
- Video Codec: Allows for selection of video codec (to baseline, main or high profile for H.264, or main profile for H.265)
- Video Output Resolution: Allows for selection of output video resolution (to "Same as Input", or from 176x144 to 1920x1080)
- Bit Rate Control: Allows for selection of bit rate control (to VBR variable bit rate, or CBR continuous bit rate)
- Video Bit Rate: Allows for selection is bit rate (from 32kbps to 32Mbps)
- Video Frames per Sec: Video refresh rate in frames per sec (from 5 to 60)
- Group of Picture: Set the GOP or Group of Pictures (from 5 to 300)
- Audio Input: Select embedded audio input source (to HDMI, or Analog via 3.5mm jack)
- Audio Codec: Select audio codec type (to AAC or MP3)
- Audio Bit Rate: Select audio bit rate (from 48Kbps to 320Kbps)
- Audio Frequency: Select audio frequency (to 44100Hz, or 48000Hz)
- Communication Protocol Selection: RTMP, RTSP, HLS, TS, FLV and Multicast (Note: Only a limited selection should be made at a time. Do not enable all at the same time.)
- Multicast: Allows for enabling or disabling the multicast protocol
- Multicast IP: Shows the multicast IP (info only)
- Multicast Port: Shows the multicast port used (info only)

#### Receiver (500762-RX) Parameters:

- Custom Name: Device name defined by user (info only)
- Model: Device model number (info only)
- Mac Address: Device MAC Address (info only)
- IP Address: Device IP Address (info only)
- FW Version: Installed firmware version (info only)
- Video Resolution: Video resolution at input (info only)
- CPU Usage: Device CPU usage in percentage (info only)
- Memory Usage: Device memory usage in bytes (info only)
- Blink LED: On / Off control to help to locate a device
- Factory Reset: Perform a Factory Reset of the device
- Set Output Video Format: Allow for the selection of output video format (to Auto, or from 480p/60 to 3840x2160/60)
- Communication Protocol Selection: RTSP, HLS, TS, FLV and Multicast
- Multicast: Allows for enabling or disabling the multicast protocol
- Multicast IP: Shows the multicast IP (info only)
- Multicast Port: Shows the multicast port used (info only)

**Note:** In both cases above click on "Save" to accept any changes, or on "Cancel" to ignore them.

## 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 419).

Lab ontroller						
Settings	Software	Update	Help			
miOver IP H26 Matrix rys to the desired so	Multiview/Vid	eowali	R5-732	IR		
SOURCE	PROTOC	OL.		PRESETS		
TX1 *	AUTO					
TX1 *	AUTO		No preset selecter	l:	* ID: 0	
TX1 *	AUTO	•	> Save current conne	ections in following p	and the second se	
			> Save current conne	ctions as new press	#:	
			> Delete following pro	iset:		
	Settings PRODUCT : mi Over IP H24 Materix so the desired so the connections. SOURCE TX1 * TX1 *	Settings     Software       PRODUCT:     Imit Over IP H264/H265 (50076)       Matrix     Multidew/Vide       vide to the desired sources below. Once the the connections.     Sources       SOURCE     PROTOC       Txt +     Auto       Txt +     Auto	Settings     Software Update       PRODUCT:     Software Update       mi Over IP H264/H265 (500762)   Mu:     Multiview/Videovali       Mutrix     Multiview/Videovali       vot the desired sources below. Once you've set to the connectiona.     SoURCE       SOURCE     PROTOCOL       Tx1 *     Auto *	Settings       Software Update       Help         PRODUCT :       mi Over IP H264/H265 (500762)   Muxiab   Matrix Vir         Matrix       Matrix(ber/Videowall       R5-232         vys to the desired sources below. Once you've selected the displays you to the desired sources below. Once you've selected the displays you to the desired sources below. Once you've selected the displays you to the desired sources below. Once you've selected the displays you to the desired sources below. Once you've selected the displays you to the the connections.         SOURCE       PROTOCOL         Txt1       Auto •         Xuto •       Save current come         Save current come       Save current come	Settings     Software Update     Help       PRODUCT :     mi Over IP H264/H265 (500762)   Muxiab   Matrix Virtual       Matrix     Matrix Virtual       Sources     PROTOCOL       Tx1+     Auto +       Tx1+     Auto +       Yave ourient connections in following provide selected the display in the following provide selected in the press       Save ourient connections in following provide selected in the press	Settings       Software Update       Help         PRODUCT :       mi Over IP H284/H265 (500762)   MuxIab   Matrix Virtual         Matrix       Multiview/Videovall       R5-232       IR       Firmware         Voto the desired sources below. Once you've selected the displays you want to change, use the "Connecte the connections.       Sources       PROTOCOL       PRESETS         Txt1       Auto       •       ID: 0       > Save current connections in following preset:         Save current connections in following preset:       •       Save current connections in following preset:

Figure 419: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "RX-1") and selects which source to connect it to (Figure 420).

	Settings	Softwar	e Update	1	Help			
	PRODUCT : dmi Over IP H2	CA 142CE (EDD)	762)   Mary	(ab.) N	Intriv Vird	u al		
11101_102.11		04/1200 (0001	roz) [ max	iteres   14	Tauta Th			
Set-up	Matrix	Multiview/W	ideovati	RS	-232	IR	Firmware	
	ake the connections.	ources below. Onc	PROTOCO			PRESE	, use the "Connect" butto	
RXI	TX2 *	Cancel	AUTO	•	> Current a No preset	ctive Preset:	+ 10: 0	
R0(2	TX1 *		AUTO	*	1 evenice con			
	TX1 *		AUTO		> Saive cur	rent connections in	following preset:	
ROD						rent connections as		
ROCI					Save ou	01.02	Create	

Figure 420: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 421).

Muxdab Network	Controller						
Products	Settings	Software	Update	Help			
	PRODUCT : dmi Over IP H2	64/H265 (50076	2)   Mu:	klab   Matrix Vir	tual		
			49475		R	Firmware	
Set-up	Matrix	Multiview/Vide	eowall	RS-232	inc.	C OTTOVAL C	
Connect your disp				RS-232 ected the displays you			
Connect your disp at the bottom to m	lays to the desired so		you've sek				
Connect your disp at the bottom to m DISPLAY	keys to the desired so ake the connections. SOURCE	ources below . Once PROTOC	you've sek	ected the displays you	PRESETS	use the "Conne	
Connect your disp at the bottom to m	lays to the desired so ake the connections.	ources below . Once PROTOC	you've sel	ected the displays you	PRESETS		
Connect your disp at the bottom to m DISPLAY	Asys to the desired so ake the connections. SOURCE	PROTOC	you've sel	ected the displays you	PRESETS	• 10; 0	
Connect your disp at the bottom to m DISPLAY RK1 RK2	Alays to the desired so also the connections. SOURCE TX2 * SUCC TX1 *	PROTOC	you've sek COL	ected the displays you > Current active Pres No preset selected	PRESETS	Use the "Conner ID: 0 reset:	

Figure 421: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 422) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS			
> Current active Preset:			
No preset selected	¥	ID:	0
<ul> <li>&gt; Save current connections in following pres</li> <li>&gt; Save current connections as new preset:</li> </ul>	et: ▼		
Preset 1 Create			
> Delete following preset:	•		

Figure 422: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 423).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create SUCCESS
> Delete following preset:

Figure 423: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 424).

PRESETS			
> Current active Preset:			
[1] Preset 1	۲	ID:	1
> Save current connections in following pre	set:		
	•		
> Save current connections as new preset:			
Create			
> Delete following preset:	•	]	
[1] Preset 1			

Figure 424: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 425).



Figure 425: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 426).

PRESETS		
> Current active Preset:		
[1] Preset 1	ID: 1	
> Save current connections in following preset:		
> Save current connections as new preset: Create		
> Delete following preset:		
▼	SUCCES	SS

Figure 426: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 427).

PR	ESETS	
> Current active Preset:		
[1] Preset 1		▼ ID: 1
> Save current connections	in following pre	eset: ▼
[1] Old Preset		
	Create	
> Delete following preset:		
		-

Figure 427: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 428).

PRESETS			]
> Current active Preset:			
[1] Old Preset	v	ID: 1	
> Save current connections in following pres	set:		
	۲	SUCCE	SS
> Save current connections as new preset: Create			
> Delete following preset:	•		

Figure 428: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

#### 3. Products Screen – Multiview/Videowall Tab

The **Multiview/Videowall** tab of the **Products** screen enables the user to define, configure and manage the connectivity of Multiview screens and/or Video Walls.

Multiview enables the user to display multiple videos or images on a single display or on a Video Wall consisting of multiple displays. Video Wall enables the user to configure an NxM display array consisting of NxM monitors, all of the same size.

Figure 429 shows the main Multiview/Videowall screen. An example consisting of 4 displays and 2 sources is used here to illustrate how to setup and configure Multiviews and/or Video Walls.

Figure 429 allows the user to create and save various configurations and arrangements of display and source layouts, and their connectivity. It includes a grid which represents the main work space for placing and sizing displays and the visible portion of sources, such that any portion of a source overlapping a display will allow that portion of the video to be shown on the monitor once the two have been connected.

VIU.	X Cor						Language: Eng
Products	I	Settings	Software U	lpdate   H	elp		
ELECT	ED PI	RODUCT:					
inal_762 :	Hdmi	Over IP H2	64/H265 (500762)	Muxlab   Matrix	Virtual		
Set-up		Matrix	Multiview/Videowal	R5-232	IR	Firmware	
Multiviev 	v / Vie	deowall					
	▼ Id	Name	S	ave Delete Clear			
Settings							
24 x 32	2	Show Disp	lays O Show Sources	Connect Stop	Reset		
	_						
Multiview S	iet-Up	: Step #1					
Drag and drop	a displ	ay. Double-click	the display for more set	tings.			
RX-50076 Bottom Le #1	52 eft	RX-500762 Bottom Right #2	RX-500762 Top Left #3	RX-500762 Top Right #4			
Multiview S Drag and drop			the source for more set	tings.			
TX-50076 Source	12	TX-500762 Source 2 #2					

Figure 429: Multiview/Videowall Tab

The **"Config"** sub-section in Figure 429 allows the user to save, load, delete and clear configurations which have been created on the grid.

- The pull-down tab allows the user to load any saved configuration.
- The "ID" field sets a "Config ID" for any given saved configuration. This can be used to call up a configuration via third party control software offered by MuxLab partners (see the MuxLab website Partners section).
- The "Name" field represents the configuration name assigned by the user for any saved configuration.
- The "Save" and "Delete" buttons allow quick access to these respective functions, in relation to a current configuration.
- The "Clear" button allows the user to create a new configuration from an existing one. Simply load an existing configuration, modify as needed, press the "Clear" button to clear the "Name" field, enter a new name in the "Name" field, and press "Save".

In the "**Settings**" sub-section in Figure 429, the user can modify the grid size, set the focus on the displays, set the focus on the sources, connect sources to displays, disconnect sources from displays, and reset the grid which removes all sources and displays from the grid.

- The grid size can be altered from a 4 by 4 grid, up to a 32 by 32 (default is 24 by 32). This grid allows the user to place and size both displays and source content, and manage their connectivity. Displays can be a minimum size of 4 by 4 grids, while sources can be as little as a 1 by 1 grid, depending on the display size. Displays of large grid sizes will limit the minimum size of the source content size (this is automatically determined by the software).
- The "Show Displays" radio button brings all displays on the grid to the foreground, allowing for easy access to displays.
- The "Show Sources" radio button brings all sources on the grid to the foreground, allowing for easy access to sources.
- The "Connect" button connects sources to displays which are located on the grid. In order for source content to be displayed on a given monitor, the source content must either partially or completely overlap the display in question. The source content can overlap more than one display at a time. In addition one source can overlay another source, but no more than one overlap per display should be attempted.
- The "Stop" button disconnects all sources from all displays on the grid.
- The "Reset" button will clear all displays and sources from the grid, allowing the user to restart the process of placing monitors and sources.

The available displays and sources to be placed on the grid are located at the bottom of Figure 429. In this example there are 4 displays and 2 sources.

To setup the displays and source content on the grid, the user begins by clicking on the top left corner of a display and dragging it onto the grid (Figure 430). Each display can

be resized on the grid by clicking and dragging the bottom right corner of the display (Figures 431). Increasing the size of the display to cover multiple grids allows for finer placement of source material within a given display, offering more flexibility when assigning sources in a Multiview arrangement. Multiview allows for virtual windowing across one or more displays.

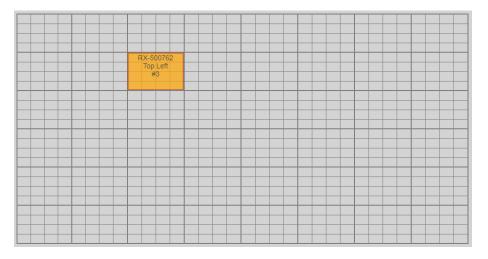


Figure 430: Placing displays

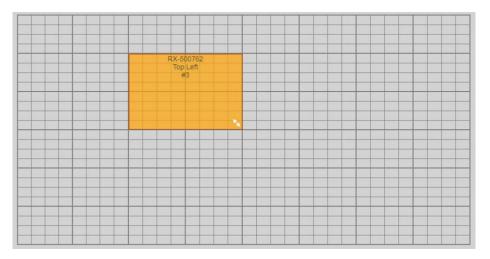


Figure 431: Sizing displays

Continue to place and size all displays on the grid. All displays should be sized equally. Once done, double click on one of the displays to configure it as shown in Figure 432. A "Display Settings" menu will pop up in order to configure the monitor settings.

- Start by setting the "Units" to either inches or centimeters
- Under "Screen Size" enter the screen diagonal dimension
- Enter the bezel size for the top, bottom, left and right bezel
- Save the above settings

Repeat the above steps for each display. When creating Video walls all the displays should be the same brand, size and model, and thus should have the same settings.

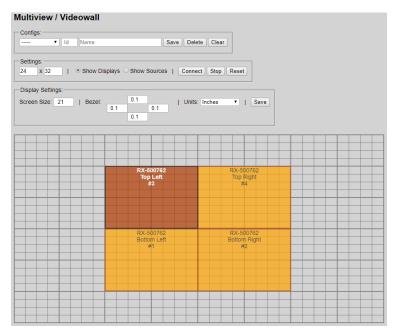


Figure 432: Configuring displays

Next add a source by clicking on the source and dragging it (via top left corner) on to the grid over one or more displays. The source content can be sized by clicking and dragging the bottom right corner. Make sure the source falls within the assigned display area as shown in Figure 432, to ensure that the video will be seen once connected. A source can be placed partially or completely cover one or more displays. Multiple sources can be added as appropriate, and in this example the second source can be added side-by-side or may even overlay the first video, see Figure 433. As mentioned previously up to two levels of source content can be overlapped within a single display, meaning one of the videos can be on the bottom level and the other on the top.

To configure a source, double click on it. This displays the "Source Settings" subsection.

- The "Copy" button creates a copy of the currently selected source to be able to place two or more copies of a given source on the grid.
- When the "Audio" check-box is enabled, the audio from the selected source will be audible, and audio from all other sources on the grid will be automatically disabled.
- The "On Top" check-box is used in cases where content from two sources overlap, and sets which source is on top and which is on the bottom. To configure this, select the source for the top level (by double clicking on it) and make sure to check-mark the "On Top" box, and press "Save". Then select the

other source and make sure to un-check the "On Top" box and press "Save". This is not configured automatically, and must be set manually.

- The "Shift" buttons are used for fine shift adjustments for cases where a video is spread across more than one display and some alignment is required between displays. This step is generally not required, since the display diagonal dimension and bezel settings performed earlier, normally are sufficient for proper alignment.
- The "Scale" buttons are used for fine video scaling adjustments for cases where a video is spread across more than one display and some adjustment is required between displays. This step is generally not required, since the display diagonal dimension and bezel settings performed earlier, normally are sufficient for proper operation.
- The "Reset" button resets all settings in this sub-section for a given source.
- The "Save" button saves all settings configured in this sub-section for a given source.

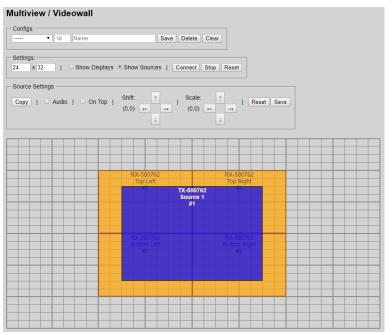


Figure 433: Adding Source Content to the Grid

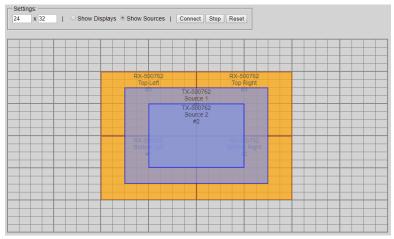


Figure 434: Adding more sources

It is important to note that the number of sources that can be displayed side-by-side simultaneously on one given display depends on the resolution of the sources.

For example:

- Only 1 windowed source can be shown on a given display at 4K
- Up to 2 windowed sources can be shown on a given display at 1080p/60
- Up to 4 windowed sources can be shown on a given display at 1080p/30
- Up to 5 windowed sources can be shown on a given display at 720p/60

Do not exceed the above limits, doing so may cause un-expected and un-intended behavior.

## 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands from the Network Controller to a MuxLab 500762 transmitter or receiver (Figure 435).

						Language:	English
Auxiab Network Co							Logo
Products	Settings	Software Update	Help				
SELECTED P Final_762 : Hdn		264/H265 (500762)   Mu	xlab   Matrix V	irtual			
Set-up	Matrix	Multiview/Videovall	RS-232	IR	Firmware		
Update your device's		ion settings here.					
Select a device:							
Select a device: - Baud rate: - IP Feedback:		[Data bits: 🔤 🕴   Stop bi	ls:   t =   Parity :   no	ne t			
- Baud rate: - IP Feedback: Save	-		IS:   <u>† •</u>   <b>Parity</b> :   no	ne *			]
Baud rate: IP Feedback: Save	• EX (ex: A013B1		ts: t * Parity : no	ne *			
- Baud rate: - IP Feedback: Save	• EX (ex: A013B1		is: <u>+ *</u> Parity : no	ne *			]

Figure 435: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 436).

MUXIAB Network Cor						Language: Engli
Products	Settings	Software Update	Help			
SELECTED PI Final_762 : Hdm		54/H265 (500762)   Mu	xlab   Matrix \	/irtual		
Set-up	Matrix	Multiview/Videowall	RS-232	IR	Firmware	
Update your device's Select a device:	RS-232 connectio	n settings here.				
- Baud rate: - IP Feedback: Save	9500 * 192.108.168.01	[Data bits: s •   Stop bit 1	s: 1 • Parity : n	one *		
Data to send in HE		505)				
Data feedback red	eived in HEX					

Figure 436: RS-233 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. Begin by setting the RS232 parameters as required and click on "Save". Next enter the RS232 command in Hex in the **Data to send in HEX** field and click on "Send". In the above example, TX2 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to TX2 will

travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to the TX2 port. That transmitter will then send the specified data command to the attached source device.

Note that any RS232 feedback data returned from the end device is automatically sent to the Network Controller and displayed in the Data Feedback Received field.

Note that RS232 pass-through mode is not currently supported.

#### 4. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands from the Network Controller to a MuxLab 500762 transmitter or receiver IR port (Figure 437).

Mux	Lab					Language	English Logi
Muxlab Network C	ontroller						
Products	Settings	Software Updat	e   Help				
SELECTED							
Final_762 : Hd	lmi Over IP H	1264/H265 (500762)   M	luxlab   Matrix	Virtual			
Set-up	Matrix	Multiview/Videowall	R5-232	IR	Firmware		
Update your device	s's IR settings here	e.					
Select a device:							
- IR Mode:							1
- IP Feedback:							
Save							
Data to send in l	UEV (our \$0420	455055					P
Data to send in i	HEA (EX: AUTJB	15505)					
Send							
							1
IR code receive	d in HEX						
Get IR code							

Figure 437: IR Tab

The 500762 supports a bi-directional IR port. The 500762 can be set to transmit IR commands from the Network Controller to a transmitter or receiver and then to a source or sink device, and can also be configured to receive IR commands from a handheld IR Remote and sending these commands to the Network Controller for learning IR command purposes.

#### **Transmitting IR Commands to Source and Sink Equipment:**

When sending IR commands through the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 438).

Muxdab Network C	controller					
Products	Settings	Software Upda	te   Help	)		
SELECTED	PRODUCT	;				
Final_762 : Ho	lmi Over IP H	1264/H265 (500762)   N	Muxlab   Matrix	: Virtual		
Set-up	Matrix	Multivlew/Videowall	RS-232	IR	Firmware	
Update your device	e's IR settings here	e.				
Select a device:	TX2 *					
[	Disable *					
- IR Mode:						
- IP Feedback:	192.168.168	5.01				
	192.168.165	.01				
- IP Feedback:						 ] ]
- IP Feedback:						
- IP Feedback:						
- IP Feedback: Save Data to send in	HEX (ex: A013B					 ] ] ]

Figure 438: IR Tab – Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. Begin by setting the IR Mode to "Emitter" and click on "Save". Next enter the IR command in Hex in the **Data to send in HEX** field and click on "Send". In the above example, TX2 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to TX2 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to the TX2 port with an attached IR Emitter. That transmitter will then send the specified data command via the attached IR Emitter to the source device.

Note that IR pass-through mode is not currently supported.

#### Learning IR Commands from a Handheld IR Remote:

The Network Controller can learn IR Commands in combination with the 500762. To begin the process, select the 500762 device as indicated above, set the IR Mode to Sensor and click on "Save", and attach an IR Senor to the 500762 IR port. Click on "Get IR Code", aim the handheld IR Remote at the Sensor while pressing on an IR command key on the IR Remote. The **IR code received in HEX** field will display the HEX version of an IR command sent from a handheld remote.

## 5. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 439).

Products	Settings		Software Update	Help			
ELECTED PR							
inal_762 : Hdm	i Over IP H264	1/H2	35 (500762)   Mu	xlab   Matrix Virt	ual		
Set-up	Matrix	M	ltiview/Videowall	RS-232	IR	Firmware	
			Modify any available s your changes * Displays (RX) Choose File No file o	ettings and click Save Source (TX) hosen	to apply		
			Apply				
DISPLAY			s	OURCE			
RX1 (RX-500762) RX2 (RX-500762) RX3 (RX-500762)	v1	2.3 2.3 2.3		K1 (TX-500762) K2 (TX-500762)	v1.1.2 v1.1.2		
				K2 (1X-500762)	V1.1.2		

Figure 439: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

## **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The **Network** tab (Figure 440) is used to change the IP address of the MuxLab Network Controller, the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP.

	Settings	Software Update	e   Help	
Network	Administration			
etwork				
	low if you'd like to set	manual network settings.		
Use DHCP:	OYes ® No			
IP address:				
192 . 168	168 . 50			
Network mask:				
255 . 255 . Router:	. 255 . 0			
192 . 168	168 . 1			
Mac Address:				
00 : 0E	C4 : D3 : B9 :	55		
Save				
-LAN 2				
Use DHCP:	Yes O No			
IP address:				
Network mask:				
Network mask:				
Router:				
Mac Address:				

Figure 440: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 441).

MuxLab Mula Netvork Controller	Language: [Engl
Products   Settings   Software Update   Help	
Hetwork Administration	
User Accounts	
Create a new User Account Or Select a User to edit. User Name new cassendt.	
Confirm new password: User Type:	
Create Update Delete	
Restore data	
Restore the unit with the selected data file	
Specify file: Choose File No file chosen WARNING ! You MUST FIRST set the IP address of this controller using the same as the controller this I	backup file come from !!!
Restore	
Backup data	
Backup the data and save it in a file	
Backup	
Get Logs	
Get all logs in a zip file Download Logs Delete Logs	
Loowinger rolls	

Figure 441: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 442). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

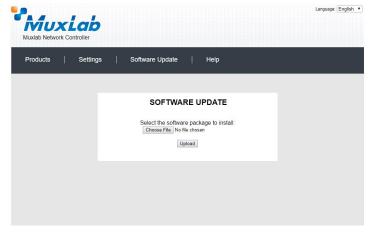


Figure 442: Software Update Screen

## **Help Screen**

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 443).

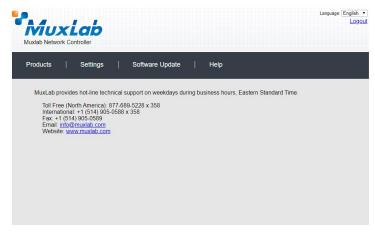


Figure 443: Help Screen

## Extender Model 500763 Products Screen

Once the user has logged in, the **Products** screen will appear (Figure 444).

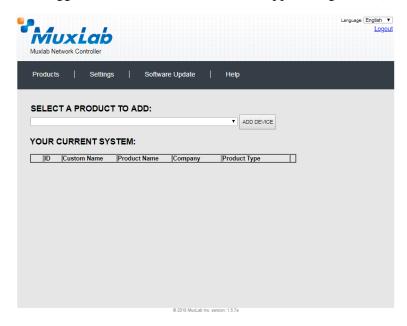


Figure 444: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP H264/H.265 (500762/763) and then click on ADD DEVICE (Figure 445).

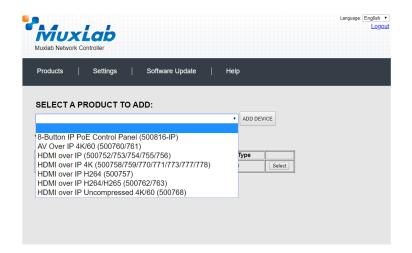


Figure 445: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 446). The user then types a name in the **Custom Name:** field and clicks **OK**. Note that if the user decides to click **CANCEL**, the previous screen appears (Figure 444), without a product being added.



Figure 446: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 447).

			Update	Help		
SEL	ECT A PRODUC	TTO ADD:				
				ADD DE		
YOU	R CURRENT S	STEM:				
	D Custom Name	Product Name	Company	Product Type		
X 1	1 62_63	HDMI over IP H264/H265 (500762/763)	Muxlab	Matrix Virtual	Select	
X 2	2 763 TX-762 RX	HDMI over IP H264/H265 (500762/763)	Muxlab	Matrix Virtual	Select	

Figure 447: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multitabbed screen (Figure 448).

SELECTED	Controlle Settings PRODUCT	168.168.50 says ou want to load previou Soliware Upo : P H264/H265 (50076	late   H	ок	Cancel	Language:[English ▼ Logout
Set-up	Matrix	Multiview/Videowall	R5-232	IR	Firmware	
Set-up Select the type o	of setup to use. O Manual					
			© 2019 MuxLab Inc			

Figure 448: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved. Select **OK** if appropriate.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Multiview/Videowall
- 4. RS-232
- 5. IR
- 6. Firmware

#### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

Automatic means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 449).

MUX Iuxlab Network (						Language: English Logo
Products	Settings	Software Upd	ate   H	lelp		
SELECTED						
763 TX-762 RX	: HDMI over I	P H264/H265 (500762	2/763)   Muxial	b   Matrix Virtu	al	
Set-up	Matrix	Multiview/Videowall	R5-232	IR	Firmware	
Set-up Modify any availa Automatic	ible settings and cl	ick Save to apply your chang	jes			
Launch discover	У	Add Remote	Source			

Figure 449: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500763 transmitters) and display side devices (500762 receivers), and will display the scan results in tabular form (Figure 450).

Each 500763 transmitter can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 451 (orange highlighted fields).

	Network		<b>ab</b> oller								
rodu	cts	I	Settings	Softw	are Update	Help					
			ODUCT OMI over	Г: IP H264/H265	(500762/763)	)   Muxlab   M	latrix Virtual				
Se	t-up		Matrix	Multiview/Vid	eowall R	5-232	IR	Firmware			
◎ A.	y any ava utomatic		ettings and Manual	click Save to apply							
Modify ® Au Laun	y any ava	ं Iery	- T		your changes dd Remote Source	5					
Modify au Laun Displa Port#	y any ava utomatic ich discov ay (4 RX) Name	ं Iery	- T	A MAC address	dd Remote Source	MASK	GATEWAY	DHCF	_		
Modify au Laun Displa Port# 0	y any ava utomatic ich discov ay (4 RX) Name 762-RX1	o Iery I	- T	MAC address 00-08-78-00-A6-8F	dd Remote Source IP address 192.168.168.74	MASK 255.255.255.0	192.168.168.1	×		Reboot	Detail
Modify au Laun Displa Port# 0 0	y any ava utomatic ich discov ay (4 RX) Name 762-RX1 762-RX2	o Iery I	- T	A MAC address 00-08-78-00-A6-BF 00-08-78-00-A6-C1	dd Remote Source IP address 192.168.168.74 192.168.168.75	MASK 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1	2 2	U	Reboot Reboot	Detail
Modify au Laun Displa Port# 0 0 0	y any ava utomatic ich discov ay (4 RX) Name 762-RX1 762-RX2 762-RX3	o reny ) 1 2 3	- T	A MAC address 00-08-78-00-A6-8F 00-08-78-00-A6-85 00-08-78-00-A6-85	dd Remote Source IP address 192.168.168.74 192.168.168.75 192.168.168.77	MASK 255.255.255.0 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1	* *		Reboot Reboot Reboot	Detail Detail
Modify au Laun Displa Port# 0 0	y any ava utomatic ich discov ay (4 RX) Name 762-RX1 762-RX2	o reny ) 1 2 3	- T	A MAC address 00-08-78-00-A6-BF 00-08-78-00-A6-C1	dd Remote Source IP address 192.168.168.74 192.168.168.75 192.168.168.77	MASK 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1	* * *	U	Reboot Reboot	Detail
Modify au Laun Displa Port# 0 0 0 0	y any ava utomatic ich discov ay (4 RX) Name 762-RX1 762-RX2 762-RX3	o reny ) 1 2 3	- T	A MAC address 00-08-78-00-A6-8F 00-08-78-00-A6-85 00-08-78-00-A6-85	dd Remote Source IP address 192.168.168.74 192.168.168.75 192.168.168.77	MASK 255.255.255.0 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1	* *		Reboot Reboot Reboot	Detail Detail
Modify au Laun Displa Port# 0 0 0 Source	y any ava utomatic ich discov ay (4 RX) Name 762-RX1 762-RX2 762-RX3 762-RX4 02-RX4	o reny ) 1 2 3	- T	AAC address 00-0575-00-A6-5F 00-08-76-00-A6-5F 00-08-76-00-A6-5B 00-08-76-00-A6-5B	dd Remote Source 19 address 192.168.168.74 192.168.168.75 192.168.168.76	MASK 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1	5 5 5 5 5 5 5		Reboot Reboot Reboot	Detail Detail
Modify au Laun Displa Port# 0 0 0 Source	y any ava utomatic ich discov ay (4 RX) Name 762-RX1 762-RX2 762-RX3	o rery 1 2 3 4	- T	A MAC address 00-08-78-00-A6-8F 00-08-78-00-A6-85 00-08-78-00-A6-85	dd Remote Source 192.168.168.74 192.168.168.77 192.168.168.77 192.168.168.76	MASK 255.255.255.0 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1	e e e DHCF		Reboot Reboot Reboot	Detail Detail
Modify and Laun Displa Port# 0 0 0 Source Port#	y any ava utomatic ich discov ay (4 RX) Name 762-RX1 762-RX2 762-RX3 762-RX3 762-RX4 ce (3 TX) Name	ery	- T	A MAC address 00-05-75-00-A6-85 00-05-75-00-A6-85 00-05-75-00-A6-85 00-05-75-00-A6-85 MAC address	dd Remote Source IP address 192.168.168.74 192.168.168.77 192.168.168.76 IP address 192.168.168.64	MASK 255,255,255,0 255,255,255,0 255,255,255,0 255,255,255,0 MASK	192.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1 GATEWAY	S S DHCF S		Reboot Reboot Reboot	Detail Detail Detail
Modify Although Although Alth	y any ava utomatic ich discov ay (4 RX) Name 762-RX1 762-RX2 762-RX3 762-RX3 762-RX4 ce (3 TX) Name 763-TX1	ery ) (	- T	A MAC address 00-05-75-00-A8-6F 00-05-75-00-A8-65 00-05-75-00-A8-85 00-05-75-00-A8-85 00-05-75-00-A6-85 00-05-75-00-A6-F5	UP address 192.168.168.75 192.168.168.75 192.168.168.75 192.168.168.75 192.168.168.76 IP address 192.168.168.68 192.168.168.68	MASK 255,255,255,0 255,255,255,0 255,255,255,0 255,255,255,0 MASK 255,255,255,0 255,255,255,0	92.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1 <b>GATEWAY</b> 192.168.168.1	S S DHCF S S		Reboot Reboot Reboot Reboot	Detail Detail Detail

Figure 450: Products Screen – Set-up Tab

	UX Network C	Lab Controller									L
roduc	cts	Settings	Softwa	are Update	Helş	D					
		PRODUCT : HDMI over		(500762/763)	Muxlab	Matrix Virtual					
Set	t-up	Matrix	Multiview/Vid	eowall R	5-232	IR	Firmware				
® Au	vanyavaila .tomatic	O Manual	lick Save to apply j								
Modify	y any availa	O Manual		your changes dd Remote Source							
Modify	y any availa .tomatic ch discovery ay (4 RX) Name	O Manual	Ar MAC address	dd Remote Source	MASK	GATEWAY	DHCF	DIP			
Modify au Laun Displa Port# 0	y any availa .tomatic ch discovery ay (4 RX) Name 762-RX1	O Manual	A MAC address 00-08-78-00-A6-8F	dd Remote Source	MASK 255.255.255.	0 192.168.168.1	۲		Reboot	Detail	
Modify aun Laun Displa Port# 0 0	y any availa nomatic ch discovery ay (4 RX) Name 762-RX1 762-RX2	O Manual	A MAC address 00-05-78-00-A6-8F 00-05-78-00-A6-C1	IP address 192.168.168.74 192.168.168.75	MASK 255.255.255. 255.255.255.	D 192.168.168.1 D 192.168.168.1	2 2		Reboot Reboot	Detail Detail	
Modify au Launi Displa Port# 0 0	y any availa domatic ch discovery ay (4 RX) Name 762-RX1 762-RX2 762-RX3	O Manual	A/ MAC address 00-08-78-00-A6-8F 00-08-78-00-A6-C1 00-08-78-00-A6-85	IP address 192.168.168.74 192.168.168.75 192.168.168.75	MASK 255.255.255. 255.255.255. 255.255.255.	0 192.168.168.1 0 192.168.168.1 0 192.168.168.1	* * *		Reboot Reboot Reboot	Detail Detail	
Modify aun Laun Displa Port# 0 0	y any availa nomatic ch discovery ay (4 RX) Name 762-RX1 762-RX2	O Manual	A MAC address 00-05-78-00-A6-8F 00-05-78-00-A6-C1	IP address 192.168.168.74 192.168.168.75 192.168.168.75	MASK 255.255.255. 255.255.255.	0 192.168.168.1 0 192.168.168.1 0 192.168.168.1	* * *		Reboot Reboot	Detail	
Modify aux Launi Displa Port# 0 0 0 0 0	y any availa domatic ch discovery ay (4 RX) Name 762-RX1 762-RX2 762-RX3	O Manual	A/ MAC address 00-08-78-00-A6-8F 00-08-78-00-A6-C1 00-08-78-00-A6-85	IP address 192.168.168.74 192.168.168.75 192.168.168.75	MASK 255.255.255. 255.255.255. 255.255.255.	0 192.168.168.1 0 192.168.168.1 0 192.168.168.1	2 2 2		Reboot Reboot Reboot	Detail Detail	
Modify au Laun Displa Port# 0 0 0 0 Source	v any availa tomatic ch discovery ay (4 RX) Name 762-RX1 762-RX2 762-RX3 762-RX3 762-RX4	O Manual	A/ MAC address 00-08-78-00-A6-8F 00-08-78-00-A6-C1 00-08-78-00-A6-85	IP address 192.168.168.74 192.168.168.75 192.168.168.75	MASK 255.255.255. 255.255.255. 255.255.255.	0 192.168.168.1 0 192.168.168.1 0 192.168.168.1	2 2 2		Reboot Reboot Reboot	Detail Detail	
Modify au Laun Displa Port# 0 0 0 0 Source	any availa .tomatic ch discovery ay (4 RX) Name 762-RX1 762-RX1 762-RX1 762-RX3 762-RX4 we (3 TX)	O Manual	A MAC address 00-05-78-00-A6-B1 00-05-78-00-A6-B1 00-05-78-00-A6-B1 00-05-78-00-A6-B1 00-05-78-00-A6-B1	IP address 192.168.168.74 192.168.168.77 192.168.168.75 192.168.168.76	MASK 255,255,255,1 255,255,255,1 255,255,255,1 255,255,255,1	0 192.168.168.1 0 192.168.168.1 0 192.168.168.1 0 192.168.168.1 GATEWAY	e e e DHCF		Reboot Reboot Reboot	Detail Detail	Det
Modify au Launi Displa Port# 0 0 0 0 Sourc Port#	any availa tomatic ch discovery ay (4 RX) Name 762-RX1 762-RX2 762-RX3 762-RX4 re (3 TX) Name	O Manual	A MAC address 00-05-75-00-A6-BF 00-05-75-00-A6-B5 00-05-75-00-A6-B5 00-05-75-00-A6-B5 MAC address	IP address 192.168.168.74 192.168.168.75 192.168.168.75 192.168.168.76 IP address 192.168.168.64	MASK 255,255,255,1 255,255,255,1 255,255,255,1 255,255,255,1 MASK	0 192.168.168.1 0 192.168.168.1 0 192.168.168.1 0 192.168.168.1 0 192.168.168.1 0 192.168.168.1	S S DHCF S		Reboot Reboot Reboot	Detail Detail Detail	Det
Modify Au Launi Displa Port# 0 0 0 0 0 0 0 0 0 0 0 0 0	any availa atomatic ch discovery ay (4 RX) Name 762-RX1 762-RX2 762-RX3 762-RX4 we (3 TX) Name 4K Streamt	O Manual	A MAC address 00-05-75-00-A6-BF 00-05-75-00-A6-BF 00-05-75-00-A6-BE MAC address 00-05-75-00-A6-F5	UP address 192.165.165.74 192.165.165.75 192.165.165.75 192.165.165.76 IP address 192.165.165.64 192.165.165.64	MASK 255 255 255 2 255 255 255 2 255 255 2 255 255 2 MASK 255 255 2 255 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 192.168.168.1 0 192.168.168.1 0 192.168.168.1 0 192.168.168.1 0 192.168.168.1 0 192.168.168.1 0 192.168.168.1	S S DHCF S S		Reboot Reboot Reboot Reboot	Detail Detail Detail	

Figure 451: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 452).

	Network Co										Lo
Produ	ıcts	Settings	Softw	are Update	Help						
	ECTED P										
63 T)	X-762 RX :	HDMI ove	r IP H264/H265	(500762/763)	)   Muxlab   M	atrix Virtual					
	et-up	Matrix	Multiview/Vid	eowall R	5-737	IR I	Firmware				
Set-u Modif	ıp fy any availabl	e settings and	click Save to apply ;	your changes							
Nodif ® A	fy any availabl	e settings and O Manual		your changes dd Remote Source	1						
Modif ® A Laur	fy any availabl kutomatic	Ŭ,			1						
Modif A Laur Displ	fý any availabl kutomatic nch discovery	Ŭ,			MASK	GATEWAY	DHCP	DIP			
Modif A Laur Displ	fý any availabl kutomatic nch discovery lay (4 RX)	Ŭ,	Ā	dd Remote Source		GATEWAY 192.168.168.1		DIP	Reboot	Detail	
Modif a A Laur Displ Port#	fý any availabl kutomatic nch discovery lay (4 RX) ≢ Name	Ŭ,	A MAC address	dd Remote Source IP address 192.168.168.74	MASK		×.		Reboot Reboot	Detail Detail	
Modif a A Laur Displ Port# 0	fý any availabl utomatic nch discovery lay (4 RX) # Name 762-RX1	Ŭ,	MAC address 00-05-78-00-A6-BF	dd Remote Source IP address 192.168.168.74 192.168.168.75	MASK 255.255.255.0	192.168.168.1	2 2	0 [			
Modif a A Laur Displ Port# 0 0	fý any availabl wtomatic nch discovery lay (4 RX) # Name 762-RX1 762-RX2	Ŭ,	A MAC address 00-08-78-00-A6-BF 00-08-78-00-A6-C1	dd Remote Source IP address 192.168.168.74 192.168.168.75 192.168.168.77	MASK 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1	2 2 2		Reboot	Detail	
Modif a A Laur Displ Port# 0 0 0 0	fý any availabl utomatic nch discovery lay (4 RX) # Name 762-RX1 762-RX2 762-RX2 762-RX3	Ŭ,	AC address 00-08-78-00-A6-8F 00-08-78-00-A6-8F 00-08-78-00-A6-85	dd Remote Source IP address 192.168.168.74 192.168.168.75 192.168.168.77	MASK 255.255.255.0 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1	2 2 2		Reboot Reboot	Detail Detail	
Modif A Laur Displ Port# 0 0 0 0 Source	fý any availabl utomatic inch discovery lay (4 RX) # Name 762-RX1 762-RX2 762-RX3 762-RX4	Ŭ,	AC address 00-08-78-00-A6-8F 00-08-78-00-A6-8F 00-08-78-00-A6-85	dd Remote Source IP address 192.168.168.74 192.168.168.75 192.168.168.77	MASK 255.255.255.0 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1	2 2 2		Reboot Reboot	Detail Detail	
Modif A Laur Displ Port# 0 0 0 0 Source	fý any availabl utomatic nch discovery lay (4 RX) # Name 762-RX1 762-RX2 762-RX2 762-RX3 762-RX4 ce (3 TX)	Ŭ,	AAC address 00-05-76-00-A6-8F 00-05-76-00-A6-05 00-05-76-00-A6-8B 00-05-78-00-A6-8B	dd Remote Source IP address 192.168.168.74 192.168.168.77 192.168.168.76 IP address	MASK 255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1	v v v DHCP		Reboot Reboot	Detail Detail Detail	) ) )
Modif A Laur Displ Port# 0 0 0 0 0 0 0 0 0 0 0 0 0	ý any availabl utomatic nch discovery  ay (4 RX) ₹ Name 762-RX1 762-RX2 762-RX4 ce (3 TX) ₹ Name	Ŭ,	A MAC address 00-05-75-00-A6-67 00-05-75-00-A6-61 00-05-75-00-A6-88 00-05-75-00-A6-88 MAC address	dd Remote Source IP address 192.168.168.74 192.168.168.77 192.168.168.76 IP address 192.168.168.64	MASK 255,255,255,0 255,255,255,0 255,255,255,0 255,255,255,0 MASK	192.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1 GATEWAY	V V V DHCP		Reboot Reboot Reboot	Detail Detail Detail	) ) ) ) UPD4
Modif A Laur Displ Port# 0 0 0 0 0 0 0 0 0 0 0 0 0	fý any availabi utomatic nch discovery lay (4 RX) # Name 762-RX1 762-RX1 762-RX2 762-RX2 762-RX4 valiabi 762-RX4 valiabi 4K Streaming	Ŭ,	A Cadress 00-08-75-00-A6-8F 00-08-75-00-A6-8F 00-08-75-00-A6-85 00-08-76-00-A6-85 00-08-75-00-A6-85 00-08-75-00-A6-85	dd Remote Source 192-165.165.74 192-165.165.75 192-165.165.75 192-165.165.76 192-165.165.64 192-165.165.65	MASK 255,255,255,0 255,255,255,0 255,255,255,0 MASK 255,255,255,0 255,255,255,0	192.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1 GATEWAY 192.168.168.1	V V V DHCP V		Reboot Reboot Reboot	Detail Detail Detail	) ) ) )

Figure 452: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given AV over IP device. A dialog appears (Figure 453).

Device Detail	
Custom Name: Model: MAC Address: IP Address: FW Version: Video Resolution: CPU Usage (%): Memory Usage (bytes): Blink LED: Factory Reset:	Signage Player 500763-TX 00-0B-78-00-A6-F6 192-168.168.71 (DHCP: OFF) 1.6.5 13 465172/496188 On Off Reset
Video Codec: Video Output Resolutior Video Bitrate control:	H 265-MainProfile     H 265-MainProfile
Video Bit Rate (kbps):	6000 [32-40000]
Max Frame Rate (FPS): Group of Picture: Audio Input:	60 [5-60] 5 [5-300]
Audio Codec:	AAC V
Audio Bit Rate (bps): Audio frequency (Hz):	192000         [48000-320000]           48000         V
RTMP RTSP HLS	TS FLV MULTICAST
	abled ▼ 100.0.20 00
Save Cancel	

Figure 453: Device Detail Dialog

#### 500763-TX Parameters:

- Custom Name: Device name defined by user (info only)
- Model: Device model number (info only)
- Mac Address: Device MAC Address (info only)
- IP Address: Device IP Address (info only)
- FW Version: Installed firmware version (info only)
- Video Resolution: Video resolution at input (info only)
- CPU Usage: Device CPU usage in percentage (info only)
- Memory Usage: Device memory usage in bytes (info only)
- Blink LED: On / Off control to help to locate a device
- Factory Reset: Perform a Factory Reset of the device
- Video Codec: Allows for selection of video codec (to baseline, main or high profile for H.264, or main profile for H.265)
- Video Output Resolution: Allows for selection of output video resolution (to "Same as Input", or from 176x144 to 3840x2160)
- Bit Rate Control: Allows for selection of bit rate control (to VBR variable bit rate, or CBR continuous bit rate)
- Video Bit Rate: Allows for selection is bit rate (from 32kbps to 40Mbps)
- Video Frames per Sec: Video refresh rate in frames per sec (from 5 to 60)
- Group of Picture: Set the GOP or Group of Pictures (from 5 to 300)
- Audio Input: Select embedded audio input source (HDMI, or Analog via 3.5mm jack)
- Audio Codec: Select audio codec type (to AAC or MP3)
- Audio Bit Rate: Select audio bit rate (from 48Kbps to 320Kbps)
- Audio Frequency: Select audio frequency (to 44100Hz or 48000Hz)
- Communication Protocol Selection: RTMP, RTSP, HLS, TS, FLV and Multicast (Note: Only a limited selection should be made at a time. Do not enable all at the same time.)
- Multicast: Allows for enabling or disabling the multicast protocol
- Multicast IP: Shows the multicast IP (info only)
- Multicast Port: Shows the multicast port used (info only)

Note: Click on "Save" to accept any changes, or on "Cancel" to ignore them.

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 454)

Products	Settings	Software Update	Help		
ELECTED	PRODUCT:				
		2/763)   Muxlab   Matrix	Virtual		
Set-up	Matrix Mi	Iltiview/Videowall RS-2	32 IR	Firmware	
Connect your disp bottom to make the	lays to the desired source e connections.	s below. Once you've selected th		nt to change, use the "Co	
Connect your disp bottom to make the	lays to the desired source				
Connect your disp bottom to make the DISPLAY	lays to the desired source e connections.	es below. Once you've selected th	e displays you wa	nt to change, use the "Co	
Connect your disp bottom to make the DISPLAY	lays to the desired source e connections. SOURCE	PROTOCOL	e displays you wa	nt to change, use the "Co PRESET	
Connect your disp bottom to make the <b>DISPLAY</b> TV1 TV2	lays to the desired source e connections. SOURCE	es below. Once you've selected th	e displays you wa	nt to change, use the "Co PRESET urrent active Preset: preset selected	TS TID: 0
Connect your disp bottom to make the	lays to the desired source e connections. SOURCE	es below. Once you've selected th PROTOCOL AUTO • AUTO •	e displays you wa	nt to change, use the "Co PRESET urrent active Preset:	TS TID: 0
Connect your disp bottom to make the DISPLAY TV1 TV2 TV3	and the desired source e connections. SOURCE	es below. Once you've selected th PROTOCOL AUTO • AUTO •	e displays you war	nt to change, use the "Co PRESET urrent active Preset: preset selected	rs v ID: 0 lowing preset v

Figure 454: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "TV1") and selects which source to connect it to (Figure 455)

Products	Settings	Softwar	re Update	Help		
ELECTED	PRODUCT:					
EST JP : HDI	MI over IP H264	I/H265 (500762	2/763)   Muxlab   I	Matrix Virtual		
	[]			15		
Set-up	Matrix	Multiview/Video	wall RS-232	IR	Firmware	
Connect your disp	plays to the desired s				Firmware nange, use the "Connect"	button at the
Connect your disp bottom to make th	plays to the desired s ne connections.		e you've selected the d		nange, use the "Connect"	button at the
Connect your disp bottom to make th	plays to the desired s					button at the
Connect your disp	plays to the desired s the connections. SOURCE	ources below. Onc	e you've selected the di	isplays you want to ct	PRESETS	
Connect your disp bottom to make th DISPLAY	plays to the desired s ne connections.	ources below. Onc	e you've selected the di	isplays you want to ct	PRESETS	UD: 0
Connect your disp bottom to make th DISPLAY	plays to the desired s the connections. SOURCE	ources below. Onc	e you've selected the di PROTOCOL AUTO	isplays you want to ch > Current a No preset	PRESETS	▼ ID: 0
Connect your disp bottom to make th DISPLAY TV1 TV2	plays to the desired s the connections. SOURCE	ources below. Onco	e you've selected the di PROTOCOL AUTO AUTO	isplays you want to ch > Current a No preset	PRESETS clive Preset: selected	▼ ID: 0
Connect your disp bottom to make th DISPLAY TV1 TV2 TV3	plays to the desired s the connections. SOURCE	ources below. Onc	e you've selected the di PROTOCOL AUTO • AUTO • AUTO •	isplays you want to ch > Current a No preset > Save curr	PRESETS clive Preset: selected	▼ ID: 0 reset: ▼

Figure 455: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 456)

Mukab Network Controller     Products     Settings     Software Update     Help       SELECTED PRODUCT: TEST JP : HDMI over IP H264/H265 (500762/763)   Muxlab   Matrix Virtual       Set-up     Matrix     Multivlew/Videowalt     RS-232     IR     Firmware       Connect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the bottom for mate: the connections.       DisPLAY     SOURCE     PROTOCOL     PRESETS       Tv1     4K Streaming * SUCCESS LITICAST * TV2     V     VIII 0     * Save current connections in following preset: TV 0       Tv3     •     •     AUTO •     * Save current connections an new preset     * Save current connections an new preset       Connect j     U     •     •     Save current connections an new preset     •							Language:	English Logo
Products     Settings     Software Update     Help       SELECTED PRODUCT:       TEST JP : HDMI over IP H264/H265 (500762/763)   Muxlab   Matrix Virtual       Set-up     Matrix     Matrixer/Videowall     R5232     IR     Firmware       Connect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the bottom to make the connections:     PRESETS       DISPLAY     SOURCE     PROTOCOL     PRESETS       TV1     4K Streaming     SUQCESS/LTICAST     V/       TV3     <     AUTO      * Save current connections in following preset:       V4      AUTO      * Save current connections a new preset       V4        · Delete following preset:       Delete following preset:	ĪVĪUX	Lab						
SELECTED PRODUCT: TEST JP : HDMI over IP H264/H265 (500762/763)   MuxIab   Matrix Virtual Set-up Astrix Muttivlew/Videowall R5-232 IR Firmware Connect your displays to the desired sources below: Once you've selected the displays you want to change, use the "Connect" button at the bottom to make the connections. DISPLAY SOURCE PROTOCOL TV1 4K Streaming SUCCESS/LITCAST V TV2 • AUTO V TV3 • AUTO V TV4 • AUTO V TV4 • AUTO V TV4 • Create Selected V Save current connections in following preaet • Detelle following preaet • Detelle following preaet • Detelle following preaet	Muxlab Network	Controller						
TEST JP : HDMI over IP H264/H265 (500762/763)   Muxlab   Matrix Virtual	Products	Settings	Software Upd	late   H	elp			
TEST JP : HDMI over IP H264/H265 (500762/763)   Muxlab   Matrix Virtual								
Set-up     Matrix     Multivew/Videovall     R5-232     IR     Firmware       Connect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the bottom to make the connections.     DISPLAY     SOURCE     PROTOCOL       Tv1     d4K Streaming * [SUOCESS]/LTICAST *     *     Current active Preset:     No preset selected * [IID 0]       Y3     -     AUTO *     *     Save current connections in following preset:     *       Y4     -     AUTO *     *     *     Save current connections an new preset:     Create       Detele following preset:     -     -     -     -     -	SELECTED	PRODUCT:						
Set-up     Matrix     Multiview/Videowall     R5-232     IR     Firmware       Connect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the bottom to make the connections.     DISPLAY     SOURCE     PROTOCOL       TV1     d4K Streaming * [SUOCESS] LTICAST * TV2     • AUTO •     * Ourrent active Preset: No preset selection * Iblo (0)     * Save current connections in following preset: Create       TV4     • AUTO •     • Save current connections an new preset: Create     • Detele following preset: • • • • • • • • • • • • • • • • • • •			4/H265 (500762/763)	Muxlab   Ma	trix Virtual			
Connect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the bottom to make the connections.  DISPLAY SOURCE PROTOCOL PRESETS Current active Preset: No preset selected IVI Save current connections in following preset: Create Deter following preset: Deter following				1				
Notice       Notice       DispLay     SOURCE     PROTOCOL       TV1     4K Streaming • SUCCESS/LTICAST •     • Current active Preset:       TV2     • AUTO •     • Save current connections in following preset:       TV4     • AUTO •     • Save current connections at new preset:       Create     • Delete following preset:     • Delete following preset:	Cabura		Ale data da ser (Mi da asser II	DC 323	ID	Firmer		
bottom to make the connections.  DISPLAY SOURCE PROTOCOL  TV1 4K Streaming SUCCESS ILTICAST  TV2 4 AUTO  TV3 AUTO  TV4 AUTO  AUTO  Save current connections in following preaet Create Detels following preset	Sec-up	Matrix	Muttiview/videowatt	R3-232	IK	Firmware		
TV1     4K Streaming     SUCCESS/LTICAST       Tv2     •     AUTO •       Tv3     •     AUTO •       Tv4     •     AUTO •         Save current connections an new preset:         Create   > Detele following preset:       •	Connect your disp bottom to make th	plays to the desired e connections.	sources below. Once you've	e selected the displa	iys you want to ch	ange, use the "Conne	ct" button at the	
TV2     •     VICO-SS/LICESS/V	DISPLAY	SOURCE	PROTOCO	DL		PRESETS		]
TV2     •     AUTO •       TV3     •     AUTO •       TV4     •     AUTO •         Save current connections in following preset:         Create         •        •	TV1	4K Streamin		•	> Current ac	tive Preset:		
TV4 • AUTO • • Save current connections as new preset. Create > Delete following preset.	TV2	-			No preset	selected	▼ ID: 0	
TV4 AUTO   AUTO   AUTO   Save current connections as new preset. Create  Delete following preset.	TV3		AUTO •		> Save curre	nt connections in followir	a preset:	
Create > Delete following preset:	TV4		AUTO T					
Create  > Delete following preset:								
					> Save curre			
					> Delete folk	owing preset:		

Figure 456: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 457) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESE	TS		
> Current active Preset:			
No preset selected		۲	ID: 1
<ul> <li>&gt; Save current connections in fo</li> <li>&gt; Save current connections as n</li> </ul>		set: V	
10:00 AM Meeting	Create		
> Delete following preset:		•	

Figure 457: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the **> Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 458)

PRESETS			
> Current active Preset:			
[2] 10:00 AM Meeting	▼	ID:	2
<ul> <li>&gt; Save current connections in following pres</li> <li>&gt; Save current connections as new preset:</li> </ul>	set: ▼		
Create	S	UCC	CESS
> Delete following preset:	•		

Figure 458: Confirmation of New Preset

To delete a preset, the user clicks the **> Delete following preset** drop-down box and selects a preset name from the list shown (Figure 459)

PRESE	TS		
> Current active Preset:			
[2] 10:00 AM Meeting	•	ID:	2
> Save current connections in fo	llowing prese	t:	
		·	
> Save current connections as n	ew preset:		
	Create		
> Delete following preset:		_	
		r I	
[2] 10:00 AM Meeting			

Figure 459: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 460).

192.168.168.50 says Are you sure to delete this preset ?		
	ОК	Cancel

Figure 460: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 461)

PRESETS		
> Current active Preset:		
No preset selected	ID: 0	
> Save current connections in following preset:		
> Save current connections as new preset:		
Create		
> Delete following preset:		
▼	SUCCE	SS

Figure 461: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 462)

PRESETS	
> Current active Preset:	
[1] 10:00 AM Meeting •	ID: 1
> Save current connections in following preset: ▼	
[1] 10:00 AM Meeting [2] 10:00 AM Meeting with Sales Team	
> Delete following preset:	

Figure 462: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 463)

PRESETS		]
> Current active Preset:		
[2] 10:00 AM Meeting with Sales Team <b>•</b>	ID: 2	
> Save current connections in following preset:		
<b>•</b>	SUCCES	SS
> Save current connections as new preset:		
Create		
> Delete following preset:		

Figure 463: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

#### 3. Products Screen – Multiview/Videowall Tab

The 500763-TX can be utilized in conjunction with the 500762-RX to create Multiview/Videowall. Please refer to the 500762 Multiview/Videowall section for further details regarding the configuration.

#### 4. Products Screen - RS-232 Tab

To send RS232 commands to the 500763 TX, you may use the 500762 RX. For further details on the settings, you may refer to the RS232 Section of the 500762.

# 5. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands from the Network Controller to a MuxLab 500763 transmitter or receiver IR port (Figure 464)

MUX Iuxlab Network C						Language: [Eng]
Products	Settings	Software Upd	ate   H	lelp		
ELECTED F		4/H265 (500762/763)	Muxlab   Ma	trix Virtual		
Set-up	Matrix	Multiview/Videowall	R5-232	IR	Firmware	
Update your device Select a device:		ettings here. ▼				
- IR Mode: - IP Feedback: Save	Y					
Data to send in	HEX (ex: A013	B155C5)				
Send IR code receive	d in HEX					
Get IR code						

Figure 464: IR Tab

The 500763 supports a bi-directional IR port. The 500763 can be set to transmit IR commands from the Network Controller to a transmitter or receiver and then to a source or sink device, and can also be configured to receive IR commands from a handheld IR Remote and sending these commands to the Network Controller for learning IR command purposes.

# **Transmitting IR Commands to Source and Sink Equipment:**

When sending IR commands through the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 465).

						Language: Er
Mux						
/luxlab Network C	Controller					
Products	Settings	Software Upd	late   H	elp		
	PRODUCT					
SELECTED			I Muxlab I Ma	briv Virtual		
EST JP : HUN	II OVER IP HZC	64/H265 (500762/763)				
Set-up	Matrix	Multiview/Videowall	RS-232	IR	Firmware	
Update your device	's IR connection s	settings here.				
Select a device						
Select a device.	4K Stream	ing •				
- IR Mode:	Sensor V					
- IP Destination		3.63				
Save						
Data to send in	HEX (ex: A013	B155C5)				
Send						
IR code receive	d in HEX					
IR code receive	d in HEX					
IR code receive	d in HEX					

Figure 465: IR Tab – Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. Begin by setting the IR Mode to "Emitter" and click on "Save". Next enter the IR command in Hex in the **Data to send in HEX** field and click on "Send". In the above example, 4K Streaming was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to 4K Streaming will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to the 4K Streaming port with an attached IR Emitter. That transmitter will then send the specified data command via the attached IR Emitter to the source device.

#### Learning IR Commands from a Handheld IR Remote:

The Network Controller can learn IR Commands in combination with the 500763. To begin the process, select the 500763 device as indicated above, set the IR Mode to Sensor and click on "Save", and attach an IR Senor to the 500763 IR port. Click on "Get IR Code", aim the handheld IR Remote at the Sensor while pressing on an IR command key on the IR Remote. The **IR code received in HEX** field will display the HEX version of an IR command sent from a handheld remote.

# 5. Products Screen - Firmware Tab

The Firmware tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 466)

Muxlab Network							Language: English
Products	Settings	\$	Software Upo	date ∣ H	elp		
SELECTED TEST JP : HD		4/H265 (	500762/763	Muxlab   Mat	rix Virtual		
Set-up	Matrix	Multivie	ew/Videowall	RS-232	IR	Firmware	
DISPLAY TV1 (500762-RX) TV2 (500762-RX) TV4 (500762-RX)		v2.0.4 v2.0.4	Modify any ava changes Displays (RX Choose File	No file chosen Apply SOURCE 4K Streaming 762-TX (5007 762-TX-2 (500	(500763-TX)	v1.6.5 v1.0.6 v1.0.6	

Figure 466: Firmware Tab

The user selects **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

#### **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The **Network** tab (Figure 467) is used to change the IP address of the MuxLab Network Controller, the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP.

	Language: English
ViuxLab uxiab Network Controller	
roducts   Settings   Software Update   Help	
Network Administration	
Network	
Use the form below if you'd like to set manual network settings.	
LAN 1- Use DHCP: O Yes ® No	
IP address:	
192 . 168 . 168 . 50	
Network mask: 255 , 255 , 255 , 0	
Router:	
192 . 168 . 168 . 1 Mac Address:	
00 : 0E : C4 : D3 : B9 : 55	
Save	
_LAN 2	
Use DHCP:	
IP address:	
 Network mask:	
1901090 A 111dDA.	
Router:	
Mac Address: 00 : 0E : C4 : D3 : B9 : 58	
Save	

Figure 467: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 468)

wilab Netwo	rk Controller				Language: (Englis
Products	Settings	Software Update	e   Help		
Network	Administration				
Select a User I User Name new password Confirm new p User Type:	User Account Or to edit:	¥			
Specify file:	unit with the selected data fi Choose File No file chose	1	ller using the same as th	e controller this backup file (	come from !!!
Backup data Backup the d Backup	a lata and save it in a file				
Get Logs Get all logs in Download Li					

Figure 468: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 469). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

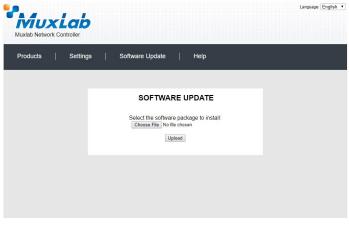


Figure 469: Software Update Screen

# **Help Screen**

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 470)

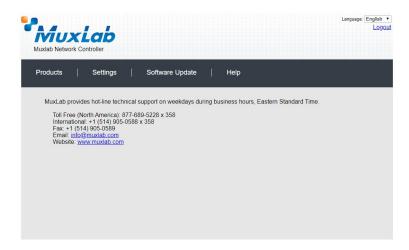


Figure 470: Help Screen

# Controller Model 500816-IP

The 500816-IP 8 Button Control Panel may be used to send commands, at the press of a button, to the 500812 Network Controller. This section describes how to accomplish this.

#### Products Screen

Once the user has logged in, the **Products** screen will appear (Figure 471).

MuxLab				Language: <u>Englisi</u>
Products Setting	s   Software Upd	late   Help		
SELECT A PRODUC		ADD DEVIC	Œ	
D Custom Name	Product Name Com	npany Product Type		

Figure 470: Products Screen – Initial View

In the **SELECT A PRODUCT TO ADD:** drop down box, select **8-Button IP PoE Control Panel (500816-IP)** and then click on **ADD DEVICE** (Figure 472).

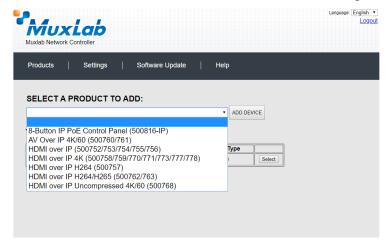


Figure 472: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product, along with the Login Name and Password for the 500816-IP unit (Figure 473). The user then types a name in the **Custom Name** field, along with the unit **Login Name** and **Password** (default is admin, admin, see the 500816-IP Operation

Manual for more details), and then clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 471), without a product being added.

	on IP PoE Control Panel (500816-IP)	
Custom Name:		
Audio-Video Room		
Login:		
admin	*500816IP device login	
Password		
admin	*500816IP device password	

Figure 473: Naming and Login into the 500816-IP

The custom name has been added to YOUR CURRENT SYSTEM (Figure 474).

	-						Language: Engl
Ā	ñ	uxlab					
Mux	lab Ne	etwork Controller					
Pro	ducts	s   Setting	is Software	e Update	Help		
FIG	uucu	s   Jeung		opuale			
-							
SE	LEC	T A PRODUC	T TO ADD:				
					<ul> <li>ADD D</li> </ul>	EVICE	
vo		CURRENT SY	CTEM.				
10	UR	CORRENTST	STEW.				
	×.	1	Product Name	Company	Product Type		
_	ID	Custom Name					
X	1D 12	Audio-Video Room	8-Button IP PoE Control	Muxlab	Controller	Select	
x	-			1		Select	
×	-		8-Button IP PoE Control	1		Select	
X	-		8-Button IP PoE Control	1		Select	
X	-		8-Button IP PoE Control	1		Select	
x	-		8-Button IP PoE Control	1		Select	
x	-		8-Button IP PoE Control	1		Select	
x	-		8-Button IP PoE Control	1		Select	
X	-		8-Button IP PoE Control	1		Select	
X	-		8-Button IP PoE Control	1		Select	
X	-		8-Button IP PoE Control	1		Select	
X	-		8-Button IP PoE Control	1		Select	

Figure 474: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the **ID** field. The user can also delete the entire row completely by clicking the X next to it. Click on "**Select**" to setup the 8-Button IP PoE Control Panel (500816-IP).

# 1. Products Screen - Set-up Tab

Press the "Discovery" button to start the discovery process (Figure 475).

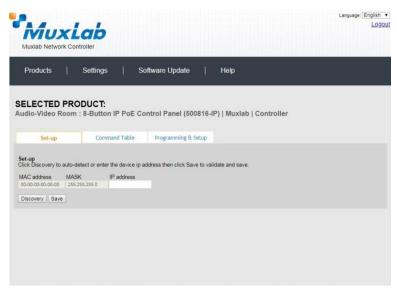


Figure 475: Set-up Tab – Discovering the 500816-IP

Once the discovery is complete the screen will indicate that one or more units have been found. Click on the "**IP** Address" pull-down menu to view the units which have been discovered. Click on the appropriate unit IP Address to select it (Figure 476).

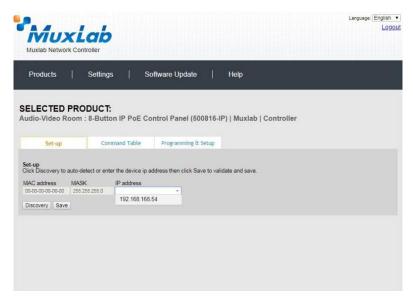


Figure 476: Set-up Tab – Set Unit IP Address

Press "**Save**" to record these settings. This will also automatically set the MAC Address and MASK (Figure 477).

Muxlab Networ				
Products	Setting	js   So	ftware Update   Help	
	PRODUCT			
		The second second second second second	ntrol Panel (500816-IP)   Muxlab   Contro	ller
		1		
Set-up	Cor	mmand Table	Programming & Setup	
et-up lick Discovery to	auto-datect or en		dress then click Save to validate and save	
lick Discovery to		10800007777000210000	dress then click Save to validate and save.	
et-up lick Discovery to IAC address 00-00-5e-14-7e-97	Auto-detect or en MASK 255.255.255.0	IP address 192.168.168.54	dress then click Save to validate and save.	
lick Discovery to IAC address 00-00-5e-14-7e-97	MASK 255.255.255.0	IP address		
lick Discovery to IAC address	MASK 255.255.255.0	IP address		
lick Discovery to IAC address 00-00-5e-14-7e-97	MASK 255.255.255.0	IP address		
lick Discovery to IAC address 00-00-5e-14-7e-97	MASK 255.255.255.0	IP address		
lick Discovery to IAC address 00-00-5e-14-7e-97	MASK 255.255.255.0	IP address		
lick Discovery to IAC address 00-00-5e-14-7e-97	MASK 255.255.255.0	IP address		

Figure 477: Set-up Tab – Save Unit IP and MAC Address and Mask

# 2. Products Screen – Command Table Tab

Under the Command table tab (Figure 478), the user can create a command crossreference table between short commands sent from the 500816-IP 8 Button Control Panel, which will be received and translated by the 500812 Network Controller into longer 500812 API (Application Program Interface) commands. The API Command will then instruct the 500812 to perform a specific function. The function may be to connect or disconnect an AV over IP transmitter and receiver, or to send an IR, RS-S232 or CEC command to an end device via one of the AV over IP transmitters or receivers, etc.

Note that the 500816-IP is not able to send long native 500812 API commands directly. Therefore the 500816-IP sends shorter commands to the 500812 and the 500812 looks up the corresponding longer 500812 API command string to be executed. This adds an extra step in the decoding process of the API commands, but is necessary.

re Update   Help I Panel (500816-IP)   Muxlab   Controller
rogramming & Setup
Muxlab Network Controller Api Command

Figure 478: Command Table Tab

Pressing on the "**Add Command**" button, brings up a new cross-reference entry, see Figure 479. The "**Command Name**" field is used to enter a custom name that is used to reference the actual API command. The custom name is an arbitrary name, which will later be entered into the 500816-IP, and once received by the 500812 will be used to look up the replacement actual API Command to be executed. The "**MuxLab Network Controller API Command**" field in Figure 479 contains the actual API Command. Reference the MuxLab API Command Document (file: MNC\_500810\_811\_812\_IP\_Commands.PDF) for a detailed listing of all Muxlab API Commands for the 500812 Network Controller. This document is available on the 500812 webpage of the MuxLab website. Each command from the 500816-IP 8 Button Control Panel to be sent to the 500812 Network Controller will require an entry in this cross reference table.

			Language English
Muxi	ab		La
Muxlab Network Cor			
Products	Settings   S	oftware Update   Help	
Ploducis	seuligs   s	privare opdate   Help	
ELECTED PRO			
		ontrol Panel (500816-IP)   Muxlab   Co	ontroller
udio-video Room	. O'BULLOIT IF FUE OF	sind of Patien (0000 10-1P) [ Midwiab ] Co	ondoner
Set-up	Command Table	Programming & Setup	
Configure your device co	mmands here.		
Command N	ame	Muxlab Network Controller Api Com	mand
			Delete
Refresh Add Commer	1		
Constant II was extended	9. [		

Figure 479: Command Table Tab – Entering Commands

# 3. Products Screen – Programming & Setup Tab

In the Programming and Setup Tab the user can setup the 500816-IP 8 Button Control Panel and program each button to send commands to the 500812 Network Controller. Each button will be assigned a custom "Command Name" as described in the previous section.

There are three main sub-screens for configuring and managing the 500816-IP.

- Keyboard: Allows the user to simulate a button press on the 500816-IP from a computer screen (Figure 480). This can be used to test a button that has just been programmed in "Actions".
- Actions: Allows the user to program commands for all 8 buttons (Figure 481).
  - First select the button to program Press on the corresponding button name, such as Button 1, Button 2, ..., Button 8.
  - Select an Event type To send IP commands to the 500812, select type "IP\_Send".
  - Setect the "Times" value Each button press can execute up to 6 events. A time delay between each event can be set. Time(S) is the time delay set between 2 events (in seconds). As there is just one command in this example, select time = "0".
  - Enter the Command Data Type in the command to send to the 500812 using the short form custom command described above.
- Setting: Allows the user to setup the 500816-IP. This will not be covered here.

Please reference the 500816-IP Operation Manual for further instructions on how to setup and program the 500816-IP 8 button Control Panel.

	Lab	anguage: En
Products	Settings   Software Update   Help	
LECTED PR	RODUCT: m : 8-Button IP PoE Control Panel (500816-IP)   Muxlab   Controller	
Set-up	Command Table Programming & Setup	
Keypad	KeyBoard	
Actions		
Setting	Button1 Button5	
	Button2 Button6	
	Button3 Button7	
	Button4 Button8	
	Button4 Button8	

Figure 480: Programming & Setup Tab – KeyBoard

AUX lab Network 0	and the second second								
iducts	Setting	s   Soft	ware Upda	ate   Help					
Set-up	m : 8-Butto		trol Panel Programmin	(500816-IP)   Muxi g & Setup	ab   Contro	ller			
Keypad	Mode							Star	dard (•
Actions	1000	55 MD	53574838		1995	Hex			
Button 1	Action	Event	Time(s)	Command Data	IR		-	•	-
Button 2 Button 3	1	None V	0		*	10			
Button 4	2	None V	1	[]					
Button 5	3	None 🔻	0		( T		ě.		
Button 6 Button 7	4	None •	0	[]	[¥]				
Button 8	5	None 🔻	0		· •	-	9		0
Button 8	6	None ¥	0			8			
Setting									

Figure 481: Programming & Setup Tab – Actions

# Working example:

An example is shown here to turn off a TV (place it in StandBy mode) when Button 1 of the 500816-IP 8 Button Control Panel is pressed. The TV is connected to a MuxLab AV over IP Receiver, which in this example is the 500759-RX Video Wall 4K over IP PoE Receiver.

# How the system will operate:

The process begins when Button 1 of the 500816-IP 8 Button Control Panel is pressed. This causes the 500816-IP to send a custom created command, which in this example will be called "poweroff", to the 500812 Network Controller. The 500812 then looks up the custom "poweroff" command in the cross reference table and executes the corresponding actual API Command. The API Command in this example causes the 500812 to send a CEC command to the 500759-RX Video Wall 4K over IP PoE Receiver. The 500759-RX then sends the TV an actual CEC command to power off the TV. Note that the custom name "poweroff" used in this example is arbitrary, and need only match the name programmed into the 500816-IP.

It is assumed that the 500759-RX is already setup in the 500812 with product ID "13" and MAC address "00-0b-78-00-7c-fd". Reference the 500759 section in this manual on how to setup the 500759, in the 500812 Network Controller.

Begin by entering the custom command name "**poweroff**" into the "**Command Name**" field, see Figure 482. This command will later be programmed into the 500816-IP and sent to the 500812 when Button 1 is pressed on the 500816-IP device. Next enter the actual API Command which will be executed by the 500812 into the "**MuxLab Network Controller API Command**" field in Figure 482, and then click on "**Add**".

The **API Command** string is as follows:

{"p\_targetId":13,"p\_cmd":"send\_hdmi\_cec\_command","p\_password":"admin","p\_user Name":"admin","p\_data":[{"mac":"00-0b-78-00-7c-fd","command":"standBy"}]}

Where;

"p\_targetId":13 - is the ID of the product (500759-RX) to control.

"p\_cmd":"send\_hdmi\_cec\_command" – is the API Command to execute.

"p\_password":"admin","p\_userName":"admin","p\_data" – is the 500812 username and password (default is admin, admin).

"p\_data":[{"mac":"00-0b-78-00-7c-fd","command":"standBy"}]} – is the command data indicating the specific 500759-RX MAC to send the command, and the TV CEC power off command "standBy".

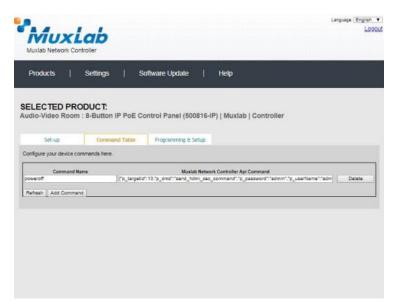


Figure 482: Command Table Tab – Entering Commands

Next program the 500816-IP device. Go to the "**Programming & Setup tab** -> **Actions**" section, see Figure 483.

In the Actions section, select "**Button 1**", and under "**Action 1**" set the "**Event**" to **IP\_Send**. Set "**Time**(**s**)" to 0. Enter the "**Command Data**", and then click on "**Submit**".

The "Command Data" string is as follows:

192.168.168.50\*31337\*TCP\*poweroff

Where;

192.168.168.50 - is the 500812 default IP address.

**31337**- is the 500812 port (this is a fixed value).

**TCP** - this is a required parameter to indicate the protocol.

poweroff – is the custom Command Name created in the Command Table Tab.

This terminates the setup procedure.

The user can now test the system by pressing on **Button 1** of the 500816\_IP 8 button Control Panel. This will cause the TV to turn off (StandBy mode).

lab Network C	Lap controller								
oducts	Setting	s   Sof	tware Upd	late   Help					
ECTED PR			trol Pane	l (500816-IP)   Muxi:	ab   Contro	ller			
Set-up	Com	mand Table	Programma	ing & Setup					
Keypad	Mode							Star	nderd 🔻
Actions								-	
Sutton 1	Action	Event	Time(s)	Command Data	IR	Hex	-	•	•
Button 2	1	IP_Send V	0	192 168 168 150*31337	•	8			0
Button 3 Button 4	2	None •	1						
	3	None 🔻	D			- 63			
Button 5	4	[None •]	0						
Button 5 Button 6 Button 7			0		( Y	01	8		
Button 6	5	None 🔻	Sectore and						
Button 6 Button 7	5 6	None	0			- 83			

Figure 483: Programming & Setup Tab – Actions

# Extender Model 500760/500761

# **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 484).

		•			1
Product		s   Softwar	re Update	Help	
SELEC	CT A PRODUC	T TO ADD:			
				ADD DEVICE	
YOUR	CURRENT SY	STEM:			
ID	Custom Name	Product Name	Compagny	Product type	

Figure 484: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select AV Over IP 4K/60 (500760/761) and then click on ADD DEVICE (Figure 485).

Wiuxiab Iuxlab Network Controller	Language:[English ▼ Logou
Products   Settings   Software Update	Help
SELECT A PRODUCT TO ADD:	
	ADD DEVICE
8-Button IP PoE Control Panel (500816-IP)	
AV Over IP 4K/60 (500760/761) HDMI over IP (500752/753/754/755/756)	Туре
HDMI over IP 4K (500758/759/770/771/773/777/778)	Select
HDMI over IP H264 (500757)	
HDMI over IP H264/H265 (500762/763)	

Figure 485: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 486). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 484), without a product being added.

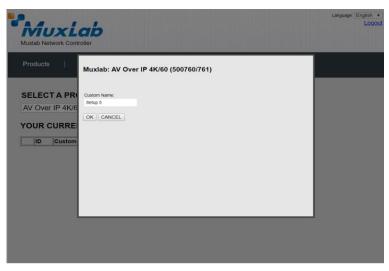


Figure 486: Products Screen – Naming a Product

The custom name has been added to **YOUR CURRENT SYSTEM** (Figure 487).

	UXLab etwork Controller	)				Language: Engl	sh <del>•</del> .ogou
Products	s   Setting	s ∣ Softwar	re Update	Help			
	T A PRODUC			ADD DEV	ЛСЕ		
ID	Custom Name	Product Name	Company	Product Type			
X 9	Setup 5	AV Over IP 4K/60 (500760/761)	Muxlab	Matrix Virtual	Select		
		AV Over IP 4K/60			Select		

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 488).

Muxlab Network C	Lab ontroller	192.168.168.50 s		ce list ? OK	Cancel	×	Language: English
Products	Settings	Software	e Update	Help			
SELECTED I	PRODUCT	:					
Setup 5 : AV Ov	ver IP 4K/60 (	(500760/761)   M	uxlab   Matrix '	Virtual			
Set-up	Matrix	RS-232	IR				
Set-up Modify any availat	ole settings and c	lick Save to apply you	r changes				

Figure 488: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Four tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. RS-232
- 4. IR

#### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 489).

Muxlab Netw								Language	English ▼ Logou
Products	Set	ttings	Softwa	re Update	I	Help			
	ED PROE		10760/761)   I	Muxlab   Mat	trix Vi	rtual			
Set-up	Mat	trix	RS-232	IR					
<b>Set-up</b> Modify any Launch dis		gs and click	: Save to apply y	our changes					

Figure 489: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500760/500761 transmitters) and display side devices (500760/500761 receivers), and will display the scan results in tabular form (Figure 490).

Each 500760/500761 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 491 (orange highlighted fields).

	UX Network Co								J
Produ		Settings	Softwar	e Update	Help				
		RODUCT							
etup	5 : AV Ov	er IP 4K/60	(500760/761)   N	luxlab   Matrix	k Virtual				
Se	t-up	Matrix	RS-232	IR					
Set-u Modify		e settings and c	lick Save to apply yo	ur changes					
Modify Laun		e settings and c	lick Save to apply yo	ur changes					
Modify Laun Displa	y any availabl ch discovery	e settings and c	lick Save to apply yo	ur changes	MASK	GATEWAY	DHCF	,	
Modify Laun Displa	y any availabl ch discovery ay (2 RX)				MASK 255.255.255.0	GATEWAY 192.168.168.3	DHCF	Reboot	Detail
Modify Laun Displa Port#	y any availabl ch discovery <b>ay (2 RX)</b> Name	1E4	MAC address	IP address					Detail Detail
Modify Laun Displa Port# 0 0	y any availabl ich discovery ay (2 RX) Name D88039A584	1E4	MAC address D8-80-39-A5-84-E4	IP address 192.168.168.149	255.255.255.0	192.168.168.3		Reboot	
Modify Laun Displa Port# 0 0 Sourc	y any availabl ch discovery <b>ay (2 RX)</b> Name D88039A584 D88039A584	1E4	MAC address D8-80-39-A5-84-E4	IP address 192.168.168.149	255.255.255.0	192.168.168.3		Reboot Reboot	
Modify Laun Displa Port# 0 0 Sourc	y any availabl ch discovery ay (2 RX) Name D88039A584 D88039A584 D88039A584 ce (2 TX)	1E4 D01	MAC address D8-80-39-A5-84-E4 D8-80-39-A5-BD-01	IP address 192.168.168.149 192.168.168.144	255.255.255.0 255.255.255.0	192.168.168.3 192.168.168.3		Reboot Reboot	
Modify Laun Displa Port# 0 0 0 Source Port#	y any availabl ch discovery ay (2 RX) Name D88039A584 D8904D8904 D8904 D8904 D8904 D8904 D8904	1E4 D01	MAC address D8-80-39-A5-84-E4 D8-80-39-A5-BD-01 MAC address	IP address 192.168.168.149 192.168.168.144 IP address	255.255.255.0 255.255.255.0 MASK	192.168.168.3 192.168.168.3 GATEWAY	DHCF	Reboot Reboot	Detail

Figure 490: Products Screen – Set-up Tab

	UX Network Co	<b>Lab</b>								L
Produc	ts	Settings	Softwar	e Update	Help					
SELE	CTED F	RODUCT	:							
Setup :	5 : AV Ov	er IP 4K/60 (	(500760/761)   N	luxlab   Matrix	(Virtual					
Set	-up	Matrix	RS-232	IR						
Set	⊢up	Matrix	RS-232	IR						
Set-up	· _									
Set-up Modify	any availab	le settings and c	RS-232 lick Save to apply yo							
Set-up Modify Laund	any availab	le settings and c								
Set-up Modify Laund	any availab	le settings and c								
Set-up Modify Laund Displa Port#	any availab th discovery <b>y (2 RX)</b> Name	le settings and c	lick Save to apply yo	ur changes IP address	MASK	GATEWAY	DHCP	Detect	General	Det
Set-up Modify Laund Displa Port# 0	any availab th discovery <b>y (2 RX)</b> Name 4K TV-1	le settings and c	Iick Save to apply yo MAC address D8-80-39-A5-84-E4	IP address 192.168.168.149	255.255.255.0	192.168.168.3		Reboot	Cancel	Det
Set-up Modify Laund Displa Port#	any availab th discovery <b>y (2 RX)</b> Name	le settings and c	lick Save to apply yo	ur changes IP address				Reboot Reboot	Cancel Cancel	Det
Set-up Modify Laund Displa Port# 0 0	any availab th discovery y (2 RX) Name 4K TV-1 4K TV-2	le settings and c	Iick Save to apply yo MAC address D8-80-39-A5-84-E4	IP address 192.168.168.149	255.255.255.0	192.168.168.3				
Set-up Modify Laund Displa Port# 0 0	any availab th discovery <b>y (2 RX)</b> Name 4K TV-1	le settings and c	Iick Save to apply yo MAC address D8-80-39-A5-84-E4	IP address 192.168.168.149	255.255.255.0	192.168.168.3				
Set-up Modify Launo Displa Port# 0 0 0 Source Port#	any availab th discovery y (2 RX) Name 4K TV-1 4K TV-2 e (2 TX) Name	le settings and c	MAC address D8-80-39-A5-84-E4 D8-80-39-A5-80-01 MAC address	IP address 192.168.168.149 192.188.168.144 IP address	255.255.255.0 255.255.255.0 MASK	192.168.168.3 192.168.168.3 GATEWAY		Reboot	Cancel	Det
Set-up Modify Launo Displa Port# 0 0	any availab ch discovery y (2 RX) Name 4K TV-1 4K TV-2 e (2 TX)	le settings and c	lick Save to apply yo MAC address D8-80-30-A5-84-E4 D8-80-39-A5-BD-01	IP address 192 168 168 149 192 168 168 144	255.255.255.0 255.255.255.0	192.168.168.3 192.168.168.3				

Figure 491: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 492).

	Vetwork Co	Lab ontroller								Lo
roduc	ts	Settings	Softwar	re Update	Help					
ELE	CTED F	RODUCT								
etup 5	5 <b>: AV Ov</b>	er IP 4K/60 (	500760/761)   N	/luxlab   Matrix	Virtual					
			RS-232	IR						
	· _	Matrix le settings and c	lick Save to apply yo	ur changes						
Set-up Modify Launc	any availab			ur changes						
Set-up Modify Launc Displa	any availab ch discovery y (2 RX)			ur changes	MASK	GATEWAY	DHCP			
Set-up Modify Launc Displa	any availab		lick Save to apply yo		MASK 255.255.255.0	GATEWAY 192.168.168.3	DHCP	Reboot	Detail	UPD
Set-up Modify Launc Displa Port#	any availab ch discovery y (2 RX) Name		lick Save to apply yo MAC address	IP address				Reboot Reboot	Detail Detail	_
Set-up Modify Laund Displat Port# 0 0	any availab ch discovery y (2 RX) Name 4K TV-1 4K TV-2		IICK Save to apply yo MAC address D8-80-39-A5-84-E4	IP address 192.168.168.149	255.255.255.0	192.168.168.3				_
Set-up Modify Laund Displat Port# 0 0	any availab ch discovery y (2 RX) Name 4K TV-1		IICK Save to apply yo MAC address D8-80-39-A5-84-E4	IP address 192.168.168.149	255.255.255.0	192.168.168.3				_
Set-up Modify Launc Displat Port# 0 0 Source	any availab ch discovery y (2 RX) Name 4K TV-1 4K TV-2		IICK Save to apply yo MAC address D8-80-39-A5-84-E4	IP address 192.168.168.149	255.255.255.0	192.168.168.3				UPD/ UPD/
Set-up Modify Launc Displat Port# 0 0 Source	any availab ch discovery y (2 RX) Name 4K TV-1 4K TV-2 e (2 TX)	le settings and c	lick Save to apply yo MAC address D8-80-39-A5-84-E4 D8-80-39-A5-BD-01	IP address 192.168.168.149 192.168.168.144	255.255.255.0 255.255.255.0	192.168.168.3 192.168.168.3				_
Set-up Modify Launc Display Port# 0 0 Source Port#	any availab th discovery y (2 RX) Name 4K TV-1 4K TV-2 e (2 TX) Name	le settings and c	MAC address D8-80-39-A5-84-E4 D8-80-39-A5-BD-01 MAC address	IP address 192.168.168.149 192.168.168.144 IP address	255.255.255.0 255.255.255.0 MASK	192.168.168.3 192.168.168.3 GATEWAY	DHCP	Reboot	Detail	UP
Set-up Modify Launc Display Port# 0 0 Source Port#	any availab th discovery y (2 RX) Name 4K TV-1 4K TV-2 e (2 TX) Name	le settings and c	MAC address D8-80-39-A5-84-E4 D8-80-39-A5-BD-01 MAC address	IP address 192.168.168.149 192.168.168.144 IP address	255.255.255.0 255.255.255.0 MASK	192.168.168.3 192.168.168.3 GATEWAY	DHCP	Reboot	Detail	UPD.

Figure 492: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 493). You can set the display mode, video resolution and have the pass-through IR follow the video connection.

Device Detail	
Custom Name: MdC Address: IP Address: FW Version: Group IP: Video Resolution: Frames Per Second: Bits Per Pixel: Color Space: Scan Mode: Video Mode:	4K TV-1 500760/761-RX D08-80-39-A5-84-E4 192.168.168.149 (DHCP: ON) 3.1.3 0.0.0 0 0 0 8 RGB PROGRESSIVE AUTO
Set Display Mode: Set Resolution: IR Follow Video: Save Cancel	Genlock V

Figure 493: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 494).

Muxlab Network	Controller			Language: Eng
Products	Settings	Softwar	re Update	Help
SELECTED	PRODUCT:			
Setup 5 : AV C	Over IP 4K/60 (	500760/761)   N	/luxlab   Matrix	t Virtual
Set-up	Matrix	RS-232	IR	
Set-up Connect your disp bottom to make th	Matrix plays to the desired te connections.			he displays you want to change, use the "Connect" button at the
Connect your disp bottom to make th	plays to the desired			he displays you want to change, use the "Connect" button at the PRESETS
Connect your disp bottom to make th DISPLAY	plays to the desired	sources below. Once	e you've selected ti	PRESETS > Current active Preset
Connect your disp bottom to make th DISPLAY 4K TV-1	plays to the desired	sources below. Once	e you've selected ti	PRESETS
Connect your disp bottom to make th DISPLAY 4K TV-1	plays to the desired	sources below. Once SOURCE 4K Media Player	e you've selected t	PRESETS    Current active Preset  No preset selected   ID: 0   Save current connections in following preset.
Connect your disp bottom to make th DISPLAY 4K TV-1	plays to the desired	sources below. Once SOURCE 4K Media Player	e you've selected t	PRESETS       > Current active Preset       No preset selected       ▼       ID:       0       > Save current connections in following preset
Connect your disp bottom to make th	plays to the desired	sources below. Once SOURCE 4K Media Player	e you've selected t	PRESETS  Current active Preset No preset selected  Save current connections in following preset  Save current connections as new preset  Save current connections as new preset
Connect your disp bottom to make th DISPLAY 4K TV-1	plays to the desired	sources below. Once SOURCE 4K Media Player	e you've selected t	PRESETS         > Current active Preset:         No preset selected         ▼         > Save current connections in following preset:         ▼         > Save current connections as new preset:         Create
Connect your disp bottom to make th DISPLAY 4K TV-1	plays to the desired	sources below. Once SOURCE 4K Media Player	e you've selected t	PRESETS  Current active Preset No preset selected  Save current connections in following preset  Save current connections as new preset  Save current connections as new preset

Figure 494: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "4K TV-2") and selects which source to connect it to (Figure 495).

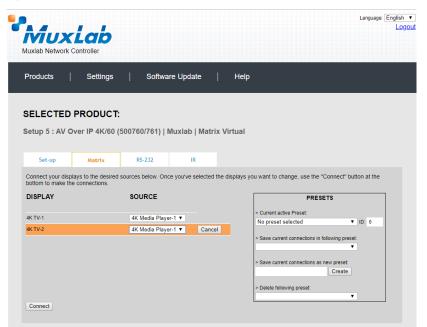


Figure 495: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 496).

RS-232 IR Uses below. Once you've selected the displays you want to change, use the "Connect" button at the OURCE PRESETS > Current active Preset.	onnect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the ottom to make the connections. IISPLAY SOURCE PRESETS > Current active Preset:
RS-232 IR UNCLE PRESETS Current active Preset.	Set-up       Matrix       RS-232       IR         Onnect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the attem to make the connections.       PRESETS         IISPLAY       SOURCE       > Current active Preset.
RS-232 IR USES below. Once you've selected the displays you want to change, use the "Connect" button at the OURCE PRESETS > Current active Preset.	Set-up         Matrix         RS-232         IR           onnect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the ottom to make the connections.         ISPLAY         SOURCE         PRESETS         > Current active Preset:
OURCE PRESETS Current active Preset:	onnect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the ottom to make the connections. IISPLAY SOURCE PRESETS > Current active Preset:
OURCE PRESETS Current active Preset:	onnect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the ottom to make the connections. IISPLAY SOURCE PRESETS > Current active Preset:
OURCE PRESETS > Current active Preset:	IISPLAY SOURCE PRESETS CUrvent active Preset:
K Modia Diavar 1      Current active Preset:	Current active Preset:
IK Media Player 1 V	CTV-1 AK Madia Diavar 1 💌
IK Media Player 1 V	CTV-1 AK Madia Diavar 1 💌
No preset selected V ID: 0	
	KTV-2 4K Media Player-1 V SUCCESS
> Save current connections in following preset:	
> Save current connections in following preset:	
No preset selected	
	TV-2 4K Media Player-1 V SUCCE

Figure 496: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 497) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS	
> Current active Preset:	
No preset selected V ID	0
<ul> <li>&gt; Save current connections in following preset:</li> <li>✓</li> <li>&gt; Save current connections as new preset:</li> </ul>	
Preset 1 Create	
> Delete following preset:	

Figure 497: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 498).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
Create SUCCESS
> Delete following preset:

Figure 498: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 499).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 499: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 500).

192.168.168.50 says:		×
Are you sure to delete this preset ?		
Prevent this page from creating additional	l dialogues.	
	ОК	Cancel

Figure 500: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 501).

PRESETS		
> Current active Preset:		
[1] Preset 1	ID: 1	
> Save current connections in following preset:		
> Save current connections as new preset: Create		
> Delete following preset:		
<b></b>	SUCCES	s

Figure 501: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 502).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
[1] Old Preset
Create
> Delete following preset:

Figure 502: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 503).

PRESETS				
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pres	set:		JCCE	
> Save current connections as new preset:				
Cieate				
> Delete following preset:				
	•			

Figure 503: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

#### 3. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 504). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

	Language: English
MuxLab	
Products   Settings   Software Update   Help	
SELECTED PRODUCT:	
Setup 5 : AV Over IP 4K/60 (500760/761)   Muxlab   Matrix Virtual	
Set-up Matrix RS-232 IR	
Update your device's RS-232 connection settings here.	
Select a device: - •	
- Baud rate: 9600 v [ Data bits: 8 v   Stop bits: 1 v Parity : none v	
Save	
Data to send in <u>ASCII:</u>	
Check for feedback data Data feedback received in <u>ASCII:</u>	
Send	
L	

Figure 504: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 505).

						Language	English
Muxlab Network Co							
Products	Settings	Software	Update	Help	)		
SELECTED F							
Setup 5 : AV Ov	er IP 4K/60 (50	00760/761)   Mu	ıxlab   Matı	rix Virtual			
Set-up	Matrix	RS-232	IR				
Update your device'	s RS-232 connectio	on settings here.					
Select a device:	DVD-1	•					
- Baud rate: 1 Save	15200 🔻 [ Data bi	ts: 8 ▼   Stop bits:	1 V Parity :	none V			
Data to send in A	SCII:						
Check for fee Data feedback red							
Send							

Figure 505: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, DVD-1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to DVD-1. That transmitter will then send the specified data command to DVD-1.

Note that an RS232 feedback may be sent to the Network Controller by selecting "Check for feedback data".

When sending RS-232 commands directly from a PC to any transmitter or receiver, in pass-through mode, this is automatically accomplished by the existing connection between the transmitter and receiver. As such a connection must exist for pass-through to operate.

# 4. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands from the Network Controller to the IR emitter port of a MuxLab 500760/500761 transmitter or receiver (Figure 506).

Muxlab Network C						Language: Englis
Products	Settings	Softwa	are Update	Help		
SELECTED	PRODUCT:	:				
Setup 5 : AV O	ver IP 4K/60 (	500760/761)	Muxlab   Matr	ix Virtual		
Set-up	Matrix	RS-232				
			IR			
Update your device Select a device:			IR			
Update your device	's IR connection s	settings here.	IR		 	
Update your device Select a device:	's IR connection s	settings here.	IR			

Figure 506: IR Tab

The 500760/500761 supports 2-way IR ports (sensor and emitter ports). The 500760/500761 transmitter and receiver can transmit IR commands from the Network Controller to a source or sink device, and can also receive IR commands from a handheld IR Remote and sending these commands to the Network Controller for learning IR command purposes.

# **Transmitting IR Commands to Source and Sink Equipment:**

When sending IR commands via the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 507).

Muxlab Network	Controller				Language: En
Products	Settings	Software	Update	Help	
SELECTED					
	over IP 4K/60 (5			Virtual	
Set-up	Matrix	RS-232	IR		
Update your device Select a device:	e's IR connection set	ttings here.			
	HEX (ex: A013B155	i):			
Data to send in					
Data to send in Send					
Send					 
	d in HEX			Copy	 
Send	d in HEX			Сору	 

Figure 507: IR Tab – Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. Next enter the IR command in Hex in the **Data to send in HEX** field and click on "Send". In the above example, DVD-1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to DVD-1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to the DVD-1 port with an attached IR Emitter. That transmitter will then send the specified data command via the attached IR Emitter to the source device.

#### Learning IR Commands from a Handheld IR Remote:

The Network Controller can learn IR Commands in combination with the 500760/500761. To begin the process, select the 500760/500761 device as indicated above, attach an IR Senor to the 500760/500761 IR sensor port. Click on "Get IR Code", aim the handheld IR Remote at the Sensor while pressing on an IR command key on the IR Remote. The **IR code received in HEX** field will display the HEX version of an IR command sent from a handheld remote.

#### **IR Pass-Through Mode**

The 500760/500761 supports a pass-through mode allowing an IR command to be sent directly from transmitter to receiver and vice versa. When sending IR commands from any transmitter to receiver, or any receiver to transmitter, in pass-through mode, this is automatically accomplished by the existing connection between the transmitter and receiver. As such a connection must exist for pass-through to operate.

# **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 508) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

	Language: Engl
MuxLab	
uxlab Network Controller	
Products   Settings   Software Update   Help	
Network Administration	
Network	
Use the form below if you'd like to set manual network settings.	
- LAN 1	
Use DHCP: O Yes  No	
IP address:	
192 . 168 . 168 . 50	
Network mask: 255 , 255 , 255 , 0	
Router:	
192 . 168 . 168 . 1	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 55	
Save	
LAN 2	
Use DHCP:	
IP address:	
Network mask:	
Router:	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 56	
Save	
Jave	

Figure 508: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 509).

	Language: English
	Log
luxlab Network Controller	
Products   Settings   Software Update   Help	
Network Administration	
User Accounts	
Create a new User Account Or Select a User to edit:	
User Name	
new password:	
Confirm new password: User Type:	
Create Update Delete	
Restore data Restore the unit with the selected data file Specify file: <u>Choose File</u> No file chosen WARNING You MUST FIRST set the IP address of this controller using the same as the controller this backup file	come from !!!
Restore	
Backup data	
Backup the data and save it in a file	
Backup	
GetLogs	
OCI LOUS	
-	
Get Logs Get all logs in a zip file Download Logs Delete Logs	

Figure 509: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 510). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

Muxlab Network C	Lab ontroller			Language: English
Products	Settings	Software Update	Help	
		SOFTWARE	UPDATE	
		Select the software pa Choose File No file ch Upload	losen	

Figure 510: Software Update Screen

## Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 511).



Figure 511: Help Screen

# Extender Model 500768

# **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 512).

Products Settings   Setter a product to add: <ul> <li>add device</li> </ul> <ul> <li>add device</li> </ul> <ul> <li>Custom Name</li> <li>Product Name</li> <li>Compagny</li> <li>Product type</li> </ul>	A.A.	I ala				Language: Engli
SELECT A PRODUCT TO ADD: ADD DEVICE YOUR CURRENT SYSTEM:						
YOUR CURRENT SYSTEM:	Products	Setting	s   Softwar	re Update	Help	
YOUR CURRENT SYSTEM:						
YOUR CURRENT SYSTEM:	SELEC	T A PRODUC	T TO ADD:			
					ADD DEVICE	
ID Custom Name Product Name Compagny Product type	YOUR	URRENT SY	STEM:			
	ID	Custom Name	Product Name	Compagny	Product type	

Figure 512: Products Screen – Initial View

In the SELECT A PRODUCT TO ADD: drop down box, select Hdmi Over IP Uncompressed 4K/60 (500768) and then click on ADD DEVICE (Figure 513).

luxlab Network Controller Products   Settings   Software Update	Неір
SELECT A PRODUCT TO ADD:	
	ADD DEVICE
8-Button IP PoE Control Panel (500816-IP)	
AV Over IP 4K/60 (500760/761) HDMI over IP (500752/753/754/755/756)	Туре
HDMI over IP 4K (500758/759/770/771/773/777/778)	Select
HDMI over IP H264 (500757) HDMI over IP H264/H265 (500762/763)	
HDMI over IP Uncompressed 4K/60 (500768)	

Figure 513: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 514). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 512), without a product being added.

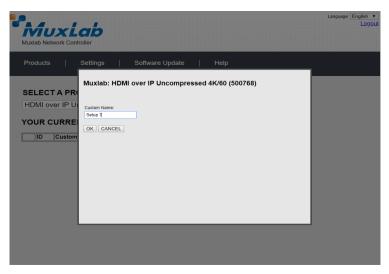


Figure 514: Products Screen – Naming a Product

The custom name has been added to **YOUR CURRENT SYSTEM** (Figure 515).

			,				Language: English
	ducts		s   Softwar	e Update	Help		
SE	LEC	T A PRODUCT	T TO ADD:				
					ADD DE	VICE	
YO	UR C	CURRENT SYS	STEM:				
	ID	Custom Name	Product Name	Company	Product Type		
X	9	Setup 7	HDMI over IP Uncompressed 4K/60 (500768)	Muxlab	Matrix Virtual	Select	

Figure 515: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 516).

	192.1	68.168.50 say	/S			Language: English 🔻
Mux		u want to load	previous stored	device list ?		
Muxlab Network	Controlle			OK	Cancel	
Products	Setungs		ie opdate			
, roduoto	Coungo		ile opulate	i noip		
SELECTED	PRODUCT:					
Setup 7 · HDM	Il over IP Uncor	nnressed 4K	/60 (500768)	Muylah I Matri	v Virtual	
Setup 7 . How	li over il oficor	iipresseu 4N	/00 (300/00) [		x virtual	
Set-up	Matrix	RS-232	IR	HDMI-CEC	Firmware	
Set-up						
Modify any avail	able settings and clic	k Save to apply y	our changes			
Automatic	O Manual					

Figure 516: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Four tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. RS-232
- 4. IR
- 5. HDMI CEC
- 6. Firmware

## 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

**Automatic** means that the software will scan the system for every dipswitch enabled device. The software will then override its manual dipswitch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 517).

Products	Settings					
		Softwa	re Update	Help		
	RODUCT:					
Setup 7 : HDMI	over IP Unco	mpressed 4K	/60 (500768)	Muxlab   Matri	x Virtual	
Set-up	Matrix	RS-232	IR	HDMI-CEC	Firmware	
Set-up Modify any availab automatic Launch discovery	le settings and cli Manual	ick Save to apply y	our changes			

Figure 517: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500768 transmitters) and display side devices (500768 receivers), and will display the scan results in tabular form (Figure 518).

Each 500768 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 519 (orange highlighted fields).

								guage: Englis Lo
VĪ	uxL	ab						
uxlab N	Vetwork Contr	oller						
Product	ts	Settings	Softwar	e Update	Help			
ELEC	CTED PR	ODUCT:						
etup 7	7 : HDMI ove	er IP Unco	ompressed 4K/	60 (500768)	Muxlab   Matri	x Virtual		
Set-	-up	Matrix	RS-232	IR	HDMI-CEC	Firmware		
Set-up								
Set-up Modify	any available s	ettings and c Manual	lick Save to apply yo	ur changes				
Set-up Modify • Auto	any available s		lick Save to apply yo	ur changes				
Set-up Modify • Auto Launce	any available settomatic		lick Save to apply yo	ur changes				
Set-up Modify • Auto Launce	any available si tomatic O th discovery y (1 RX)		lick Save to apply yo	ur changes IP address	MASK	GATEWAY	DHCP DIP	
Set-up Modify : • Auto Launce Display	any available si tomatic O th discovery y (1 RX)	Manual			MASK 255 255 255 0	GATEWAY 192.168.168.1	DHCP DIP	ot Detail
Set-up Modify : • Auto Launce Display Port#	any available si tomatic O th discovery y (1 RX) Name	Manual	MAC address	IP address				ot Detail
Set-up Modify : • Auto Launce Display Port#	any available so tomatic h discovery y (1 RX) Name RX-00.0B.78.00	Manual	MAC address	IP address				ot Detail
Set-up Modify: autors Launce Display Port# 0	any available so tomatic th discovery y (1 RX) Name RX-00.0B.78.00 e (1 TX)	Manual	MAC address	IP address				ot Detail
Set-up Modify : auto Launch Display Port# 0 Source	any available so tomatic th discovery y (1 RX) Name RX-00.0B.78.00 e (1 TX)	Manual B3:1B	MAC address 00-08-78-00-83-18	IP address 192.168.168.86	255.255.255.0	192.168.168.1	✓ Rebo	

Figure 518: Products Screen – Set-up Tab

luxlab Ne	twork Co	Lab ontroller								
Products		Settings	Softwa	re Update	Help					
		RODUCT:								
etup 7 :	: HDMI (	over IP Unco	mpressed 4K/	60 (500768)	Vluxlab   Matri	x Virtual				
Set-u Set-up Modify ar		Matrix le settings and cl	RS-232 ick Save to apply yo	IR bur changes	HDMI-CEC	Firmware				
Set-up Modify ar • Auton	ny availabl natic discovery				HDMI-CEC	Firmware				
Set-up Modify ar • Auton Launch	ny availabl natic discovery (1 RX)	le settings and cl			HDMI-CEC	GATEWAY	DHCP	DIP		
Set-up Modify ar auton Launch Display ( Port# N	ny availabl natic discovery (1 RX)	le settings and cl	ick Save to apply yc	ur changes			DHCP [	DIP	Cancel	
Set-up Modify ar Auton Launch Display ( Port# N 0 4	ny availabl natic discovery (1 RX) lame #K TV-1	le settings and cl	ick Save to apply yo	ur changes	MASK	GATEWAY			Cancel	) [
Set-up Modify ar auton Launch Display ( Port# N	ny availabl natic discovery (1 RX) lame IK TV-1 1 TX)	le settings and cl	ick Save to apply yo	ur changes	MASK	GATEWAY		Reboot	Cancel	

Figure 519: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 520).

	xLab							Logou
Constant of the second	PROVIDE AND ADDRESS OF							
iuxiab Net	twork Controller							
Products	Settings	Softwa	re Update	Help				
SELEC	TED PRODUC	r:						
Setup 7 :	HDMI over IP Un	compressed 4K	/60 (500768)   1	Muxlab   Matri	x Virtual			
Set-up	Matrix	RS-232	IR	HDMI-CEC	Firmware			
Set-up Modify an	y available settings and	click Save to apply y	our changes					
Set-up	y available settings and	click Save to apply y	our changes					
Set-up Modify an	y available settings and atic O Manual	click Save to apply y	our changes					
Set-up Modify an Autom	y available settings and latic Manual	click Save to apply y	our changes					
Set-up Modify an autom Launch d Display (*	y available settings and atic Manual Ilscovery 1 RX)	click Save to apply y	our changes	MASK	GATEWAY	DHCP DIP		
Set-up Modify an autom Launch d Display (* Port# Na	y available settings and atic Manual Ilscovery 1 RX)			MASK 255.255.0	GATEWAY 192.168.168.1		Reboot	Detail UPC
Set-up Modify an autom Launch d Display (* Port# Na	y available settings and atic Manual <u>Ilscovery</u> 1 RX) ame	MAC address	IP address				Reboot	Detail UPE
Set-up Modify an autom Launch d Display (* Port# Na	y available settings and atic Manual <u>liscovery</u> 1 RX) ame KTV-1	MAC address	IP address				Reboot	Detail UPC
Set-up Modify an Autom Launch d Display (* Port# Na 0 4i Source (1	y available settings and latic Manual liscovery 1 RX) ame K TV-1	MAC address 00-0B-78-00-B3-1B	IP address 192.168.168.86	255.255.255.0	192.168.168.1	<b>⊻</b> □	Reboot	Detail UPC
Set-up Modify an Launch d Display (' Port# Na 0 4/ Source (1 Port# Na	y available settings and latic Manual liscovery 1 RX) ame K TV-1	MAC address	IP address 192.168.168.86 IP address					Detail UPC

Figure 520: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 521). You can set the Multicast Address and Blink the LED.

Device Detai	1
IP Address:	4K TV-1 500768-RX 00-0B-78-00-B3-1B 192.168.168.86 (DHCP: ON) 10.0
Video Resolution: Blink LED:	
MULTICAST Multicast IP : Multicast Port	
Save Cancel	

Figure 521: Device Detail Dialog

#### 2. Products Screen - Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 522).

Muxlab Network						Language:	English <u>Logc</u>
Products	Settings	Softwa	re Update	Help			
SELECTED	PRODUCT:						
Setup 7 : HDN	II over IP Unco	mpressed 4K	/60 (500768)	Muxlab   Mat	trix Virtual		
Set-up	Matrix	RS-232	IR	HDMI-CEC	Firmware		
Connect your disp bottom to make th	lays to the desired e connections.	sources below. One	ce you've selected	the displays you	want to change, use th	e "Connect" button at the	
DISPLAY	SOURCE			Γ	PRE	ESETS	]
4K TV-1	-	•			Current active Preset: No preset selected	▼ ID: 0	
					Save current connections		
				>	Save current connections	as new preset: Create	
				>	Delete following preset:	•	
Connect							]

Figure 522: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "4K TV-2") and selects which source to connect it to (Figure 523).

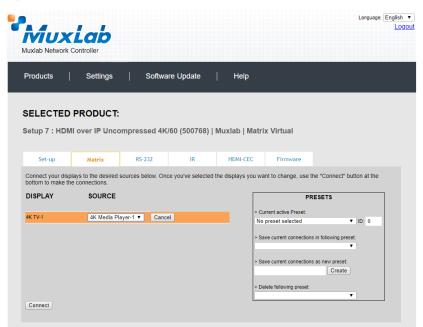


Figure 523: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 524).

roducts	Settings	Softwa	re Update	Help		
ELECTED	PRODUCT:					
tup 7 : HDN	Il over IP Unco	mpressed 4K	/60 (500768)	Muxlab   Ma	trix Virtual	
				HDMI-CEC	Firmware	
Set-up	Matrix	RS-232	IR	HDMI-CEC	1 IIIIIIIII	
onnect your disp	plays to the desired					the "Connect" button at the
onnect your disp ottom to make th	plays to the desired			the displays you	want to change, use t	the "Connect" button at the
onnect your disp ottom to make th	plays to the desired the connections.		ce you've selected	the displays you	want to change, use t	
	plays to the desired the connections.	sources below. One	ce you've selected	the displays you	want to change, use t PF Current active Preset:	RESETS
onnect your disp ottom to make th	plays to the desired the connections.	sources below. One	ce you've selected	the displays you	want to change, use t PF Current active Preset: No preset selected	RESETS       V     ID:     0       s in following preset:     V

Figure 524: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 525) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS
> Current active Preset:
No preset selected VID: 0
<ul> <li>&gt; Save current connections in following preset:</li> <li>▼</li> <li>&gt; Save current connections as new preset:</li> </ul>
Preset 1 Create
> Delete following preset:

Figure 525: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 526).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
Create SUCCESS
> Delete following preset:

Figure 526: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 527).

PRESETS
> Current active Preset:
[1] Preset 1 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset: Create
> Delete following preset:
[1] Preset 1

Figure 527: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 528).

192.168.168.50 says:	×
Are you sure to delete this preset ?	
Prevent this page from creating additional dialogues.	
<b>OK</b> Cancel	

Figure 528: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 529).

PRESETS	
> Current active Preset:	
[1] Preset 1	ID: 1
> Save current connections in following preset:	
> Save current connections as new preset: Create	
> Delete following preset:	
<b>T</b>	SUCCES

Figure 529: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 530).

PRES	ETS		
> Current active Preset:			
[1] Preset 1		▼ ID:	1
> Save current connections in	following pre	eset:	
[1] Old Preset			
	Create		
> Delete following preset:			
		•	

Figure 530: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 531).

PRESETS				
> Current active Preset:				
[1] Old Preset	¥	ID:	1	
> Save current connections in following pres	set:	-		
	•	SI	JCCE	SS
> Save current connections as new preset:				
Create				
> Delete following preset:				
	۲			

Figure 531: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

#### 3. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 532). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver as a pass-through.

Auxiab Network	Non-state of the second se					Language:	English Log
Products	Settings	Softwa	re Update	Help			
	PRODUCT:		/60 (500768)	Muxlab   Matri	ix Virtual		
Set-up	Matrix	RS-232	IR	HDMI-CEC	Firmware		
Update your device:	e's RS-232 connec	tion settings here.					
- Baud rate: - IP Feedback: Save	Y	[ Data bits:	8 🔻   Stop bits:	1 V Parity : none	٣		
Data to send in	HEX (ex: A013B1	55C5)					
Data feedback r	eceived in HEX						

Figure 532: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 533). The **IP Feedback** field should also contain the IP address of the Network Controller. Pressing **Save** will retain these changes.

						Language: Englisi
Products	Settings	Softwa	re Update	Help		
SELECTED F Setup 7 : HDMI			/60 (500768)	Muxlab   Matri	x Virtual	
Set-up	Matrix	RS-232	IR	HDMI-CEC	Firmware	
Update your device! Select a device:	s RS-232 connec 4K Media	-				
- Baud rate: - IP Feedback: Save	9600 V 192.168.16		8 🔻   Stop bits:	1 V Parity : none	۲	
Data to send in H	EX (ex: A013B1	55C5)				
Data feedback red	ceived in HEX			_		
Send						

Figure 533: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, 4K Media Player-1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to 4K Media Player-1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to 4K Media Player-1. That transmitter will then send the specified data command to 4K Media Player-1.

The **Data feedback received in HEX** field displays the HEX version of the feedback sent to the Network Controller by "4K Media Player-1".

When sending RS-232 commands directly from a PC to any transmitter or receiver, the user must set up a pass-through system for RS-232 signals to be sent to and from devices. This requires two steps:

(1) The user first tells the local device (the device connected directly to the PC) the IP address of the far device (where the RS-232 commands are being sent). This is done by first clicking on the Select a device drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the IP Feedback field. The user then clicks on Save.

The user then tells the far device the IP address of the local device (if feedback from the far device is required). This is done by first clicking on the **Select a device** dropdown list and selecting the far device from the list, and then inputting the IP address of the near device in the **IP Feedback** field. The user then clicks on **Save**.

## 4. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands from the Network Controller to the IR emitter port of a MuxLab 500768 transmitter or receiver (Figure 534). IR pass-through mode is also supported using an IR handheld remote as the control source.

oducts	Settings	Softwa	are Update	Help		
	PRODUCT:					
	I over IP Unco	mpressed 4K	/60 (500768)	Muxlab   Matri	ix Virtual	
Set-up	Matrix	RS-232	IR	HDMI-CEC	Firmware	
odate your devic	e's IR connection s	ettings here.				
elect a device:		•				
IR Mode:	•	•				
IR Mode:		•				
IR Mode: IP Feedback: Save						
IR Mode: IP Feedback: Save						

Figure 534: IR Tab

The 500768 supports a directional IR port (for a sensor or emitter). The 500768 transmitter and receiver can transmit IR commands from the Network Controller to a source or sink device, and can also receive IR commands from a handheld IR Remote and sending these commands to the Network Controller for learning IR command purposes.

## **Transmitting IR Commands to Source and Sink Equipment:**

When sending IR commands via the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 535).

Products	Settings	Softwa	re Update	Help		
SELECTED	PRODUCT:					
Setup 7 : HDMI	over IP Unco	mpressed 4K/	60 (500768)	Muxlab   Matr	ix Virtual	
Set-up	Matrix	RS-232	IR	HDMI-CEC	Firmware	
Update your device	's IR connection se	ettings here.				
Select a device:	4K TV-1	•				
- IR Mode:	Emitter V					
- IP Feedback:	192.168.16	8.49				
Save						
Data to send in H	IEX (ex: A013B15	5C5)				

Figure 535: IR Tab – Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. Next enter the IR command in Hex in the **Data to send in HEX** field and click on "Send". In the above example, 4K TV-1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to 4K TV-1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to the 4K TV-1 port with an attached IR Emitter. That transmitter will then send the specified data command via the attached IR Emitter to the source device.

## Learning IR Commands from a Handheld IR Remote:

The Network Controller can learn IR Commands in combination with the 500768. To begin the process, select the 500768 device as indicated above, and set the IR port direction to input for a sensor, and then attach an IR Senor to the 500768 IR port. Set the **IR Feedback** to the Network Controller IP Address. Click on "Get IR Code", aim the handheld IR Remote at the Sensor while pressing on an IR command key on the IR Remote. The **IR code received in HEX** field will display the HEX version of an IR command sent from a handheld remote. This code can be copied for later use.

## **IR Pass-Through Mode**

When sending IR commands directly from an IR Source device, such as an IR handheld remote, from 500768 receiver through to a transmitter, the user must set up a pass-through for IR signals to be sent to and from devices. This requires the following step:

The user must tell the 500768 receiver (which is the device near the IR handheld remote with an attached IR Sensor) the IP address of the 500768 transmitter, and where the IR commands are being sent, which has an attached IR Emitter). This is done by first clicking on the **Select a device** drop-down list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.

## 5. Products Screen – HDMI CEC Tab

The **HDMI CEC** tab of the Products screen enables the user to support CEC commands including Standby, Power ON, Volume Up, Volume Down, & Mute (Figure 536).

Muxlab Network						Language: English Logo
Products	Settings	Softwa	are Update	Help		
SELECTED						
				Muxlab   Matri		
Select the devices	Matrix you want to contro	RS-232	IR command link.	HDMI-CEC	Firmware	
		-	COMMANDS			
□ 4K TV-1		1	Power Off Power On Volume Up Volume Down			

Figure 536: HDMI CEC Tab

## 6. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen (Figure 537) enables the user to update the firmware:

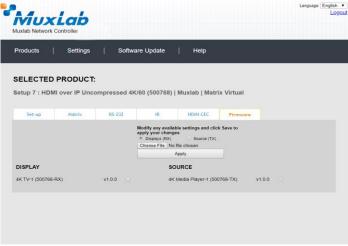


Figure 537: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

# **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 538) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

				Language: Eng
viux	Controller			
uxlab Network	Controller			
roducts	Settings	Software Update	Help	
the based of	Administration			
Network	Administration			
Network				
	low if you'd like to set mar	nual network settings.		
LAN 1				
Use DHCP:	○ Yes ® No			
IP address:				
192 . 168 .	168 . 50			
Network mask:				
255 . 255 .	255 . 0			
Router:				
192 . 168 .	168 . 1			
Mac Address:				
00 : 0E :	C4 : D3 : B9 : 55			
Save				
_LAN 2				 
Use DHCP:	Yes O No			
IP address:				
Network mask:				
Router:				
Mac Address:				
	C4 : D3 : B9 : 56			
00 . OL .				
Save				

Figure 538: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 539).

	Language: E	iglis
Products       Settings       Software Update       Help         Network       Administration         User Accounts       Image: Control or Control	AuxLab tab Network Controller	L
User Accounts  Create a new User Account Or Confirm new password: Confirm new password: Confirm new password: Confirm new password: Create Update Delete  Restore data Restore data Restore the unit with the selected data file Specify file: Choose File No file chosen WARNING ! You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Backup data		
Create a new User Account Or Select a User to not: User Name new password: Confirm new password: Create   Update   Delete Restore data Restore data Restore the unit with the selected data file Specify file: Choose File   No file chosen WARNING ! You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Backup data	Network Administration	
Restore the unit with the selected data file Specify file: Choose File No file chosen WARNING ! You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Backup data	Heate a new User Accourt Or elect a User to odit: Iser Name Senfim new password: Sen Type: ▼	
	lestore the unit with the selected data file pecify file: Choose File No file chosen VARNING I You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!!	
Backup	ackup the data and save it in a file	

Figure 539: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 540). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

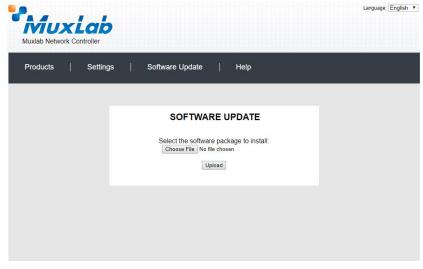
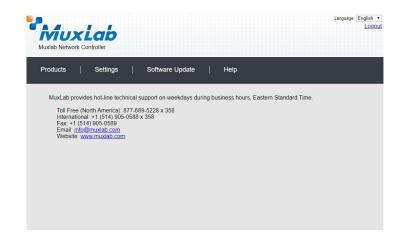
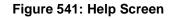


Figure 540: Software Update Screen

## Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 541).





# Extender Model 500800

## **Products Screen**

Once the user has logged in, the **Products** screen will appear (Figure 542).

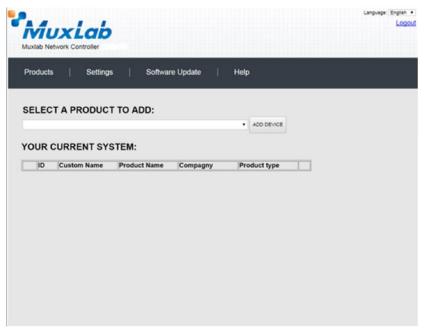


Figure 542: Products Screen – Initial View

In the **SELECT A PRODUCT TO ADD:** drop down box, select **HDMI over IP PoE 4K/60 (500800)** and then click on **ADD DEVICE** (Figure 543).

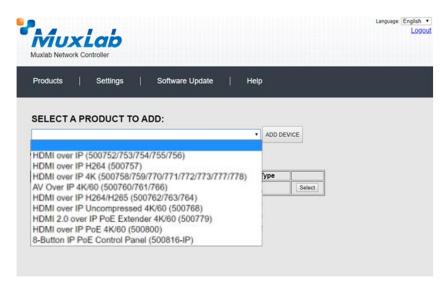


Figure 543: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 544). The user then types a name in the **Custom Name:** field and clicks on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 542), without a product being added.

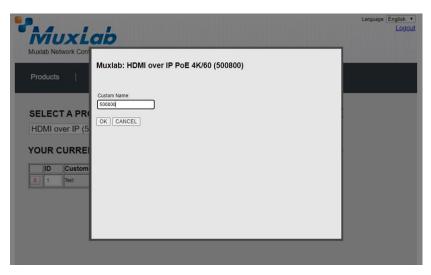


Figure 544: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 545).

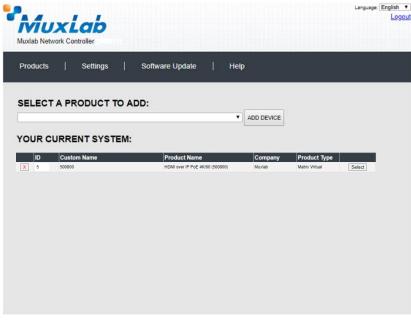


Figure 545: Products Screen – Your Current System Selection

The user can change the ID of each row by modifying the ID field. The user can also delete the entire row completely by clicking the X next to it.

To configure a given product, the user clicks on **Select**, which brings up a multi-tabbed screen (Figure 546).

P.A.	IXL	192.16	8.168.50 sa want to load		tored device li	st ?		Language: English • Logoi
	twork Contr					ок	Cancel	
Products		Setungs	Sonw	are Opdati	ејн	eip		
BELECTE		UCT: PoE 4K/60 (5	00800)   Mu	ixlab   Mat	rix Virtual			
Set-up	Matrix	Video Wall	RS-232	IR	HDMI-CEC	Firmware		
	Print of the	rideo rida	10 202					
Set-up Modify any avai	lable settings a	and click Save to	apply your char	nges				
Automatic	O Manual							

Figure 546: Products Screen – Load Dialog

By default, a dialog appears asking the user to load a previously saved device list (in case such a list has already been stored). This dialog will appear even if no device list has been previously saved.

Six tabs appear within the **Products** screen:

- 1. Set-up
- 2. Matrix
- 3. Video Wall
- 4. RS-232
- 5. IR
- 6. HDMI CEC
- 7. Firmware

#### 1. Products Screen - Set-up Tab

The **Set-up** tab offers the user two options for the type of set-up allowed: **Automatic** or **Manual**.

Automatic means that the software will scan the system for every dip-switch enabled device. The software will then override its manual dip-switch address settings and place these units under software address control. (Automatic is recommended).

**Manual** means that the software will allow the manual dip-switch address settings of any found device to remain active.

After selecting Automatic or Manual, click on Launch discovery (Figure 547).

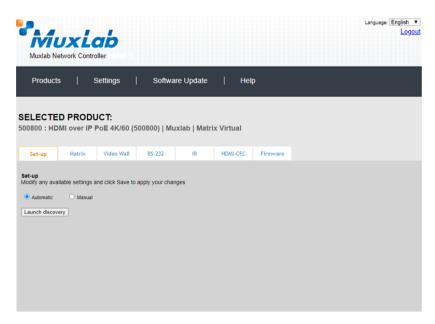


Figure 547: Products Screen – Set-up Tab

The system will scan the network for all source side devices (500800 transmitters) and display side devices (500800 receivers) and will display the scan results in tabular form (Figure 548).

Each 500800 transmitter and receiver can be assigned an arbitrary descriptive name, normally reflecting the end device that it is terminated to. To change the name of any Display (RX) or Source (TX) device, click the **Name** field to edit its contents. Several **Name** fields can be edited before saving changes, as shown in Figure 549 (orange highlighted fields).

		-									glish Log
		work Contr									
P	roducts	I	Settings	Software Upda	te   He	elp					
		PRODI	ICT								
			DC 1. PoE 4K/60 (50080	00)   Muxlab   Ma	trix Virtual						
Set	-up	Matrix	Video Wall RS	5-232 IR	HDMI-CEC	Firmw	are				
/lodify		vle settings a	and click Save to apply	your changes							
Modify Aut Launc	any availab omatic	-	and click Save to apply	your changes							
Modify Aut Launc Display Port#	any availab iomatic h discovery y (4 RX) Name	-	MAC address	IP address	MASK	DHCP	DIP				
Modify Aut Launc Display Port# 1	any availab tomatic h discovery y (4 RX) Name 800-RX1	-		IP address	MASK 255.255.0	DHCP	DIP	Reboot	Detail		
Modify Aut Launc Display Port#	any availab iomatic h discovery y (4 RX) Name	-	MAC address	IP address 1A 192.168.168.152				Reboot	Detail Detail		
Modify Aut Launc Display Port# 1	any availab tomatic h discovery y (4 RX) Name 800-RX1	-	MAC address 00-08-78-00-D1-1	IP address IA 192.168.168.152 00 192.168.158	255.255.255.0						
Modify Aut Launc Display Port# 1 2	any availab comatic h discovery y (4 RX) Name 800-RX1 800-RX2	-	MAC address 00-08-78-00-D1-1 00-08-78-00-D1-2	IP address 192.168.168.152 192.168.168.158 10 192.168.168.158	255.255.255.0 255.255.255.0			Reboot	Detail		
Audify Aut Launc Display Port# 1 2 3 4	Any availab omatic h discovery y (4 RX) Name 800-RX1 800-RX2 800-RX3 800-RX3	-	MAC address 00-08-78-00-D1-1 00-08-78-00-D1-2 00-08-78-00-DE-2	IP address 192.168.168.152 192.168.168.158 10 192.168.168.158	255.255.255.0 255.255.255.0 255.255.255.0			Reboot Reboot	Detail Detail		
Aut Launc Display Port# 1 2 3 4 Source	any availab omatic h discovery y (4 RX) Name 800-RX1 800-RX2 800-RX3 800-RX4 e (2 TX)	-	MAC address 00-08-78-00-D1-1 00-08-78-00-D1-2 00-08-78-00-DE- 00-08-78-00-DE-	IP address IA 192.168.168.152 10 192.168.168.158 IC 192.168.168.201 I7 192.168.168.196	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0			Reboot Reboot	Detail Detail		
Vodify Aut Launc Display Port# 1 2 3 4 Source Port#	any availab ormatic h discovery y (4 RX) Name 800-RX1 800-RX2 800-RX3 800-RX4 e (2 TX) Name	-	MAC address 00-08-78-00-D1-1 00-08-78-00-D1-2 00-08-78-00-DE- 00-08-78-00-DE- 00-08-78-00-DE-	IP address A 192.168.168.152 20 192.168.168.152 192.168.168.196 192.168.168.196 192.168.168.196	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	C C DHCP	DIP	Reboot Reboot Reboot	Detail Detail Detail		
Aut Launc Display Port# 1 2 3 4 Source Port# 5	any availab ormatic h discovery y (4 RX) Name 800-RX1 800-RX2 800-RX3 800-RX4 e (2 TX) Name 800-TX1	-	MAC address 00-08-78-00-D1-1 00-08-78-00-D1-2 00-08-78-00-DE-1 00-08-78-00-DE-1 MAC address 00-08-78-00-D1-1	IP address 14 192 168 168 152 10 192 168 168 152 10 192 168 168 153 10 192 168 168 196 IP address IP address IB 192 168 168 153	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0			Reboot Reboot Reboot	Detail Detail Detail		
Modify Aut Launc Display Port# 1 2 3 4 Source Port#	any availab ormatic h discovery y (4 RX) Name 800-RX1 800-RX2 800-RX3 800-RX4 e (2 TX) Name	-	MAC address 00-08-78-00-D1-1 00-08-78-00-D1-2 00-08-78-00-DE- 00-08-78-00-DE- 00-08-78-00-DE-	IP address 14 192 168 168 152 10 192 168 168 152 10 192 168 168 153 10 192 168 168 196 IP address IP address IB 192 168 168 153	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	C C DHCP	DIP	Reboot Reboot Reboot	Detail Detail Detail		

Figure 548: Products Screen – Set-up Tab

							Language: English
Γ.							Logo
	VIL	IXL	ap				
		work Cont					
inic			Tonici				
PI	roducts		Settings   S	Software Upda	te   H	elp	
	ECTER		ICT				
					triv Mirtual		
0080	0 : HDN	ni over iP	PoE 4K/60 (500800)	)   wuxiad   wa	trix virtual		
Set	-up	Matrix	Video Wall RS-2	32 IR	HDMI-CEC	Firmware	
Modify Aut		O Manual	and click Save to apply yo	ur changes			
Aut	any availa tomatic	O Manual	and click Save to apply you	ur changes			
Modify Aut Launc	any availa tomatic ch discover	O Manual	and click Save to apply you MAC address	ur changes	MASK	DHCP DIP	
Modify Aut Launc Display	any availa tomatic ch discover y (4 RX)	O Manual			MASK 255.255.255.0		atal ]
Modify Aut Launc Display Port#	any availa tomatic th discover <b>y (4 RX)</b> Name	O Manual	MAC address	IP address		Reboot Cancel De	etall
Modify Aut Launc Display Port# 1	any availa tomatic ch discover y (4 RX) Name Conferen	O Manual	MAC address 00-08-78-00-D1-1A	IP address 192.168.168.152	255.255.255.0	Reboot Cancel De     Reboot De	
Modify Aut Launc Display Port# 1 2	any availa tomatic th discover y (4 RX) Name Conferen 800-RX2	O Manual	MAC address 00-08-78-00-D1-1A 00-08-78-00-D1-20	IP address 192.168.168.152 192.168.168.158	255.255.255.0 255.255.255.0	Reboot     Cancel     Detection       Reboot     Reboot     Detection       Reboot     Detection     Detection	etail
Modify Aut Launc Display Port# 1 2 3	any availatomatic tomatic th discover y (4 RX) Name Conferen 800-RX2 800-RX3	O Manual	MAC address 0 08-78-00-D1-1A 00-08-78-00-D1-20 00-08-78-00-DE-1C	IP address 192.168.168.152 192.168.168.158 192.168.168.201	255.255.255.0 255.255.255.0 255.255.255.0	Reboot     Cancel     Detection       Reboot     Reboot     Detection       Reboot     Detection     Detection	etail
Modify Aut Launc Display Port# 1 2 3 4	any availator tomatic th discover y (4 RX) Name Conferen 800-RX2 800-RX3 800-RX4	O Manual	MAC address 0 08-78-00-D1-1A 00-08-78-00-D1-20 00-08-78-00-DE-1C	IP address 192.168.168.152 192.168.168.158 192.168.168.201	255.255.255.0 255.255.255.0 255.255.255.0	Reboot     Cancel     Detection       Reboot     Reboot     Detection       Reboot     Detection     Detection	etail
Modify Aut Launc Display Port# 1 2 3 4	any availatomatic tomatic th discover y (4 RX) Name Conferen 800-RX2 800-RX3	O Manual	MAC address 0 08-78-00-D1-1A 00-08-78-00-D1-20 00-08-78-00-DE-1C	IP address 192.168.168.152 192.168.168.158 192.168.168.201	255.255.255.0 255.255.255.0 255.255.255.0	Reboot     Cancel     Detection       Reboot     Reboot     Detection       Reboot     Detection     Detection	etail
Modify Aut Launc Display Port# 1 2 3 4 Source	any availator tomatic th discover y (4 RX) Name Conferen 800-RX2 800-RX3 800-RX4	O Manual	MAC address 0 08-78-00-D1-1A 00-08-78-00-D1-20 00-08-78-00-DE-1C	IP address 192.168.168.152 192.168.168.158 192.168.168.201	255.255.255.0 255.255.255.0 255.255.255.0	Reboot     Cancel     Detection       Reboot     Reboot     Detection       Reboot     Detection     Detection	etail
Modify Aut Launc Display Port# 1 2 3 4 Source	any availation tomatic th discover y (4 RX) Name Conferen 800-RX2 800-RX3 800-RX4 800-RX4 e (2 TX)	O Manual Y	MAC address 00-08-76-00-01-1A 00-08-78-00-01-20 00-08-78-00-0E-1C 00-08-78-00-0E-17	IP address 192.168.168.152 192.168.168.158 192.168.168.201 192.168.168.196	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0	Rebot Cancel De     Rebot     Rebot     Rebot     Rebot     Rebot     De	etail
Modify Aut Launc Display Port# 1 2 3 4 Source Port#	any availation tomatic th discover y (4 RX) Name Conferen 800-RX2 800-RX3 800-RX4 e (2 TX) Name	O Manual Y	MAC address 00-08-76-00-D1-1A 00-08-76-00-D1-20 00-08-78-00-DE-1C 00-08-78-00-DE-17 MAC address	IP address 192.168.168.152 192.168.168.158 192.168.168.201 192.168.168.196 IP address	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 MASK	Image: Cancel Det       Image: Cancel Det	stali etali
Modify Autic Launc Display Port# 1 2 3 4 Source 5	any avail tomatic th discover y (4 RX) Name Conferen 800-RX2 800-RX3 800-RX4 e (2 TX) Name Conferen	O Manual Y	MAC address 00-08-78-00-01-1A 00-08-78-00-01-20 00-08-78-00-0E-1C 00-08-78-00-0E-17 MAC address 00-08-78-00-01-18	IP address 192.168.168.152 192.168.168.158 192.168.168.168 192.168.168.196 IP address 192.168.168.153	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	Image: Cancel Det       Image: Cancel Det	atali atali

Figure 549: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 550).

								Language: English
	uxi							
Muxlab	Network Cont	roller						
Produc	:ts	Settings   S	Software Upda	te   H	elp			
ELECT	ED PROD	UCT:						
00800 : H	DMI over IP	PoE 4K/60 (500800)	Muxlab   Ma	trix Virtual				
	Matrix	Video Wall RS-2	32 IR	HDMI-CEC	Firmware			
Set-up								
<ul> <li>Automatic</li> </ul>	vailable settings	and click Save to apply you	ur changes					
Set-up Modify any av Automatic Launch disco Display (4 R	vailable settings Manual vvery K)	and click Save to apply you						
et-up Modify any av Automatic Launch discr Display (4 R Port# Name	vailable settings Manual vvery ()	and click Save to apply you MAC address	IP address	MASK 255 255 0		1 Detail		
Automatic     Automatic     Launch disc      Display (4 R      Port# Name     1 Confi	valiable settings Manual vvery () e rence Room	And click Save to apply you MAC address 00-06-76-00-D1-1A	IP address 192.168.168.152	255.255.255.0	Z 🗌 Reboo		UPDATED	
Automatic     Automatic     Launch disco Display (4 R Port# Name     Confr     S00-F	A Manual Manual Wery () errence Room XX2	and click Save to apply you MAC address 0-08-78-00-D1-1A 0-08-78-00-D1-20	IP address 192.168.168.152 192.168.168.158	255.255.255.0 255.255.255.0	Reboo	ot Detail		
Automatic     Automatic     Launch disc      Display (4 R      Port# Name     1 Confi	Annual Manual Wery () Frence Room IX2 IX3	MAC address 00-06-76-00-D1-1A 0-06-76-00-D1-120 0-06-76-00-D1-20	IP address 192 168 168 152 192 168 168 158 192 168 168 201	255.255.255.0	Reboo     Reboo     Reboo     Reboo	ot Detail	UPDATED	
Automatic     Launch disc:     Display (4 R     Port# Name     1 Confi     2 800-1     3 800-1	Annual Manual Wery () Frence Room IX2 IX3	and click Save to apply you MAC address 0-08-78-00-D1-1A 0-08-78-00-D1-20	IP address 192.168.168.152 192.168.168.158	255.255.255.0 255.255.255.0 255.255.255.0	Reboo	ot Detail	UPDATED	
Automatic Automatic Launch discr Display (4 R Port# Name 1 Confi 2 800-1 3 800-1 4 800-1	A Manual Manu	MAC address 00-06-76-00-D1-1A 0-06-76-00-D1-120 0-06-76-00-D1-20	IP address 192 168 168 152 192 168 168 158 192 168 168 201	255.255.255.0 255.255.255.0 255.255.255.0	Reboo     Reboo     Reboo     Reboo	ot Detail		
Automatic     Launch disc:     Display (4 R     Port# Name     1 Confi     2 800-1     3 800-1	A Manual Manu	MAC address 00-06-76-00-D1-1A 0-06-76-00-D1-120 0-06-76-00-D1-20	IP address 192 168 168 152 192 168 168 158 192 168 168 201	255.255.255.0 255.255.255.0 255.255.255.0	Reboo     Reboo     Reboo     Reboo	ot Detail		
Automatic     Launch disc:     Display (4 R     Port# Name     1    Confi     2    800-1     3    800-1     Gource (2 T)     Port# Name	vallable settings Manual vvery st errence Room XX2 XX3 XX4 ) e	And click Save to apply you MAC address 0.0-87-76-00-01-1A 00-86-78-00-01-00 00-86-78-00-02-00 00-86-78-00-02-17 MAC address	IP address 192.168.168.152 192.168.168.159 192.168.168.201 192.168.168.201 192.168.168.196	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 MASK	Reboo	ot Detail ot Detail ot Detail	]	
Automatic     Launch disc:     Display (4 R     Port# Name     1    Confi     2    800-1     3    800-1     Gource (2 T)     Port# Name	railable settings Manual wwwy rence Room X2 XX3 XX4 rence Room	And click Save to apply you MAC address 00-06-78-00-01-1A 00-06-78-00-01-20 00-06-78-00-0E-1C 00-06-78-00-0E-17	IP address 192.168.168.152 192.168.168.158 192.168.168.201 192.168.168.196	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0	Reboo     Reboo     Reboo     Reboo	ot Detail ot Detail ot Detail		

Figure 550: Saving Name Changes

To view component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 551).

Device Det	ail
Custom Name:	800-RX2
Model:	500800-RX
MAC Address:	00-0B-78-00-D1-20
IP Address:	192.168.168.158 (DHCP: ON)
FW Version:	1.0.0
Group IP:	225.1.45.58 - 225.8.45.58
Channel:	4558
Set output Vide HDR Mode: Set HDCP Forr	eo Format: Auto Detect (Per EDID) V Pass-Through V mat: V
IR Follow Video	0:
Rotate Video:	0 🗸
Analog Volume	+ - Mute Unmute
Standby Image	
Save Can	NOTE: Supports 640x480 JPEG images.

Figure 551: Device Detail Dialog

#### 2. Products Screen – Matrix Tab

The **Matrix** tab of the **Products** screen allows the user to connect any Display to any Source. The user also has the option of using **Presets** to save connection schemes ("Presets"), as well as to edit and delete existing presets (Figure 552).

								Lan	guage: Engli
Muxlab Netv	vork Controlle								Ļ
Products	Se	ttings	s	Software	Update	H	lelp		
						Virtual			
0800 : HDMI	over IP Por	- 410/00	(500800)	Imaxia	DINIATI	VIILGUI			
Set-up	Matrix N	/ideo Wall	RS-23	32	IR	HDMI-CEC	Firmware		
Set-up nnect your displa nnections.	Matrix Natrix	/ideo Wall	RS-23	32	IR	HDMI-CEC		e the "Connect" button at the bottom 1 PRESETS	to make the
Set-up nnect your displa inections. SPLAY	Matrix Natrix	rideo Wall d sources DURCE	RS-23	32	IR	HDMI-CEC			to make the
Set-up nnect your displa nections. SPLAY	Matrix Natrix	rideo Wall d sources DURCE	RS-23	32	IR	HDMI-CEC		PRESETS	to make the
Set-up Intect your displation nections. SPLAY	Matrix Natrix	rideo Wall d sources DURCE	RS-23	32	IR	HDMI-CEC		PRESETS > Current active Preset: No preset selected	▼] ID: 0
Set-up Innect your displa nections. SPLAY RX1 RX2 RX3	Matrix Natrix	fideo Wall d sources DURCE	RS-23	32	IR	HDMI-CEC		PRESETS > Current active Preset:	▼] ID: 0
Set-up Innect your displa nections. SPLAY RX1 RX2 RX3 RX3 RX4	Matrix Natrix	rideo Wall d sources DURCE	RS-23	32	IR	HDMI-CEC		PRESETS > Current active Preset: No preset selected > Save current connections in followin	y ID: 0
Set-up Innect your displa nections. SPLAY RX1 RX2 RX3 RX3 RX4	Matrix Natrix	fideo Wall d sources DURCE	RS-23	32	IR	HDMI-CEC		PRESETS > Current active Preset: No preset selected > Save current connections in followin > Save current connections as new pr	y ID: 0
Set-up nnect your displa inections.	Matrix Natrix	fideo Wall d sources DURCE	RS-23	32	IR	HDMI-CEC		PRESETS > Current active Preset: No preset selected > Save current connections in followin > Save current connections as new pr	g preset

Figure 552: Matrix Tab

To connect a display to a source, the user first clicks on the drop-down list next to the given display (for example "800-RX1") and selects which source to connect it to (Figure 553).

	etwork Contr		*					
Product	s	Settings	Software U	Jpdate	н	elp		
	D PROD							
00800 : HE	MI over IP	PoE 4K/60 (5	600800)   Muxlab	Matrix	Virtual			
	Matrix	Video Wall	RS-232	IR	HDMI-CEC	Firmware		
Set-up								
onnect your d		esired sources be	low. Once you've sele	ected the di	splays you wa	nt to change, u	se the "Connect" button at the I	bottom to make the
onnect your d		esired sources be	elow. Once you've sele	ected the di	splays you wa	nt to change, u	se the "Connect" button at the I	bottom to make the
onnect your d		esired sources be	elow. Once you've sele	ected the di	splays you wa	nt to change, u		bottom to make the
onnect your d onnections.		SOURCE	elow. Once you've sele		splays you wa	nt to change, u		
onnect your d onnections.		SOURCE	llow. Once you've sele	cted the dis	splays you wa	nt to change, u	PRE	
onnect your d onnections. ISPLAY		SOURCE	elow. Once you've sele		splays you wa	nt to change, u	PRE: > Current active Preset: No preset selected	SETS V ID: 0
ISPLAY		SOURCE	elow. Once you've sele	Cancel	splays you wa	nt to change, u	PRE:	SETS VID: 0 n following preset
onnect your d onnections. ISPLAY I0-RX1 I0-RX2 I0-RX3		SOURCE 800-TX1 ~ 800-TX2 ~	elow. Once you've sele	Cancel	splays you wa	nt to change, u	PRE: > Current active Preset: No preset selected	SETS V ID: 0
onnections. IISPLAY 00-RX1 00-RX2 00-RX3 00-RX4		SOURCE 800-TX1 ~ 800-TX2 ~ - ~	elow. Once you've sele	Cancel	splays you wa	nt to change, u	PRE: > Current active Preset: No preset selected	SETS ID: 0 n following preset s new preset
		SOURCE 800-TX1 ~ 800-TX2 ~ - ~	elow. Once you've sele	Cancel	splays you wa	nt to change, u	PRE: > Current active Preset: No preset selected > Save current connections in	SETS ID: 0 In following preset.
ISPLAY 00-RX1 00-RX2 00-RX3 00-RX3		SOURCE 800-TX1 ~ 800-TX2 ~ - ~	elow. Once you've sele	Cancel	splays you wa	nt to change, u	PRE: > Current active Preset: No preset selected > Save current connections in	SETS ID: 0 n following preset s new preset

Figure 553: Change Connection

Once the selection is made (the user can change any or all connections between displays and sources), the user clicks on **Connect** to finalize the change. A green SUCCESS tag will appear next to the new or changed connection (Figure 554).

M		ab						ما
Produc		Settings	Softw	are Update	е   н	elp		
		PoE 4K/60 (5	00800)   Mu	xiab   Matr	ix virtual			
00000 . HE	ini oror n							
Set-up	Matrix	Video Wall	RS-232	IR	HDMI-CEC	Firmware		
Set-up Connect your d	Matrix						the "Connect" button at the bot	tom to make the
Set-up Connect your di onnections.	Matrix						the "Connect" button at the bot	
Set-up connect your di connections.	Matrix	SOURCE	low. Once you'v				PRESE > Current active Preset:	TS
Set-up connect your di connections. DISPLAY 00-RX1	Matrix	SOURCE	Now. Once you'v				PRESE	
Set-up connect your di connections. DISPLAY 00-RX1 00-RX2	Matrix	SOURCE	low. Once you'v				PRESE > Current active Preset:	<b>TS</b>
Set-up connections. DISPLAY 00-RX1 00-RX2 00-RX3	Matrix	SOURCE	Now. Once you'v				PRESE > Current active Preset: No preset selected	<b>TS</b>
Set-up connections. DISPLAY 00-RX1 00-RX2 00-RX3 00-RX3	Matrix	SOURCE	Now. Once you'v				PRESE > Current active Preset: No preset selected	TS VID: 0 lowing preset V
Set-up	Matrix	SOURCE	Now. Once you'v				PRESE: > Current active Preset: No preset selected > Save current connections in fol	TS ID: 0 lowing preset w preset

Figure 554: Change Success

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 555) and types a name. This assigned preset name will be linked to the existing connection scheme being shown within the **Matrix** tab.

PRESETS			
> Current active Preset:			
No preset selected	▼	ID:	1
<ul> <li>&gt; Save current connections in following p</li> <li>&gt; Save current connections as new prese</li> </ul>	V		
10:00 AM Meeting Create	_		
> Delete following preset:	v		

Figure 555: Create New Preset

To save this preset, the user clicks on **Create**. A green SUCCESS tag will appear next to the > **Save current connections as new preset** field and the newly created preset becomes the **Current active Preset** (Figure 556).

PRESE	TS			
> Current active Preset:				
[2] 10:00 AM Meeting		▼	ID:	2
<ul> <li>&gt; Save current connections in fo</li> <li>&gt; Save current connections as n</li> </ul>		set: v		
	Create	S	UC	CESS
> Delete following preset:		•	]	

Figure 556: Confirmation of New Preset

To delete a preset, the user clicks the > **Delete following preset** drop-down box and selects a preset name from the list shown (Figure 557).

PRESETS
> Current active Preset:
[2] 10:00 AM Meeting • ID: 2
> Save current connections in following preset:
<b></b>
> Save current connections as new preset:
Create
> Delete following preset:
▼
[2] 10:00 AM Meeting

Figure 557: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 558).

192.168.168.50 says		
Are you sure to delete this preset ?		
	ОК	Cancel

Figure 558: Confirmation of Deleted Preset

Click on **OK**. The preset will be deleted and a green SUCCESS tag will appear next to the **> Delete following preset** field (Figure 559).

PRESETS		]
> Current active Preset:		
No preset selected	ID: 0	
<ul> <li>&gt; Save current connections in following preset:</li> <li>✓</li> <li>&gt; Save current connections as new preset:</li> </ul>		
Create		
> Delete following preset:		
▼	SUCCES	SS

Figure 559: Confirmation of Deleted Preset

To save the current matrix configuration under an existing **Preset** name, click on > **Save current connection in following preset** drop-down box and selects a preset name (Figure 560).

PRESETS		
> Current active Preset:		
[1] 10:00 AM Meeting •	ID:	1
> Save current connections in following preset:	]	
[1] 10:00 AM Meeting [2] 10:00 AM Meeting with Sales Team		
<ul> <li>&gt; Delete following preset:</li> </ul>	]	

Figure 560: Change Current Active Preset

Once selected, the **Preset** will be saved and a green SUCCESS tag will appear next to the > **Save current connections in following preset** field (Figure 561).

PRESETS	
> Current active Preset:	
[2] 10:00 AM Meeting with Sales Team V ID: 2	
> Save current connections in following preset:	
SUCCES	SS
> Save current connections as new preset:	
Create	
> Delete following preset:	

Figure 561: Confirmation of Changed Preset Name

In order to activate an existing **Preset**, select > **Current active Preset**, and select the **Preset** name from the drop-down box and the **Preset** will become active. The active **Preset** will also be displayed in the **Current active Preset** field.

## 3. Products Screen – Video Wall Tab

The **Video Wall** tab enables the user to configure an NxM video wall consisting of NxM monitors, all of the same size (Figure 562).

Muxlab MNC	Home	Setup site	Video Wall	Devices -		Logout
Video Wall Set-u	р				Si	ettings
Saved V-Wall + V.Wall Selected: Save Appl Save as: new Configuration Create Delete		ID::			Drag n drop here a video wall template or Select a previous configuration from the "Saved Configuration" list	
			Select all			
					Ideo Wall Set-Up : Step #1	
					Interpretation of the temperature of temperature	
					+ Video Wall Set-Up : Step #3	

Figure 562: Video Wall Tab

This screen is laid-out in a 3-step pattern, with a display pane that shows the NxM video wall setup:

1. The user clicks on +Video Wall Set-Up: Step #1, which expands to provide the user with video wall size options (Figure 563).

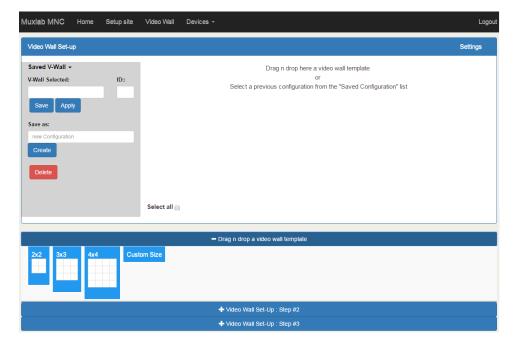


Figure 563: Video Wall Tab

a. By clicking on <u>and dragging</u> any of the N*x*N preconfigured boxes into the display pane, the user creates a video matrix of the same size. In the example shown in Figure 564, a 2x2 video wall consisting of 4 monitors is created. Custom video wall sizes may also be created.

Muxiab MNC Ho	ome Setup s	ite Video Wall	Devices -	Logout
Video Wall Set-up				Settings
Saved V-Wall + V-Wall Selected: Save Apply Save as: new Configuration Create Delete	ID:	: Select all	Drag in drop here a video wall template or Select a previous configuration from the "Saved Configuration" list	
			- Drag n drop a video wall template	
2x2 3x3	4x4	Custom Size		
			+ Video Wall Set-Up : Step #2	

Figure 564: Video Wall Tab – Dragging to Create a 2x2 Video Wall

b. Once dragged into the display pane, the user is asked for display dimensions (Figure 565).

Display dir	mension ×
Unit of measure:	inch •
Screen diagonal length:	þiagonal length
	Ok

Figure 565: Video Wall Tab – Newly Created 2x2 Video Wall

c. Once created, the display panel shows an empty (unpopulated) video wall consisting of 4 monitors (Figure 566)

Muxiab MNC Home	e Setup site	Video Wall	Devices -	Logout
Video Wall Set-up				Settings
Saved V-Wall +				
V-Wall Selected:	ID::			
Save Apply				
Save as: new Configuration		<u> </u>		
Create				
Delete				
Delete				
		Select all		
			– Drag n drop a video wali template	
2x2 3x3 4	x4 Cust	om Size		
			Interpretation + Video Wall Set-Up : Step #2	
<b>F</b> '			+ Video Wall Set-Up : Step #3	

Figure 566: Video Wall Tab – Newly Created 2x2 Video Wall

2. The user clicks on +**Video Wall Set-Up: Step #2**, which expands to provide the user with display mapping options (Figure 567).

Muxlab MNC Home Setup site	Video Wall Devices -	Logou
Video Wall Set-up		Settings
Saved V-Wall + V-Wall Selected: ID:: Save Apply Save as: new Configuration Create Delete		
	Select all	
	- Drag n drop a video wall template	
2x2 3x3 4x4 Cu	stom Size	
	- Select and place Displays	
RX-1 RX-2	RX-3	
	+ Video Wall Set-Up : Step #3	

Figure 567: Video Wall Tab – Newly Created 2x2 Video Wall

- a. The user clicks on a given display in the lower section of the screen. This highlights the display in a light blue box. (Note that dragging and dropping displays into the display pane is not allowed.)
- b. The user clicks on any one of the cells in the display pane.
- c. The clicked cell in the display pane is now mapped to the given display.
- d. The user must continue mapping the remaining displays to the remaining cells. The display pane then becomes fully display mapped (Figure 568).

RX-3	RX-2
Sh H:0,V:0	Sh H:0,V:0
Sc H:0,V:0	Sc H:0,V:0
RX-1	RX-4
Sh H:0,V:0	Sh H:0,V:0
Sc H:0,V:0	Sc H:0,V:0

Figure 568: Video Wall Tab – Fully Display Mapped Video Wall

3. The user clicks on +Video Wall Set-Up: Step #3, which expands to provide the user with source mapping options (Figure 569).

/ideo Wall Set-up		Settings
Saved V-Wall - /Wall Selected: ID:: Save Apply	RX-3 Sh H:0,V0 Sc H:0,V0	RX-2 Sh H:0,V:0 Sc H:0,V:0
ave as: new Configuration Create	RX-1 Sh H:0,V0 Sc H:0,V0	RX-4 Sh H:0,V:0 Sc H:0,V:0
	Select all	
2x2 3x3 4x4 Custo	- Drag n drop a video wali template	
RX-1 RX-2	- Select and place Displays	
RX-1		

Figure 569: Video Wall Tab – Connecting Sources to Receivers

- a. The user clicks on one or more cells in the display pane. Once clicked, the panes will change to blue to indicate that they are now actively selected.
- b. The user clicks on any single source shown in the lower part of the screen.
- c. The clicked cell(s) in the display pane is (are) now mapped to the given source.
- d. The user maps some or all sources to all cells. The display pane then becomes fully source mapped (Figure 570).

RX-2 (vw) - [DVD]	RX-1 (vw) - [DVD]
Sh H:0,V:0	Sh H:0,V:0
Sc H:0,V:0	Sc H:0,V:0
RX-3 (vw) - [TX-00-0B-78-00-7D-0B]	RX-4 (vw) - [TX-00-0B-78-00-7D-0B]
Sh H:0,V:0	Sh H:0,V:0
Sc H:0,V:0	Sc H:0,V:0

Figure 570: Video Wall Tab – Fully Source Mapped Video Wall

To configure the display size and bezel dimensions of all the displays (assumed to be all equal) comprising the video wall, the user clicks on **Settings** in the top right hand side of the **Video Wall** tab. This brings up the display setting options (Figure 571).

Video Wall	l Set-up										Settings
Unit inch v	screen width 36.54	screen height	bezel top 0.1	bezel bottom	bezel left 0.1	bezel right	scale+	scale -	Shift .	Shift .	Reset 🛞
		20.58		0.1			scale+ ↔	scale - ↔	Shift .	Shift . →	

Figure 571: Video Wall Tab – Display Setting Options

Since the video wall consists of only one type of display (all displays are the same), the user only needs to modify the dimensions for only one representative display.

Note that **Unit**, **screen width**, and **screen height** values are derived from the information provided by the user when first creating the video wall (Figure 565). Also, **Bezel top**, **bezel bottom**, **bezel left**, and **bezel right** are all set to 0.1 inch by default, but these values may be changed.

Display settings options also allow the user to scale or shift the image of one or several displays at the same time. The user must first selects the display(s) to be modified in the display plane, and then clicks on any of the eight buttons (Scale/Shift) in the display setting options. Clicking on **Reset** resets any changes made to these eight buttons, not to **Unit**, screen width, screen height, or bezel values.

The settings of any video wall can be saved as a named configuration by using the options shown in the left hand side of the **Video Wall** tab. Video wall configurations can be named, saved, deleted, or activated.

Note that not all displays in an actual video wall need to be included in a given saved configuration, simply start the three steps mentioned above, but only include the required subset of the displays to define as a given configuration, and save this configuration. For example, if the actual video wall consists of four (4) horizontal displays by four (4) vertical displays (4x4 video wall), a 2x2 configuration can be created consisting of only the upper-left corner four displays. To do so create a 2x2 video wall configuration in Step #1 above, then assign the corresponding four displays in the upper-left corner in Step #2 above, then in Step #3 assign the initial source, and save this configuration. Tip, use a configuration name that is representative of the actual setup, such as "Upper Left 2x2" in this case.

Any saved configuration can be activated and displayed on the video wall with the initial assigned source by simply loading it. Once activated, the initial source can easily be changed by repeating Step #3 above with a different source selected, after which you can either save this change or choose not to save it so the next time this configuration is activated the initial source remains unchanged.

#### 4. Products Screen - RS-232 Tab

The **RS-232** tab of the **Products** screen enables the user to send RS-232 commands to any MuxLab transmitter or receiver (Figure 572). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

2						Language: English •
MuxL						
Muxlab Network Cont	roller					
Products	Settings	Softwa	ire Update	He	łp	
SELECTED PROD	UCT					
500800 : HDMI over IP		00800)   Mu	xlab   Matr	ix Virtual		
Set-up Matrix	Video Wall	RS-232	IR	HDMI-CEC	Firmware	
Update your device's RS-232	connection setting	s here.				
Select a device: -	~					
- Baud rate: 🛛 👻	Data bits: 8   Pari	ty bits: None   S	top bits: 1]			
Save						
Data to send in HEX (ex: A	013B155C5)					
Check for feedback dat	a					
Data feedback received in	HEX					

Figure 572: RS-232 Tab

When sending RS-232 commands through the Network Controller, the user first selects the device that the RS-232 commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 573).

	UXL letwork Cont							Langu	uage: English ▼ Logou
Product	ts	Settings	Softwa	are Update	н   н	elp			
SELECTE 500800 : HE		UCT: PoE 4K/60 (5	00800)   Mu	xlab   Matr	ix Virtual				
Set-up	Matrix	Video Wall	RS-232	IR	HDMI-CEC	Firmware			
Update your de Select a device	e: 800	D-RX1  Data bits: 8   Par		tion hits: 11					
Save		Data bio, o f r ai	ny ona. None j c	NOP 013. 1 ]			 		
Data to send	in HEX (ex: A	013B155C5)							
	r feedback dat k received in I								
Send									

Figure 573: RS-232 Tab - Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. In the above example, 800-RX1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to 800-RX1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to 800-RX1. That transmitter will then send the specified data command to 800-RX1.

Note that no RS232 feedback is sent to the Network Controller when sending an RS232 command originating from the Network Controller in the direction of the transmitter (to 800-RX1).

When sending RS-232 commands directly from a PC to any transmitter or receiver, in pass-through mode, this is automatically accomplished by the existing connection between the transmitter and receiver. As such this connection must exist for pass-through to operate.

#### 5. Products Screen - IR Tab

The **IR** tab of the **Products** screen enables the user to send IR commands from the Network Controller to a MuxLab 500800 transmitter or receiver IR port (Figure 574).

Muxdab Ne	IXL Work Cont						Lang	wape: English • Locou
Product	s	Settings	Soft	ware Updati	e	Help		
SELECTEI 500800 : HDI		UCT: PoE 4K/60 (5	00800)   Mu	ıxlab   Matri	x Virtual			
Set-up	Matrix	Video Wall	RS-232	IR	HDMI-CEC	Firmware		
Select a device:		ction settings her					 	
Data to send ir	1 HEX (ex: 00	01 002B 3FFF)					 	
IR code receiv	ed in HEX						 	
Get IR code								

Figure 574: IR Tab

The 500800 supports a bi-directional IR port. The 500800 can be set to transmit IR commands from the Network Controller to a transmitter or receiver and then to a source or sink device, and can also be configured to receive IR commands from a handheld IR Remote and sending these commands to the Network Controller for learning IR command purposes.

#### **Transmitting IR Commands to Source and Sink Equipment:**

When sending IR commands through the Network Controller, the user first selects the device that the IR commands will be sent to. This is done by clicking on the **Select a device** drop-down list and making a selection (Figure 575).

Muxiab Netw	xi	ab					Langu	age: English • Logou
Products	T	Settings	Sof	ware Upda	te	Help		
Update your device' Select a device:	Over IP I Matrix 's IR conner	POE 4K/60 (5 Video Wall	RS-232	uxlab   Matr	ix Virtual HDMI-CEC	Firmware	 	
Save							 	]
Data to send in H	EX (ex: 00	01 002B 3FFF)						
IR code received	in HEX				_			

Figure 575: IR Tab – Selecting a Device

Once a device is selected, the **Data to send in HEX** field becomes enabled. Begin by setting the IR Mode to "Emitter" and click on "Save". Next enter the IR command in Hex in the **Data to send in HEX** field and click on "Send". In the above example, 800-TX1 was chosen as the selected device (but a receiver connected to sink equipment could have also been selected), meaning that a command sent to 800-TX1 will travel from the Network Controller to the Ethernet Switch, and from the Ethernet Switch to the transmitter connected to the 800-TX1 port with an attached IR Emitter. That transmitter will then send the specified data command via the attached IR Emitter to the source device.

Note that IR pass-through mode is not currently supported.

#### Learning IR Commands from a Handheld IR Remote:

The Network Controller can learn IR Commands in combination with the 500800. To begin the process, select the 500800 device as indicated above, set the IR Mode to Sensor and click on "Save", and attach an IR Senor to the 500800 IR port. Click on "Get IR Code", aim the handheld IR Remote at the Sensor while pressing on an IR command key on the IR Remote. The **IR code received in HEX** field will display the HEX version of an IR command sent from a handheld remote.

### 6. Products Screen – HDMI CEC Tab

The **HDMI CEC** tab of the Products screen enables the user to support CEC commands including Standby, Power ON, Volume Up, Volume Down and Mute (Figure 576).

Muxiab Network Controller						Language: English • Logou
Products	Settings   So	tware Update	He	elp		
SELECTED PROD 500800 : HDMI over IP		Muxlab   Matri	x Virtual	Firmware		
Select the devices you want to			TIDMI-CEC	Timmere		
DEVICE 800-RX1 800-RX2 800-RX3 800-RX4	Stand Power Volum	On				

Figure 576: HDMI CEC Tab

### 7. Products Screen - Firmware Tab

The **Firmware** tab of the Products screen enables the user to update the firmware for MuxLab transmitters and receiver (Figure 577).

M	uxi	ab							Language: English
	etwork Contr								
Product	s	Settings	\$	Softwar	e Update	H	elp		
SELECTE		JCT:							
500800 : HE	MI over IP	PoE 4K/60 (	500800	Mux	lab   Matr	ix Virtual			
Set-up	Matrix	Video Wall	RS-23	32	IR	HDMI-CEC	Firmware		
			uploadi	your dev ing it belo plays (RX)		re by urce (TX)			
			Choos	e File N	o file chosen				
					Apply				
DISPLAY					SOUR	CE			
	00-RX)		v1.0.0					v1.0.0	
DISPLAY 800-RX1 (5008 800-RX2 (5008			v1.0.0 v1.0.0		800-TX	CE 1 (500800-TX) 2 (500800-TX)		v1.0.0 v1.0.0	
800-RX1 (5008	00-RX)				800-TX	1 (500800-TX)			

Figure 577: Firmware Tab

The user first selects either **Display** (**RX**) or **Source** (**TX**), then chooses the firmware update file to upload to the given device. Once the file is selected, the user checks the box next to the given device (listed under **DISPLAY** and **SOURCE**) targeted for firmware upgrade, and then clicks **Apply**.

## **Settings Screen**

The Settings screen contains two tabs: Network and Administration.

The Network tab (Figure 578) is used to change the IP address on LAN 1 port of the Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP. LAN 2 port can be used for controlling purpose.

xiab Network Controller	
xdab Network Controller	
roducts   Settings   Software Update	Help
Network Administration	
Network	
Use the form below if you'd like to set manual network settings.	
LAN 1	
Use DHCP: O Yes ® No	
IP address: 192 . 168 . 168 . 50	
192 . 100 . 100 . 50 Network mask:	
255 . 255 . 255 . 0	
Router:	
192 . 168 . 168 . 1	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 55	
Save	
Save	
LAN 2	
Use DHCP:   Yes  No	
IP address:	
IP address:	
Network mask:	
Router:	
Mac Address:	
00 : 0E : C4 : D3 : B9 : 56	

Figure 578: Settings Screen: Network Tab

The **Administration** tab is used to create or delete user accounts, change passwords, restore data, backup data, and retrieve logs (Figure 579).

					Language: [English Log
Products	Settings	Software Upda	te   Help		
Network	Administration				
Select a User User Name new password Confirm new p User Type:	User Account Or to edit:	T T			
	ta unit with the selected dat Choose File No file cho				
WARNING ! Restore	You MUST FIRST set ti	e IP address of this contro	oller using the same a	as the controller this backup	file come from !!!
Backup dat Backup the o Backup	a data and save it in a file				
Get Logs Get all logs i Download L					

Figure 579: Settings Screen: Administration Tab

The **mNDS Browser** tab is used to find MuxLab devices on the local network using the mDMS Protocol, and lists their IP and MAC Addresses. Press the mNDS Discovery button to begin the discovery. This is practical if a device has an unknown IP Address. Note that not all MuxLab devices support the mNDS Protocol.

#### Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 580). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

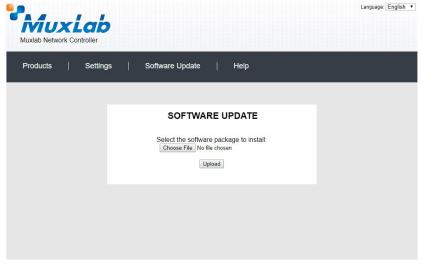


Figure 580: Software Update Screen

#### Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 581).

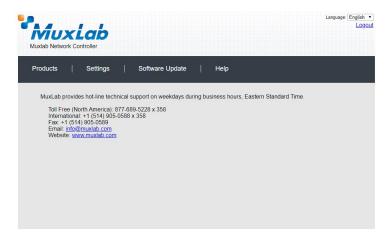


Figure 581: Help Screen

# Troubleshooting

Table 3 lists common problems, as well as their possible causes and solutions. If the information below does not solve the problem, technical support contact information can be found at the end of this section.

PROBLEM	POSSIBLE SOLUTIONS
Unable to connect computer	Ensure the computer IP subnet address matches the IP subnet address of the MNC
to MNC	Ensure that http://192.168.168.50/mnc/ is written in lower case
Unable to connect computer to Ethernet Switch or to the Router	Ensure the computer IP subnet address matches the IP subnet address of the Ethernet Switch and Router.
	As a general rule, all devices required to communicate together on the same local network, must have an IP address in the same subnet
General communication problem between devices	Static IP address must be unique and in the same subnet.
	DHCP addresses must be assigned within the same subnet and configured at the DHCP server not to overlay with any assigned Static IP addresses.

#### Table 3: Troubleshooting

When contacting your nearest MuxLab dealer or MuxLab Technical Support at 877-689-5228 (toll free in North America) or (+1) 514-905-0588 (International), please have the following information ready:

- Unit model number.
- Description of problem.
- List of tests performed.

## Appendix – IP Command API

The Muxlab API (Application Program Interface) Commands for the 500812 Network Controller are not covered in this document. They are covered in a separate document as follows:

File: MNC\_500810\_811\_812\_IP\_Commands.PDF

which is available on the 500812 unit webpage of the MuxLab website.

## 6. Product Warranty Policy

#### Items Under Warranty - Company Policy

MuxLab guarantees its products to be free of defects in manufacturing and workmanship for the warranty period from the date of purchase. If this product fails to give satisfactory performance during this warranty period, MuxLab will either repair or replace this product at no additional charge, except as set forth below. Repair and replacement parts will be furnished on an exchange basis and will be either reconditioned or new. All replaced parts and products become the property of MuxLab. This limited warranty does not include repair services for damage to the product resulting from accident, disaster, misuse, abuse, or unauthorized modifications or normal decay of battery driven devices. Batteries, if included with the product, are not covered under this warranty.

Limited warranty service can be obtained by delivering the product during the warranty period to the authorized MuxLab dealer from whom you purchased the product, or by sending it to MuxLab. MuxLab will not accept any such product for repair without a Return Material Authorization number (RMA#) issued by its Customer Service Department and a proof of purchase date. If this product is delivered to MuxLab by mail, you agree to assume risk of loss or damage in transit, to prepay shipping charges to the warranty service location, and to use the original shipping container or equivalent.

THE ABOVE LIMITED WARRANTY IS THE ONLY WARRANTY COVERING YOUR MUXLAB PRODUCT. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IF THIS PRODUCT IS NOT IN GOOD WORKING ORDER, YOUR SOLE REMEDY SHALL BE REPAIR OR REPLACEMENT AS PROVIDED FOR ABOVE. IN NO EVENT SHALL MuxLab BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING ANY LOSS OF PROFITS, LOST SAVINGS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF MUXLAB OR AN AUTHORIZED MuxLab DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; NOR WILL MUXLAB BE LIABLE FOR ANY CLAIM BY ANY OTHER PARTY. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR CONSUMER PRODUCTS, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

#### Warranty Periods

Any 500812 ProDigital Network Controller found to be defective within three (3) years of invoice, including one (1) month shelf life, may be returned for replacement by a new unit or a satisfactory repair within one (1) month of receiving any returned product. The customer must provide MuxLab with the serial number and proof of purchase of the defective unit being returned. <u>All R.M.A.'s issued are subject to inspection by MuxLab</u>, and will be returned to customer if not properly package – units must be returned in original container or equivalent. MuxLab will not accept any such product for repair without an authorization for its Technical Support department and without a return authorization number issued by MuxLab Customer Service department. For credit & replace R.M.A., customer will be liable to pay replacement invoice if defective products are not returned.

Product more than six months old, including shelf life.

The defective unit must be returned prepaid to MuxLab and then the unit will be repaired or if repair is not possible, replaced by an equivalent unit and returned to the customer within one (1) month of receiving any returned product. There is no charge for repair (parts and labor) during the full warranty period.

#### Items Defective and not under Warranty

For products which are no longer under warranty the policy is repair and return. An amount of 25% of the products published list price at the time of purchase will be charged. Customer must issue a purchase order to cover the cost of repair.

*Each unit will be returned to the customer within one (1) month from receipt of the unit by MuxLab. The defective unit must be returned prepaid to MuxLab. The repaired unit will be returned to the customer FOB MuxLab. The repaired unit has a 90 day warranty.* 



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