MuxLab Pro Digital Network Controller (MNC) (Model: 500811)



Operation Manual

94-000810-F SE-000810-F



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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.

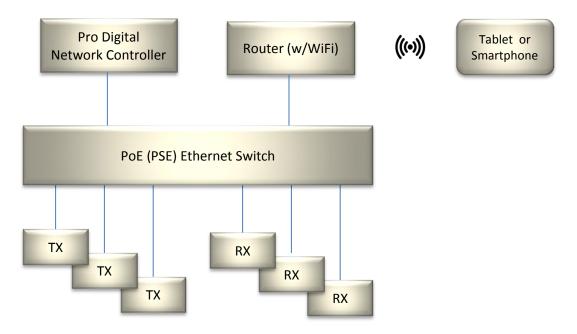


Figure 1: System Overview

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 & Side View)

Figure 1: Pro Digital Network Controller

Front Panel

- Power LED
- Power button

Back Panel

- VGA video out port
- HDMI video out port
- LAN port (RJ-45 jack)
- Audio in (3.5 mm)
- Audio out (3.5 mm)
- Micro SD memory slot
- K lock
- Power connector

Side Panel

• Three (3) USB 2.0 ports

2. Technical Specifications

MuxLab ProDigital Network Controller				
CPU	Intel Z3735F			
Memory	2GB DDR3			
BIOS	AMI BIOS			
VGA	Resolution up to 1920 x 1200			
Keyboard and Mouse	USB keyboard and mouse (sold separately)			
Peripherals	 USB 2.0 ports (3x) micro SD slot (1x) Network interface (1x) VGA Video out port (1x) HDMI Video out port (1x) Audio in via 3.5mm port (1x) Audio out via 3.5mm port (1x) 			
Operating System	Ubuntu 14.04 LTS			
Operating Temperature	5 °C to 50 °C			
Dimensions	4.52 x 4.52 x 1.4 inch (115 x 115 x 35 mm)			
Weight	1.1lbs (0.5kg)			
Accessories Included	External Power Adaptor			
Regulatory	FCC, CE, RoHS, WEEE			
Order Information	500811 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)



Please verify that both parts are present before proceeding.

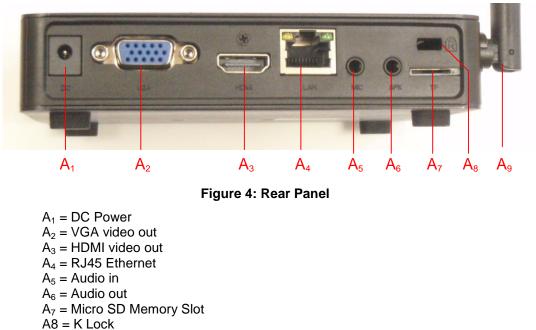
Figure 2: Base Unit



Figure 3: External Power Adaptor

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.



A9 = Wifi antenna (not supported in current software release)

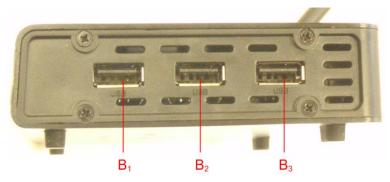


Figure 5: Side Panel

B ₁ = USB 2.0 #1
B ₂ = USB 2.0 #2
B ₃ = USB 2.0 #3

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. Note that the WiFi antenna on the MuxLab Controller is not supported in the current software release.

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

The MuxLab Pro Digital Network Controller comes with a default static IP address of 192.168.168.50 (with DHCP disabled). 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 and 500759 Transmitters)
- 192.168.168.59 (for the 500758 and 500759 Receivers)
- 192.168.168.62 (for the 500762 Transmitter)
- 192.168.168.63 (for the 500762 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 SG300 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. 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).

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 500811 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 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 in the ON position (front button pressed in).
 - C. Connect one end of an Ethernet cable to the 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:

http://192.168.168.50/mnc/

NOTE: mnc must be written in lower case

) http://192.168.168.50/mn < ×	
← → X ☆ 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.

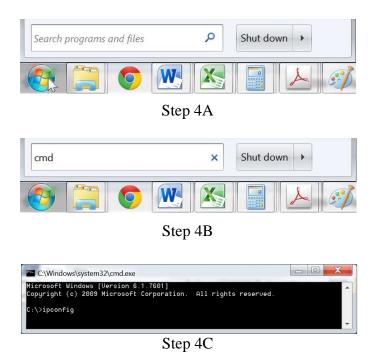


Figure 7: Determining Computer IP Address

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 Figure 9 through Figure 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:

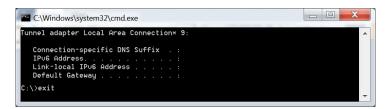
192.168.168.*x*

Where x can be any number from 2 to 254 except for 50 (since 50 is the MNC address). The example in Figure 12 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.





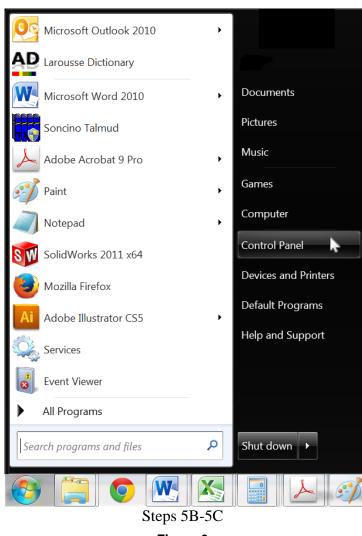
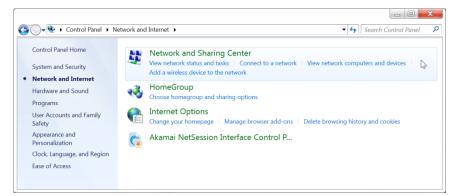
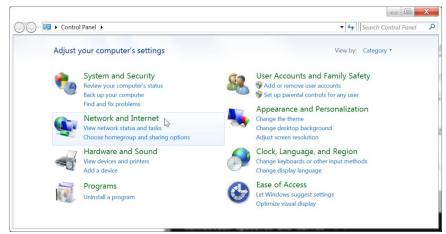


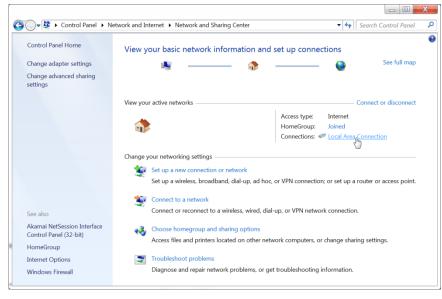
Figure 9



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:				
Stroadcom 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 <u>U</u> ninstall <u>Properties</u>				
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

nternet Protocol Version 4 (TCP/IPv4) Properties						
General						
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.						
Obtain an IP address automatically						
• Use the following IP address:						
IP address:	192 . 168 . 168 . 12					
S <u>u</u> bnet mask:	255 . 255 . 255 . 0					
Default gateway:						
Obtain DNS server address autom	atically					
• Use the following DNS server addresses:						
Preferred DNS server:						
<u>A</u> lternate DNS server:	· · ·					
Validate settings upon exit	Advan	ced				
	OK	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.

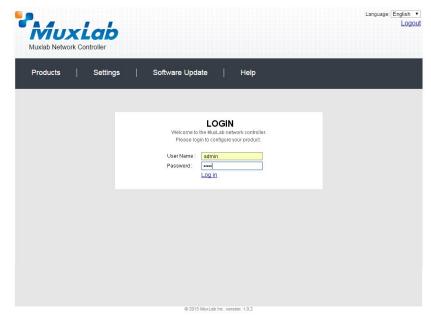


Figure 14 Login Screen

- 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.

Refer to Figure 15

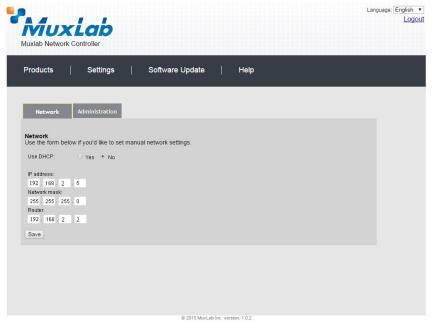


Figure 15 Network Settings Screen

- 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. **Error! Reference source not found.** Just make sure the Static IP address for the MNC does 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 Cont		Language: English ▼ Logout
Products	Settings Software Update Help	
NETWORK SE Use DHCP: ``Y IP address: 192 - 168 - 2 - 5 - Network mask: 255 - 255 - 255 - 0 Router: 192 - 168 - 2 - 2	The unit is reporting. 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 17).

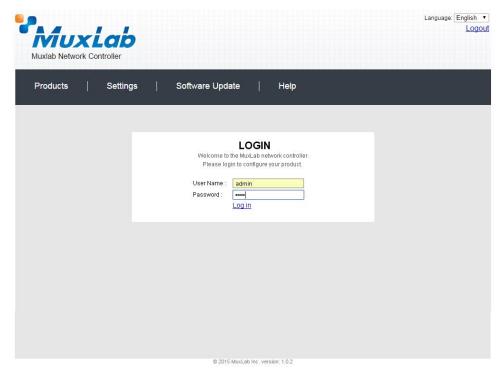


Figure 17 Login Screen

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
500755- AMP	Audio	2 Ch Audio w/AMP	RS232+IR+PoE(TX)	173
500762	HDMI	1080p/60 & 4K/60	USB+RS232+IR+PoE	192
500816- IP	Controller	n/a	Controllers 500811	217

Table 2: Extender Models

Extender Model 500752

Products Screen

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

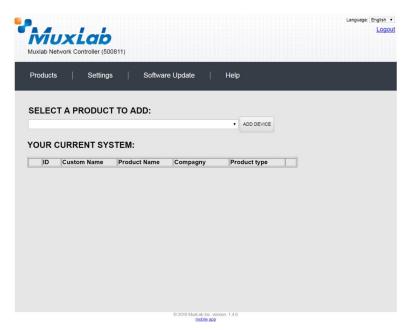


Figure 18: Products Screen – Initial View

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).

Products Settings	i Software L	lpdate	Help	
SELECT A PRODUCT	TO ADD:			
			ADD DEVICE	
8-Button IP PoE Control Hdmi Over IP (500752/7			_	
Hdmi Over IP 4K (50075			uct Type	
Hdmi Over IP H264 (500				
Hdmi Over IP H264/H26 Matrix 16x16 (500480)	5 (500762)			
Matrix 16x16 (500480)				

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 19), without a product being added.

Reversion (500811)	Language: English v
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP (500752/753/754/755/756) VOUR CURRE D Custom Name: Setup 1 OK CANCEL	
© 20%6 Madiab file: version: 3.4.8 mobile age	

Figure 20: Products Screen – Naming a Product

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

	UXLAR etwork Controller (5					Language: English Logo
Products	s Settin	gs ∣ Software	e Update 🛛 🗍	Help		
	CT A PRODUC			ADD DEVICE		
ID X 1	Custom Name Setup 1		Compagny ^{Muxlab}	Product type Matrix Virtual	Select	
<u>- 1</u>		(5007527753/754/755/756)				
			© 2016 MuxLab Inc. mobile a			

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	Controller (500811)		58.50 says: to load previous stor	ed device list ?	Cancel	Language	e: English Log
Products	Settings	Softwa	re Update	Help			
	PRODUCT : i Over IP (50075	2/753/754/75	5/756) Muxla	ab Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Set-up Modify any availat	ole settings and click S	ave to apply you	r changes				
			© 2016 MuxLab In	a uemien: 4.4.0			

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).

Mux						Language:	English
Iuxlab Network (Controller (50081 Settings		re Update	Help			
Products	Settings	Softwa	re Update	Help			
SELECTED	PRODUCT	:					
Setup 1 : Hdm	i Over IP (500	752/753/754/75	5/756) Muxla	ab Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
	le settings and clic	k Save to apply you	r changes				
,							
			© 2016 MuxLab In mobile				

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).

Matrix		RS-232	Help Ixlab Matrix IR			nware		1		
Matrix Matrix able settings and Manual	00752/753/754/ Video Wall	RS-232	·	Virtua		nware				
Matrix Matrix able settings and Manual	00752/753/754/ Video Wall	RS-232	·	Virtua		nware				
able settings and			IR		Fim	nware				
able settings and			IR		Fim	nware				
O Manual	click Save to apply	your changes								
		IP address								
0.001/200	10 30 10 00 12 03	1211001100103	230200200.0	Ŀ		Report	Dotain			
	MAC address	ID address	MARK	DHCD						
					' DIP	Reboot	Detail			
			255 255 255 0							
			270.200.200.0	. U			Joiun			
7	78-00-7D-E2 78-00-7E-59 78-00-7E-5E 78-00-7E-63	78-00-7E-59 00-08-78-00-7E-59 78-00-7E-5E 00-08-78-00-7E-5E 78-00-7E-63 00-08-78-00-7E-63 MAC address	78-00-7D-E2 00-08-78-00-7D-E2 192.168.168.84 78-00-7E-59 00-08-78-00-7E-59 192.168.168.60 78-00-7E-52 00-08-78-00-7E-54 192.168.168.65 78-00-7E-63 00-08-78-00-7E-63 192.168.168.65 MAC address IP address 192.168.168.62	78-00-7D-E2 00-08-78-00-7D-E2 192.168.168.64 255.255.255.0 78-00-7E-59 00-08-78-00-7E-56 192.168.168.60 255.255.05 78-00-7E-54 00-08-78-00-7E-56 192.168.168.60 255.255.05 78-00-7E-63 00-08-78-00-7E-63 192.168.168.60 255.255.05 MAC address IP address MASK 00-08-78-00-7D-69 192.168.168.62 255.255.55	MAC address IP address MASK DHCF 00-08-78-00-7D-E2 192.168.168.64 255.255.25.0 •	MAC address IP address MASK DHCP DIP 00-08-78-00-7D-E2 192.168.168.64 255.255.255.0 • •	MAC address IP address MASK DHCP DIP 00-08-78-00-7D-E2 192.168.168.64 255.255.255.0 ✓ Reboot 78-00-7E-59 00-08-78-00-7E-59 192.168.168.65 255.255.255.0 ✓ Reboot 78-00-7E-56 00-08-78-00-7E-56 192.168.168.65 255.255.255.0 ✓ Reboot 78-00-7E-63 00-08-78-00-7E-63 192.168.168.63 255.255.255.0 ✓ Reboot 8-00-07E-63 00-08-78-00-7E-63 192.168.168.63 255.255.255.0 ✓ Reboot	MAC address IP address MASK DHCP DIP Detail 00-08-78-00-7D-62 192.168.168.64 255.255.255.0 ✓ ■ Reboot Detail 78-00-7E-59 00-08-78-00-7E-58 192.168.168.65 255.255.255.0 ✓ ■ Reboot Detail 78-00-7E-63 00-08-78-00-7E-63 192.168.168.65 255.255.255.0 ✓ ■ Reboot Detail 90-08-78-00-7E-63 192.168.168.65 255.255.255.0 ✓ ■ Reboot Detail	MAC address IP address MASK DHCP DIP 00-08-78-00-7D-09 192.168.168.62 255.255.256.0 ✓ Reboot Detail 78-00-7E-59 00-08-78-00-7E-59 192.168.168.60 255.255.256.0 ✓ Reboot Detail 78-00-7E-59 00-08-78-00-7E-58 192.168.168.60 255.255.256.0 ✓ Reboot Detail 78-00-7E-63 00-08-78-00-7E-63 192.168.168.63 255.255.256.0 ✓ Reboot Detail 90-08-78-00-7E-63 192.168.168.63 255.255.256.0 ✓ Reboot Detail	MAC address IP address MASK DHCP DIP 00-08-78-00-7D-69 192:168:168.64 255:255:250 Image: Control of Con

Figure 24: Products Screen – Set-up Tab

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).

ĪV	iux	Lab								Lange	uage: Englis Lo
	ib Network lucts	Controller (500	,	vare Update	Help						
			T : 00752/753/754/	755/756\ Mi	Ivlah Matrix	Virtua	1				
					·	Virtua					
	Set-up	Matrix	Video Wall	RS-232	IR		- m	nware			
• 4		O Manual	click Save to apply	your changes							
Modif A Laur Displ	fy any availa Automatic	O Manual	click Save to apply	your changes	MASK	DHCF	DIP				
Modif A Laur Displ	fy any availa Automatic Inch discovery Iay (4 RX)	O Manual		IP address	MASK 255.255.255.0	DHCF	DIP	Reboot	Detail	UPDATED	
Modif A Laur Displ Port#	fy any availa Automatic Inch discovery Iay (4 RX) ¥ Name	O Manual	MAC address 00-08-78-00-7D-E2	IP address				Reboot	Detail Detail		
Modif A Laur Displ Port# 0	fý any availa Automatic Inch discovery I ay (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	255.255.255.0						
Modif A Laur Displ Port# 0 0	fý 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 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0	•		Reboot	Detail	UPDATED	
Modif	fy any availa Automatic nch 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	UPDATED UPDATED	
Modii A Laur Displ Port# 0 0 0 0 Sour	ý any availa kutomatic hch 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	UPDATED UPDATED	
Modii A Laur Displ Port# 0 0 0 0 Sour	rý any availa Automatic Inch discovery Iay (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-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 IP2.468.168.63	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0	5 5 5		Reboot Reboot	Detail Detail	UPDATED UPDATED	
Modif A Laur Displ Port# 0 0 0 0 Sour Port#	y any availa automatic the h discovery lay (4 RX) # Name RX-1 RX-3 RX-3 RX-3 RX-4 RX-3 RX-4 RX-3 RX-4 RX-3 RX-4 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-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	Ø Ø Ø DHCF		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Modii A Laur Displ Port# 0 0 0 0 0 Sour Port# 0 0	ty any availa wutomatic thich discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 ce (2 TX) # Name DVD-1 DVD-1 DVD-2	O Manual	MAC 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 00-08-78-00-7D-09	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	I DHCF		Reboot Reboot Reboot	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 Detai	I
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 in	nage: Choose file No file chosen
Upload Image	
Set output Video I	
Auto-detect Resol	lution:
Show Screen Tex	t: 🖉
Show Screen ima	ge: 🕜
-	
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).

Muxlab Network		11)				Language:	English •
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdm		-	55/756) Muxla	ıb Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th	plays to the desired the connections.	sources below. One	ce you've selected t	he displays you wa	ant to change, use th	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	'S	7	
RX-1			> Current ac	tive Preset:			
RA-1		- •	No preset s	elected	▼ ID: 1		
			> Save curre	ent connections in follo	owing preset:		
			> Save curre	ent connections as ne	w preset: Create		
			> Delete foli	owing preset:			
Connect					•]	
			© 2016 MuxLab Inc				

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).

Muxlab Network	Controller (5008	11)					Languag	e: English Log
Products	Settings	Softwa	are Update	Help				
	PRODUCT ni Over IP (500	-	55/756) Muxla	ab Matrix Virt	ual			
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 wa	int to change, use	the "Conne	ct" button at the	
DISPLAY		SOURCE	Γ		RESETS]	
RX-1		DVD-1 V	ancel	Current active Preset: No preset selected		ID: 1		
				Save current connecti	ons in following prese	E		
			>	Save current connecti	ons as new preset: Create			
			>	Delete following prese	t			
Connect			L]	
			© 2016 MuxLab In	e version: 1.4.9				

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).

Muxlab Network	Controller (5008	11)				Language	English Loge
Products	Settings	Softwa	re Update	Help			
	PRODUCT ni Over IP (500	752/753/754/75	55/756) Muxla	ab Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
bottom to make th			ce you've selected t			he "Connect" button at the	
DISPLAY		SOURCE		PRESET	rs		
RX-1		DVD-1 V SUC	CESS > Current ad		▼ ID: 0		
			> Save curr	ent connections in fol	lowing preset:		
			> Save curre	ent connections as n	ow preset: Create		
Connect			> Delete foll	owing preset:			

Figure 30: Change Successful

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.

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

Figure 31: 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 32).

PRESETS
> Current active Preset:
[1] Preset 1 TID: 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	l 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:		
▼	SUCCE	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		V	ID:	1
> Save current connections in fo [1] Old Preset	bllowing pre	eset: ▼		
	Create			
> Delete following preset:	-IJ	•		

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 pre-	set:	-		
	•	S	JCCE	SS
> Save current connections as new preset:				
Create				
> Delete following preset:				
	۲			

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).

Muxlab Network	Controller (5008	11)				Languag	e: Engli Lc
Products	Settings	Software	e Update	Help			
	PRODUCT ni Over IP (500	: 752/753/754/75	5/756) Muxla	ab Matrix Vir	tual		
Set-up	Matrix	Video Wall	R5-232	IR	Firmware		
		wall features found					
			© 2016 MuxLab Inc	unreion 149			

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		11)				Language: English
Products	Settings	Softwa	re Update	Help		
SELECTED Setup 1 : Hdm		: 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 RS-23	2 features found !				
			© 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.

	Settings	Softwar	re Update	Help		
	D PRODUCT mi Over IP (500	1752/753/754/75	5/756) Muxla	ab Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
- IR Mode: - IP Feedbacl Save	¢.	_				
	in HEX (ex: A01	3B155C5)				

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		11)				Langua	ige: Englis Lo
Products	Settings	Softwa	ire Update	Help			
SELECTED Setup 1 : Hdmi		-	55/756) Muxl	ab Matrix Virt	tual		
Set-up	Matrix	Video Wall	R5-232	IR	Firmware		
Update your device Select a device: - IR Mode: - IP Feedback:	-						
Save							
Data to send in	HEX (ex: A013	B155C5)		_			
							_
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).

Settings Software Update Help SELECTED PRODUCT : Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/756) Muxlab Matrix Virtual Source (x) Choose He No He Inchean Apply DISPLAY SOURCE RX-1 (500752-TX) v2.10	Muxlab Network C		1)					Language: English Log
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	Softwa	re Update	Help			
Modify any available settings and click Save to apply your changes Displays (X) Gource (TX) Choose file No file chosen Apply DISPLAY SOURCE				'55/756) Muxla	ab Matrix Vir	tual		
changes • Displays (RX) Source (TX) Choose fie No file chosen Apply DISPLAY SOURCE	Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
			ehan D	isplays (RX)	-	to apply your		
RX-1 (500752-RX) v2.1.0 DVD-1 (500752-TX) v2.1.0	DISPLAY			SO	URCE			
	RX-1 (500752-RX)		v2.1.0	DVD	0-1 (500752-TX)	,	v2.1.0	
				© 2016 MuxLab Inc.	version: 1.4.8			

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 of the MuxLab Network Controller (MNC), the network mask, as well as the router IP address. It also allows the user to enable or disable DHCP.

Muxlab Network C	Language Controller (500811)	e: English Logo
Products	Settings Software Update Help	
Network	Administration	
Network Use the form below	w if you'd like to set manual network settings.	
Use DHCP:	Yes * No	
IP address: 192 , 168 , 168 , Network mask:		
255 . 255 . 255 . Router:	0	
192 . 168 . 168 .	. 1	
Save		
	© 2016 MusLab Inc. version: 1.4.8 mobile app	

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).

Muxiab Network Controller (500811)	
Products Settings Softwa	are 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 I You MUST FIRST set the IP address of ti Restore	this controller using the same as the controller this backup file come from !!!
Backup data Backup the data and save it in a file Backup	
Backup the data and save it in a file	
Backup the data and save it in a file Backup Get Logs	
Backup the data and save it in a file Backup Get Logs Get all logs in a zip file	

Figure 44: Settings Screen: Administration Tab

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.

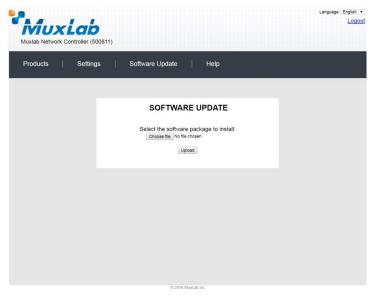


Figure 45: Software Update Screen

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).

Muxlab Network Controller (500811)	Language: English ▼ Logout
Products Settings Software Update Help	
SELECT A PRODUCT TO ADD:	
YOUR CURRENT SYSTEM: ID Custom Name Product Name Compagny Product type	
© 2016 MusLab Inc. version: 1.4.8 motile app	

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).

/luxlab Network Controller (500811)		Inglish •
Products Settings Software Update He	ip	
SELECT A PRODUCT TO ADD:		
•	ADD DEVICE	
8-Button IP PoE Control Panel (500816-IP) Hdmi Over IP (500752/753/754/755/756)		
Hdmi Over IP 4K (500758/759) Hdmi Over IP H264 (500757) Hdmi Over IP H264/H265 (500762) Matrix 16x16 (500480)	uct Type	

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 48), without a product being added.

Reversion (500811)	Language: English v
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP (500752/753/754/755/756) YOUR CURRE D Custom Name: Setup 1 OK CANCEL	
© 20%6 Madiab file: version: 3.4.8 mobile age	

Figure 49: Products Screen – Naming a Product

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

	UXLAR etwork Controller (5					Language: English • Logou
Products	s Setting	gs ∣ Software	e Update 🛛 🗍	Help		
	CT A PRODUC			ADD DEVICE		
ID X 1	Custom Name Setup 1		Compagny Muxlab	Product type Matrix Virtual	Select	
1	Setup 1		Muxlab	Matrix Virtual	Select	
			© 2016 MuxLab Inc. mobile a			

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).

	Controller (50081)	Do you wan	68.50 says: t to load previous store	ed device list ?	Cancel	Language: English
Products	Settings	Softwa	re Update	Help		
	PRODUCT : ni Over IP (5007		55/756) Muxla	ıb Matrix Virl	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Set-up Modify any availa	able settings and click	Save to apply you	ur changes			

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).

Mux						Language:	English
Iuxlab Network (Controller (50081 Settings		re Update	Help			
Products	Settings	Softwa	re Update	Help			
SELECTED	PRODUCT	:					
Setup 1 : Hdm	i Over IP (500	752/753/754/75	5/756) Muxla	ab Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
	le settings and clic	k Save to apply you	r changes				
,							
			© 2016 MuxLab In 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).

Δ.								Lang	uage: English Log
	b Network Control								
Prod	lucts S	ettings s	Software Update	Help					
	ECTED PRO		754/755/756) Mi	uxlab I Matrix	Virtual				
			,						
	Set-up N	Aatrix Video	Wall RS-232	IR	Fi	mware			
• 4		ngs and click Save to a	apply your changes						
Modif	fý any available setti Automatic O Man		apply your changes						
Modif A Laur Displ Port#	rý any available setti Automatic O Man Inch discovery			MASK	DHCP DI	×			
Modif A Laur Displ Port# 0	rý any available setti wutomatic Man nch discovery lay (4 RX) ≠ Name RX-00-08-78-00-7D-	MAC address E2 00-08-78-00-7	s IP address 7D-E2 192.168.168.64	255.255.255.0	•	Reboot	Detail		
Modif A Laur Displ Port# 0 0	fý any available settil uutomatic Man nch discovery lay (4 RX) # Name RX-00-08-78-00-7D- RX-00-08-78-00-7E-	MAC address E2 00-08-78-00-7 59 00-08-78-00-7	s IP address 7D-E2 192.168.168.64 7E-59 192.168.168.60	255.255.255.0 255.255.255.0	•	Reboot Reboot	Detail		
Modified A	tv any available setti uutomatic Man nch discovery Iay (4 RX) ≠ Name RX-00-0B-78-00-7D- RX-00-0B-78-00-7E- RX-00-0B-78-00-7E-	MAC address E2 00-08-78-00-7 59 00-08-78-00-7 5E 00-08-78-00-7	s IP address TD-E2 192.168.168.64 7E-59 192.168.168.60 7E-5E 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	•	Reboot Reboot Reboot	Detail Detail		
Modif A Laur Displ Port# 0 0	fý any available settil uutomatic Man nch discovery lay (4 RX) # Name RX-00-08-78-00-7D- RX-00-08-78-00-7E-	MAC address E2 00-08-78-00-7 59 00-08-78-00-7 5E 00-08-78-00-7	s IP address 7D-E2 192.168.168.64 7E-59 192.168.168.60	255.255.255.0 255.255.255.0	•	Reboot Reboot Reboot	Detail		
Modifier A	ý any available setti uutomatic Man hch discovery lay (4 RX) 7 Name RX-00-0B-78-00-7E- RX-00-0B-78-00-7E- RX-00-0B-78-00-7E- RX-00-0B-78-00-7E-	MAC address E2 00-08-78-00-7 59 00-08-78-00-7 5E 00-08-78-00-7	s IP address TD-E2 192.168.168.64 7E-59 192.168.168.60 7E-5E 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	•	Reboot 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 available setti uutomatic Man ich discovary ay (4 RX) # Name RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E-	MAC address E2 00-08-76-00-7 55 00-08-76-00-7 55 00-08-76-00-7 63 00-08-76-00-7	s IP address 7D-E2 192.168.168.64 7E-56 192.168.168.60 7E-56 192.168.168.65 7E-63 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	9 9 9	Reboot Reboot Reboot	Detail Detail		
Modifi A Laur Displ Port# 0 0 0 0 Sour Port#	ý any available setti uutomatic Man hch discoveny lay (4 RX) ¥ Name RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- Ce (2 TX) ¥ Name	MAC address E2 00-08-78-00-7 59 00-08-78-00-7 63 00-08-78-00-7 63 00-08-78-00-7	s IP address TD-E2 192.168.168.64 TE-59 192.168.168.60 TE-63 192.168.168.63 192.168.168.63 s IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	I DHCP DI	Reboot Reboot Reboot	Detail Detail Detail		
Modil A Laur Displ Port# 0 0 0 0 0 Sour Port# 0 0 0 0 0 0 0 0 0 0 0 0 0	ý any available setti uutomatic O Man nch discovery Iay (4 RX) ≠ Name RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- (2 TX) ¥ Name DVD -1	MAC address E2 00-08-78-00-7 59 00-08-78-00-7 55 00-08-78-00-7 63 00-08-78-00-7 MAC address MAC address	IP address TD-E2 192.168.168.64 TE-50 192.168.168.65 TE-56 192.168.168.63 TE-66 192.168.168.63 S IP address TD-D9 192.168.168.62	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 MASK 255 255 255 0	♥ ♥ DHCP DI	Reboot Reboot Reboot Reboot	Detail Detail Detail Detail		
Modifi A Laur Displ Port# 0 0 0 0 Sour Port#	ý any available setti uutomatic Man hch discoveny lay (4 RX) ¥ Name RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- Ce (2 TX) ¥ Name	MAC address E2 00-08-78-00-7 59 00-08-78-00-7 55 00-08-78-00-7 63 00-08-78-00-7 MAC address MAC address	s IP address TD-E2 192.168.168.64 TE-59 192.168.168.60 TE-63 192.168.168.63 192.168.168.63 s IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	I DHCP DI	Reboot Reboot Reboot Reboot	Detail Detail Detail		
Modil A Laur Displ Port# 0 0 0 0 0 Sour Port# 0 0 0 0 0 0 0 0 0 0 0 0 0	ý any available setti uutomatic Man hich discoveny lay (4 RX) ¥ Name RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- RX-00-08-78-00-7E- (2 TX) ¥ Name DVD-1 DVD-1 DVD-2	MAC address E2 00-08-78-00-7 59 00-08-78-00-7 55 00-08-78-00-7 63 00-08-78-00-7 MAC address MAC address	IP address TD-E2 192.168.168.64 TE-50 192.168.168.65 TE-56 192.168.168.63 TE-66 192.168.168.63 S IP address TD-D9 192.168.168.62	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 MASK 255 255 255 0	♥ ♥ DHCP DI	Reboot Reboot Reboot Reboot	Detail Detail Detail Detail		

Figure 53: Products Screen – Set-up Tab

		Controller (500	811)						Lo
Prod	ucts	Settings	Softv	vare Update	Help				
		PRODUC	T :)0752/753/754/	755/756) Mu	ıxlab Matrix	Virtual			
s	et-up	Matrix	Video Wall	R5-232	IR	Fi	mware		
• Ai		O Manual	click Save to apply	your changes					
Modify and Laune Displa	y any availa utomatic ch discovery ay (4 RX)	O Manual			MASY				
Modify and Laune Displa	y any availa utomatic ch discovery	O Manual	Click Save to apply MAC address 00-08-78-00-7D-E2	your changes IP address 192.168.168.64	MASK 255.255.0	DHCP DIF		Detail	
Modify au Laune Displa Port#	y any availa utomatic ch discovery ay (4 RX) Name	O Manual	MAC address	IP address		•	Reboot	Detail	
Modify and Laune Displa Port# 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	IP address 192.168.168.64	255.255.255.0	•	Reboot Reboot	Detail	
Modify An Laune Displa Port# 0 0	y any availa utomatic ch discovery ay (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	255.255.255.0 255.255.255.0	 ✓ ✓ 	Reboot Reboot		
Modify and And Laune Displa Port# 0 0 0 0 0	y any availa utomatic ch 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		Reboot Reboot Reboot	Detail Detail	
Modify and And Laune Displa Port# 0 0 0 Source	any availa utomatic ch 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		Reboot Reboot Reboot	Detail Detail	
Modify and And Laune Displa Port# 0 0 0 Source	y any availa utomatic ch discovery ay (4 RX) Name RX-1 RX-2 RX-3 RX-4 RX-4 et (2 TX)	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 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	2 2 2	Reboot Reboot Reboot	Detail Detail	
Modify All All All All All All All Al	y any availa nomatic ch discovery ay (4 RX) Name RX-1 RX-2 RX-3 RX-4 ee (2 TX) Name	O Manual	MAC address 00-08-78-00-7D-52 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 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		Reboot Reboot Reboot	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).

	_	_								Languag	e: Englis
		k Controller (50									
Proc	ducts	Setting	s Softv	vare Update	Help						
						Minter					
setu	ір і : на	mi Over IP (s	500752/753/754/	/ 55// 50) MIL	IXIAD MATRIX	virtua					
	Set-up	Matrix	Video Wall	RS-232	IR		Firm	ware			
	Automatic nch discove	O Manual									
Lau Disp	nch discove Play (4 RX)		MAC address	IP address	MASK	DHCE					
Lau Disp	nch discove		MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	MASK 255.255.255.0	DHCF		Reboot	Detail	UPDATED	
Lau Disp Port	nch discove blay (4 RX) # Name			192.168.168.64				Reboot	Detail Detail	UPDATED	
Lau Disp Porta	nch discove blay (4 RX) # Name RX-1		00-0B-78-00-7D-E2	192.168.168.64 192.168.168.60	255.255.255.0	۲					
Lau Disp Ports 0	nch discove blay (4 RX) # Name 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	
Lau Porte 0 0 0	# Name 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	
Lau Porte 0 0 0	Manuel 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	
Lau Disp Port 0 0 0 0 0 0 0	# Name 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	
Lau Disp Port 0 0 0 0 0 0 0	Manch discove Ware (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4 rce (2 TX)		00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-55 00-08-78-00-7E-63	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	0 [0 [0 [0 [Reboot Reboot	Detail Detail	UPDATED UPDATED	
Lau Disp Port 0 0 0 0 0 0 0 0 0 0 0	nch discove blay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 rce (2 TX) # Name		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E 00-0B-78-00-7E-63 MAC address	192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63 IP address 192.168.168.62	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 MASK	Ø Ø Ø DHCF	0 [0 [0 [0 [Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Lau Disp Port: 0 0 0 0 0 Sour Port: 0 0	Harring Arrier		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E 00-0B-78-00-7E-63 MAC address 00-0B-78-00-7D-D9	192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63 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	0 [0 [0 [0 [Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Lau Disp Port 0 0 0 0 0 0 Sour Port 0	Harring Arrier		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E 00-0B-78-00-7E-63 MAC address 00-0B-78-00-7D-D9	192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63 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	0 [0 [0 [0 [Reboot Reboot Reboot	Detail 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).

Device Detai	l I		
Custom Name:	RX-1		
Model:	50075	3-RX	
MAC Address:		-78-00-7D-E2	,
IP Address:		68.168.64 (DI	-
FW Version:	2.1.0	0.100.04 (DI	ICF. ON)
Group IP:	239.25	511	
Video Resolution:			
Audio Format:			
Audio Format.	44. I KI	12	
			1
Select a screen in	nage:	Choose file	No file chosen
Upload Image			
Set output Video I	Format:		
Auto-detect Resol	lution:		
Show Screen Tex	t:		
Show Screen ima	ge:		
-			
DVI Compatibility	On:		
Save Cancel			

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		11)				Language:	English •
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdm		-	55/756) Muxla	ıb Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th	plays to the desired the connections.	sources below. One	ce you've selected t	he displays you wa	ant to change, use th	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	'S	7	
RX-1			> Current ac	tive Preset:			
RA-1		- •	No preset s	elected	▼ ID: 1		
			> Save curre	ent connections in follo	owing preset:		
			> Save curre	ent connections as ne	w preset: Create		
			> Delete foli	owing preset:			
Connect					•]	
			© 2016 MuxLab Inc				

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).

Muxlab Network		11)					Languag	e: English • Logou	
Products	Settings	Softwa	are Update	Help					
SELECTED Setup 1 : Hdm		-	55/756) Muxi	ab Matrix Virt	ual				
Set-up	Matrix	Video Wall	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 to make the connections.									
DISPLAY SOURCE		Γ	PRESETS]			
RX-1		DVD-1 V	ancel	Current active Preset: No preset selected		ID: 1			
				Save current connecti		E			
			>	Save current connecti	ons as new preset: Create				
Connect			>	Delete following prese	•				
			© 2016 MuxLab In						

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).

Products	Settings	Softwa	are Update	Help			ſ
rioddola	Cettings						
SELECTED	PRODUCT	:					
Setup 1 : Hdr	ni Over IP (500	752/753/754/7	55/756) Muxla	ab Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your dis		sources below. On	ce you've selected	the displays you w	ant to change, use t	he "Connect" button at the	
bottom to make t	ne connections.					_	
DISPLAY		SOURCE		PRESET	rs		
			CEEC	ctive Preset:			
DISPLAY RX-1		DVD-1 V SUC	CCESS > Current a	ctive Preset:	rs ▼ ID: 0	1	
			No preset t	ctive Preset:	• ID: 0		
			No preset t	ctive Preset: selected	• ID: 0		
			> Save curr	ctive Preset: selected	▼ ID: 0 lowing preset: ▼		
			> Save curr	ctive Preset: selected ent connections in fol	▼ ID: 0 lowing preset: ▼		
			> Save curr	ctive Preset: selected ent connections in fol	ID: 0		
			> Save curr	ctive Preset: selected ent connections in fol ent connections as ne	ID: 0		

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 v 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 additiona	l 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:		
▼]	SUCCES	S

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).

PRESETS							
> Current active Preset:							
[1] Preset 1		▼ ID: 1					
> Save current connections in	following pre	eset: ▼					
[1] Old Preset							
	Create						
> Delete following preset:							
		•					

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:	-		
	•	S	JCCE	SS T
> Save current connections as new preset:				
Create				
> Delete following preset:				
	۲			

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).

	Lab					Language:	Engli LC
Products	Controller (5008		e Update	Help			
) PRODUCT ni Over IP (500	: 752/753/754/755	i/756) Muxla	b Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
NO devices con	npatible with video	wall features found	!				
IO devices con	npatible with video	wall features found	I				

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.

Muxlab Network C		1)				Language: Er
Products	Settings	∣ Softwar	e Update	Help		
SELECTED Setup 1 : Hdmi		•	5/756) Muxi	ab Matrix Virt	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Select a device - Baud rate: - IP header in d - Feedback ON - IP Feedback:	ata:	[Data bits: i	8 Stop bits: 1]	Parity : NONE *		
Save	,					
Data to send in	HEX (ex: A013	B155C5)				
Data feedback	received in HEX	(

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.

Products	Settings	Softwa	re Update	Help		
SELECTED PF						
Setup 1 : Hdmi O		52/753/754/75	55/756) Muxi	ab Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device's F	S-232 connectio	on settings here.				
Select a device:	DVD-1 V					
ociect a device.						 _
- Baud rate:	9600 🔻	[Data bits:	8 Stop bits: 1]	Parity : NONE •		
- IP header in data	: 💌		- , , , ,			
- Feedback ON:						
- IP Feedback:	192.168.168.56					
Save						
Data to send in HE	X (ex: A013B	155C5)				
Data to send in HE	X (ex: A013B	155C5)				
Data to send in HE		155C5)				

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.

	k Controller (5008	11)				Langua	ge: E
Products	Settings	Softwa	ire Update	Help			1
	D PRODUCT Imi Over IP (500		55/756) Muxl	ab Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Select a dev - IR Mode: - IP Feedbac Save		_					
Data to send	l in HEX (ex: A013	B155C5)					
IP code rec	ived in HEX						
IN COUCTEC							
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).

		Softwar	e Update	Help		
	PRODUCT					
		752/753/754/75	5/756) Muxla	b Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your devi	ce's IR settings here	2.				
Select a devic	e: DVD-1 •					
- IR Mode:	Emitter *					1
- IP Feedback	0.0.0.0					
Save						
	-	B155C5)				
Data to send i	n HEX (ex: AU13					
Data to send i	n HEX (ex: AU13					

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).

Products Settings Software Update Help SELECTED PRODUCT : Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Set-up Matrix Video Walt R5-232 IR Firmware Moding register wallback settings and click Save to apply your charges Moding register DISPLAY SOURCE RX-1 (500753-RX) v2.1.0 DVD-1 (500753-TX) v2.1.0	Muxlab Network (Controller (50081	1)					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 Modify any available settings and click Save to apply your changes Choose file [No file chosen Apply DISPLAY SOURCE	Products	Settings	Softwa	re Update	Help			
Modify any available settings and click Save to apply your changes			-	/55/756) Muxla	ab Matrix Vir	tual		
changes Choipignys (RX) Source (TX) Choose file [No file chosen Apply DISPLAY SOURCE	Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
			chang D	jes isplays (RX) se file No file chosen Apply	Source (TX)	to apply your		
KA-1 (SUU753-KX) V2.1.0 UUD-1 (SUU753-TX) V2.1.0 U		0						
	RX-1 (500753-R)	K)	v2.1.0 🗆	DVI	D-1 (500753-TX)	×	/2.1.0 🗆	
				© 2016 MuxLab Inc.				

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 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.

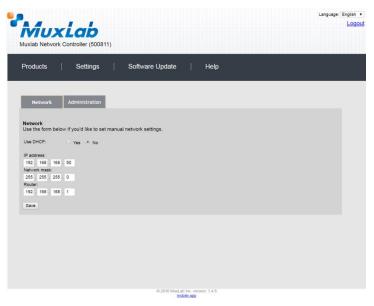


Figure 73: Settings Screen: Network Tab

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

Muxlab Network	Controller (500811)		La	nguage: Engl
Products	Settings	Software Update	Help	
Network	Administration			
User Accounts				
Create a new Us User Name new password: Confirm new passw User Type: Create Update		User to edit:		
	with the selected data file	,		
WARNING ! You Restore	MUST FIRST set the IP	address of this controller us	ng the same as the controller this backup file come from	11
Backup data Backup the data Backup	and save it in a file			
Get Logs Get all logs in a 2	zip file			
Download Logs	Delete Logs			
			Inc. version: 1.4.8 6.000	

Figure 74: Settings Screen: Administration Tab

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.

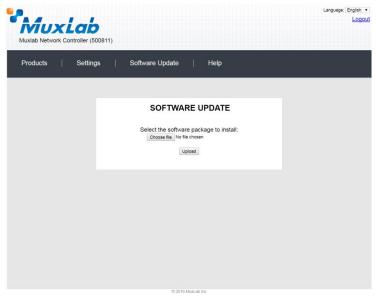


Figure 75: Software Update Screen

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).

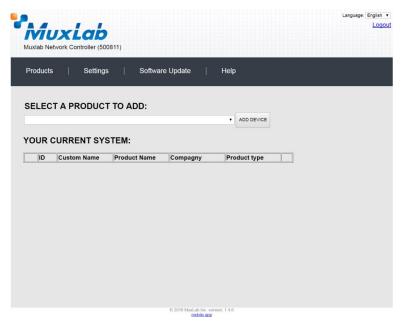


Figure 77: Products Screen – Initial View

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).

Viuxiab Network Controller (500811)	1
Products Settings Software Update	Help
SELECT A PRODUCT TO ADD:	
	ADD DEVICE
8-Button IP PoE Control Panel (500816-IP)	
Hdmi Over IP (500752/753/754/755/756)	
Hdmi Over IP 4K (500758/759) Hdmi Over IP H264 (500757) Hdmi Over IP H264/H265 (500762) Matrix 16x16 (500480)	uct Type

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 78), without a product being added.

Muxiab Network Controller (500811)	Language: English • Logout
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP (5 YOUR CURRE ID Custon	
© 2016 Mari ah Inr. Version, 1.4.6 Inckés age	

Figure 79: Products Screen – Naming a Product

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

	UXLAR etwork Controller (5					Language: English Logo
Products	s Settin	gs ∣ Software	e Update 🛛 🗍	Help		
	CT A PRODUC			ADD DEVICE		
ID X 1	Custom Name Setup 1		Compagny ^{Muxlab}	Product type Matrix Virtual	Select	
<u>- 1</u>		(5007527753/754/755/756)				
			© 2016 MuxLab Inc. mobile a			

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).

	Controller (50081)	Do you wan	68.50 says: t to load previous store	ed device list ?	Cancel	Language: English
Products	Settings	Softwa	re Update	Help		
	PRODUCT : ni Over IP (5007		55/756) Muxla	ıb Matrix Virl	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Set-up Modify any availa	able settings and click	Save to apply you	ur 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).

Mux						Language:	English
Iuxlab Network (Controller (50081 Settings		re Update	Help			
Products	Settings	Softwa	re Update	Help			
SELECTED	PRODUCT	:					
Setup 1 : Hdm	i Over IP (500	752/753/754/75	5/756) Muxla	ab Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
	le settings and clic	k Save to apply you	r changes				
,							
			© 2016 MuxLab In mobile				

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).

	iuxL										L
	ib Network Contr	Settings		vare Update	Help						
	ECTED PR										
Setu	p 1 : Hdmi Ov	er IP (50	0752/753/754/	755/756) Mu	ıxlab Matrix	Virtual	I				
	Set-up	Matrix	Video Wall	RS-232	IR		Firm	ware			
• 4	fy any available se	ttings and anual	click Save to apply	your changes							
Modi A Laur Disp	rý any avallable se Automatic M nch discovery Iay (4 RX)				MASY	DUCD					
Modi A Laur Disp	rý any available se Automatic M nch discovery Iay (4 RX) # Name	anual	Click Save to apply MAC address 00-08-78-00-7D-E2	IP address	MASK 255.255.255.0	DHCP		Reboot	Detail		
Modi Laur Disp Porta	fý any available se Automatic M Inch discovery Iay (4 RX) # Name RX-00-08-78-00-7	anual D-E2	MAC address	IP address 192.168.168.64		۲		Reboot	Detail		
Modi Laur Disp Porta 0	rý any available se Automatic M nch discovery Iay (4 RX) # Name	anual D-E2 E-59	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0			Reboot Reboot Reboot	Detail		
Modi A Laur Disp Porta 0 0	fý any available se Automatic M Inch discovery Iay (4 RX) # Name RX-00-0B-78-00-7 RX-00-0B-78-00-7	anual D-E2 E-59 E-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	✓✓		Reboot			
Modi Laur Disp Porta 0 0 0 0	fý any available se Automatic M Inch discovery Iay (4 RX) # Name RX-00-0B-78-00-7 RX-00-0B-78-00-7 RX-00-0B-78-00-7	anual D-E2 E-59 E-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		
Modi A Lau Disp Porti 0 0 0 0 Sour	fý any available se kutomatic M hch discovery lay (4 RX) # Name RX-00-08-78-00-7 RX-00-08-78-00-7 RX-00-08-78-00-7 RX-00-08-78-00-7 RX-00-08-78-00-7	anual D-E2 E-59 E-5E	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 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	8 8 8		Reboot Reboot	Detail Detail		
Modi A Lau Disp Porti 0 0 0 0 Sour	fý any available se kutomatic M Iay (4 RX) # Name RX-00-0B-78-00-7 RX-00-0B-78-00-7 RX-00-0B-78-00-7	anual D-E2 E-59 E-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 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0	* *		Reboot Reboot	Detail Detail		
Modi A Lau Disp Porta 0 0 0 0 Sour Porta	fy any available se Automatic M Inch discovery lay (4 RX) # Name RX-00-0B-78-00-7 RX-00-0B-78-00-7 RX-00-0B-78-00-7 RX-00-0B-78-00-7 RX-00-0B-78-00-7 RX-00-0B-78-00-7 RX-00-0B-78-00-7 RX-00-0B-78-00-7 RX-00-0B-78-00-7 # Name	anual D-E2 E-59 E-5E	MAC address 00-08-78-00-7D-52 00-08-78-00-7E-50 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	I DHCP	0 (0 (0 (Reboot Reboot	Detail Detail Detail		

Figure 83: Products Screen – Set-up Tab

	and the second second second	Controller (50									Lo
Produ	ucts	Settings	s ∣ Softv	vare Update	Help						
		PRODUC ni Over IP (5	: T : 00752/753/754/	755/756) Mu	ıxlab Matrix	Virtual					
s	iet-up	Matrix	Video Wall	RS-232	IR		Firmy	ware			
• Al		O Manual	click Save to apply	your changes							
Modify auno Launo Displa	y any availa utomatic	O Manual	click Save to apply	your changes IP address	MASK	DHCP	DIP				
Modify auno Launo Displa	y any availa utomatic ch discovery ay (4 RX)	O Manual			MASK 255.255.255.0			Reboot	Detail		
Modify au Laune Displa Port#	y any availa utomatic ch discovery ay (4 RX) Name	O Manual	MAC address	IP address				Reboot	Detail Detail		
Modify Au Laund Displa Port# 0	y any availa utomatic ch discovery ay (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	•					
Modify autority Launo 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	•		Reboot	Detail		
Modify Au Laune Displa Port# 0 0 0 0	y any availa utomatic ch 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	* *		Reboot Reboot	Detail Detail		
Modify Au Laund Displa Port# 0 0 0 Source	y any availa utomatic ch discovery ay (4 RX) Name RX-1 RX-2 RX-3 RX-4 RX-4 et (2 TX)	O Manual	MAC address 00-08-78-00-7E-52 00-08-78-00-7E-50 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	5 5 5 5		Reboot Reboot	Detail Detail		
Modify Au Laund Displa Port# 0 0 0 Source	y any availa utomatic ch discovery ay (4 RX) Name RX-1 RX-2 RX-3 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 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0	I DHCP I		Reboot Reboot	Detail Detail Detail		
Modify AL Laune Displa Port# 0 0 0 0 Source Port#	y any availa utomatic ch discovery ay (4 RX) Name RX-1 RX-2 RX-3 RX-4 et (2 TX) Name	O Manual	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 IP2.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	♥ ♥ ♥ DHCP I		Reboot Reboot	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).

	-									Languag	ie: Englis Lo
		k Controller (50									
Proc	ducts	Setting	s Softv	vare Update	Help						
			_								
		D PRODUC mi Over IP (5	CT: 500752/753/754/	755/756) Mu	ıxlab Matrix	Virtua	ı				
				,,,							
	Set-up	Matrix	Video Wall	R5-232	IR		Firm	ware			
	Jec-up	macris	Hideo Hua	10 202	in the second se			in a c			
	Automatic Inch discove	O Manual									
Lau Disp	inch discove blay (4 RX)										
Lau Disp Port	inch discove blay (4 RX) t# Name		MAC address	IP address	MASK	DHCF		Dahaat	Detail		
Lau Disp Port	inch discove blay (4 RX) t# Name RX-1		00-0B-78-00-7D-E2	192.168.168.64	255.255.255.0	۲		Reboot	Detail		
Lau Disp Port 0	nch discove blay (4 RX) # Name RX-1 RX-2		00-0B-78-00-7D-E2 00-0B-78-00-7E-59	192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0	 ✓ 		Reboot	Detail	UPDATED	
Lau Disp Port	inch discove blay (4 RX) t# Name RX-1		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	* *		Reboot Reboot	Detail Detail	UPDATED UPDATED	
Lau Disp Port 0 0	when the discoverse of the dis		00-0B-78-00-7D-E2 00-0B-78-00-7E-59	192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	 ✓ 		Reboot	Detail	UPDATED	
Lau Port 0 0 0	INCH discove INCURPTION INCU		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	
Lau Port 0 0 0	when the discoverse of the dis		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	
Lau Disp Port 0 0 0 0 0 Sour	Inch discove blay (4 RX) IIII Name RX-1 RX-2 RX-3 RX-4 rce (2 TX) IIIII Name		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E 00-0B-78-00-7E-63 MAC 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 MASK	* *		Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Lau Disp Port 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	inch discove blay (4 RX) ## Name RX-1 RX-2 RX-3 RX-4 rce (2 TX) ## Name DVD-1		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-55 00-0B-78-00-7E-63 00-0B-78-00-7E-63	192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63 IP2.468.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Lau Disp Port 0 0 0 0 0 Sour	Inch discove blay (4 RX) IIII Name RX-1 RX-2 RX-3 RX-4 rce (2 TX) IIIII Name		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E 00-0B-78-00-7E-63 MAC address	192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63 IP2.468.168.63	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 MASK	Ø Ø Ø DHCF		Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Lau Disp Port 0 0 0 0 0 Sour Port 0 0	Harmonich discover Harmonic (A RX) ## Name RX-1 RX-2 RX-3 RX-4 RX-4 Harmonic (A RX) RX-4 DVD-1 DVD-2 DVD-2		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-55 00-0B-78-00-7E-63 00-0B-78-00-7E-63	192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63 IP2.468.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Lau Disp Port 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Harmonich discover Harmonic (A RX) ## Name RX-1 RX-2 RX-3 RX-4 RX-4 Harmonic (A RX) RX-4 DVD-1 DVD-2 DVD-2		00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-55 00-0B-78-00-7E-63 00-0B-78-00-7E-63	192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63 IP2.468.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK 255.255.255.0	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	

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 Detail 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 image: Choose file No file chosen Upload Image Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image: D// Commatibility On:		
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 image: Choose file No file chosen Upload Image Set output Video Format: Show Screen Text: Show Screen image: -	Device Detai	
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 image: Choose file No file chosen Upload Image Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image: -		
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 image: Choose file No file chosen Upload Image Set output Video Format: v Auto-detect Resolution: v Show Screen Text: v Show Screen image: v		
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 image: Choose file No file chosen Upload Image Set output Video Format: ♥ Auto-detect Resolution: ♥ Show Screen Text: ♥ Show Screen image: ♥ -		500754-RX
FW Version: 2.1.0 Group IP: 239.255.1.1 Video Resolution: 720P 60Hz Audio Format: 44.1 khz Select a screen image: Choose file No file chosen Upload Image Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image: -	MAC Address:	00-0B-78-00-7D-E2
Group IP: 239.255.1.1 Video Resolution: 720P 60Hz Audio Format: 44.1 khz Select a screen image: Choose file No file chosen Upload Image Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image: -	IP Address:	192.168.168.64 (DHCP: ON)
Video Resolution: 720P 60Hz Audio Format: 44.1 khz Select a screen image: Choose file No file chosen Upload Image Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image:	FW Version:	2.1.0
Audio Format: 44.1 khz Select a screen image: Choose file No file chosen Upload Image Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image: -		
Select a screen image: Choose file No file chosen Upload Image Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image: -	Video Resolution:	720P 60Hz
Upload Image Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image:	Audio Format:	44.1 khz
Upload Image Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image:		
Set output Video Format: Auto-detect Resolution: Show Screen Text: Show Screen image:	Select a screen in	age: Choose file No file chosen
Auto-detect Resolution: Show Screen Text: Show Screen image:	Upload Image	
Auto-detect Resolution: Show Screen Text: Show Screen Image:		
Show Screen Text: Show Screen Image:	Set output Video F	ormat:
Show Screen image:	Auto-detect Resol	ution:
-	Show Screen Text	
-	Show Screen image	je: 🖌
DV/L Compatibility Op:	-	
	DVI Compatibility	Dn:
Save Cancel	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).

Muxlab Network		11)				Language:	English •
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdm		-	55/756) Muxla	ıb Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th	plays to the desired the connections.	sources below. One	ce you've selected t	he displays you wa	ant to change, use th	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	'S	7	
RX-1			> Current ac	tive Preset:			
RA-1		- •	No preset s	elected	▼ ID: 1		
			> Save curre	ent connections in follo	owing preset:		
			> Save curre	ent connections as ne	w preset: Create		
			> Delete foli	owing preset:			
Connect					•]	
			© 2016 MuxLab Inc				

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).

Muxiab Network	Controller (5008	11)					Languag	e: English Logo
Products	Settings		are Update	Help				
	PRODUCT ni Over IP (500	-	55/756) Muxl	ab Matrix Virt	ual			
Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
Connect your disposition to make the		sources below. On	ce you've selected	the displays you wa	ant to change, use	the "Conne	ect" button at the	
DISPLAY		SOURCE	Γ	F	PRESETS]	
RX-1		DVD-1 V	ancel	Current active Preset: No preset selected		ID: 1		
				Save current connecti		E		
			>	Save current connecti	ons as new preset: Create			
			>	Delete following prese	t:			
Connect							-	
			© 2016 MuxLab In	ic version: 1.4.8				

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).

	Controller (5008	11)					
Products	Settings	Softwa	ire Update	Help			
	PRODUCT ni Over IP (500	-	55/756) Muxla	ab Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your dispottom to make the DISPLAY		sources below. On	ce you've selected t	the displays you wa		he "Connect" button at the	
RX-1		DVD-1 V SUC	CECC	tive Preset:	▼ ID: 0		
RX-1		DVD-1 ▼ SUC	No preset s				
RX-1		DVD-1 V SUC	> Save curr	elected	owing preset:		
RX-1		DVD-1 V SUC	> Save cum	elected	w preset:		
		DVD-1 ¥ SUC	> Save cum	elected ant connections in foll ant connections as ne	wing preset: v v preset: Create		

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 v ID: 0
 > Save current connections in following preset: > Save current connections as new preset:
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 V ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
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 additiona	l 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:		
τ	SUCCES	s

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).

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 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	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::		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	
2x2 3x3 4x4 Cust	Drag n drop a video wall template om Size	
	➡ Video Wall Set-Up : Step #2	
	✤ 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 - V-Wall Selected: Save App Save as: new Configuration	bly	ID::		Drag in drop here a video wail template or Select a previous configuration from the "Saved Configuration" list	
Create			Select all		
				Drag n drop a video wall template	
2x2 3x3	4x4	Cust	om 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 din	nension	×
Unit of measure:	inch •	
Screen diagonal length:	diagonal 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-u	р				Settings
Saved V-Wall - V-Wall Selected: Save Appl Save as: new Configuration Create Detete		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).

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	
2x2 3x3 4x4 Cus	- Drag n drop a video wall template om Size	
	- Select and place Displays	
RX-1 RX-2	RX-3	

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).

video 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
save as: new Configuration Create	RX-1 Sh H:0,V0 Sc H:0,V0	RX-4 Sh H:0\V0 Sc H:0\V0
s	elect all 📄	
2x2 3x3 4x4 Custom	Size	
	- Select and place Displays	

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).

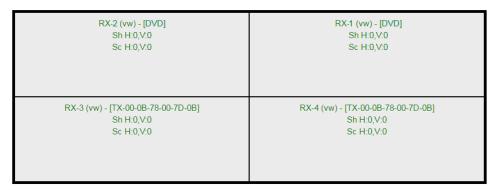


Figure 105: Video Wall Tab – Fully Source Mapped Video Wall

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 v	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.

	Controller (50081	11)				
Products	Settings	Softwar	e Update 🛛	Help		
	D PRODUCT mi Over IP (500		5/756) Muxla	b Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your dev Select a devie	rice's RS-232 connec	tion settings here.				
		[Data bits: 8	Stop bits: 1] F	Parity : NONE •		
- Baud rate: - IP header in - Feedback C	N: ⊻					
- IP header in	ndata: ⊗ DN: ⊗	_				
- IP header in - Feedback C - IP Feedback Save	ndata: ⊗ DN: ⊗	B155C5)				

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.

Setup 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. IR Firmware IR Firmware Setect a device: DVD-1 = IR Firmware IR Firmware - Baud rate:	S-232 IR Firmware	Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup Matrix Video Wall R5-232 IR Firmware Update your device's RS-232 connection settings here. Select a device: DVD-1 * IVD-1 * - Baud rate: 500 * [Data bits: 8] Stop bits: 1] Parity : NONE * IVD-1 *	Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup Matrix Video Walt RS-232 IR Firmware Update your device's RS-232 connection settings here. IR Firmware IR Firmware Select a device: DVD-1 • Image: Select a device * Image: Select a device *	Products	Settings	Softwa	are Update	Help		
Update your device's RS-232 connection settings here. Select a device: DVD-1 Baud rate: 9000 [Data bits: 8 Stop bits: 1] Parity : NONE * - IP header in data:	S-232 IR Firmware	Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Set-up Matrix Video Walt RS-232 IR Firmware Update your device's RS-232 connection settings here. Select a device: DVD-1 • Image: Select a device is Select a device is settings here. Select a device is Select a device is settings here. Select a device is Select a device is Select a device is settings here. Image: Select a device is Select a device is settings here. Select a device is Select a device is settings here. Image: Select a device is settings here. Select a device is Select a device is settings here. Image: Select a device is settings here.<	Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Set-up Matrix Video Walt RS-232 IR Firmware Update your device's RS-232 connection settings here. Setect a device: DVD-1 ▼ Setect a device: DVD-1 ▼ Image: Setect a device in data: - Baud rate: Setect a device in data: [Data bits: 8 Stop bits: 1] Parity : NONE ▼ - IP header in data: - IP feedback: 112:168:168:56							
Set-up Matrix Video Wall R5-232 IR Firmware Update your device's RS-232 connection settings here. Select a device's RS-232 connection settings here. Select a device's RS-232 connection settings here. Select a device: DVD-1 • • - Baud rate: \$600 • [Data bits: 8 Stop bits: 1] Parity : NONE • - IP header in data: \$1	S-232 IR Firmware	Set-up Matrix Video Wall RS-232 IR Firmware Update your device's RS-232 connection settings here. Select a device's DVD-I * -Baud rate: DVD-I * -Baud rate: \$\$500 * [Data bits: 8 Stop bits: 1] Parity : NONE * -IP header in data: #	Set-up Matrix Video Wall RS-232 IR Firmware Update your device's RS-232 connection settings here. Set-up IR Firmware Select a device' DVD-1 ▼ - Baud rate: 500 ▼ [Data bits: 8 Stop bits: 1] Parity : toolv∈ ▼ - Ph eader in data: - PF eedback: 192 168.188.56	SELECTED P	RODUCT	:				
Update your device's RS-232 connection settings here. Select a device: DVD-1 Baud rate: 9000 [Data bits: 8 Stop bits: 1] Parity : NONE * - IP header in data:		Update your device's RS-232 connection settings here. Select a device's DvD-1 = Baud rate: by DvD-1 = ID header in data: Fierback ON:	Update your device's RS-232 connection settings here. Select a device's DVO-I = - Baud rate: B000 * [Data bits: 8 Stop bits: 1] Parity : NONE = - IP header in data: # - Perdback ON: # - IP Feedback: 192.168.188.56	Setup 1 : Hdmi C	Over IP (500	752/753/754/7	55/756) Muxla	b Matrix Vir	tual	
Update your device's RS-232 connection settings here. Select a device: DVD-1 - Baud rate: 9000 - [Data bits: 8 Stop bits: 1] Parity : NONE + - IP header in data: -		Update your device's RS-232 connection settings here. Select a device's DvD-1 = Baud rate: by DvD-1 = ID header in data: Fierback ON:	Update your device's RS-232 connection settings here. Select a device's DVO-I = - Baud rate: B000 * [Data bits: 8 Stop bits: 1] Parity : NONE = - IP header in data: # - Perdback ON: # - IP Feedback: 192.168.188.56							
Update your device's RS-232 connection settings here. Select a device: DVD-1 Baud rate: 9000 Data bits: 8 Stop bits: 1] Parity : NONE - IP header in data:		Update your device's RS-232 connection settings here. Select a device's DV-01 ■ Baud rate: D000 ■ [Data bits: 8 Stop bits: 1] Parity : MONE ■ IP header in data: # Feedback ON: #	Update your device's RS-232 connection settings here. Select a device: DvD-I ■ - Baud rate: 9000 ■ [Data bits: 8 Stop bits: 1] Parity : NONE ■ - IP header in data: 2 - Feedback ON: 2 - IP Feedback: 192 (68.188.56					ID	C	
Select a device: DV0-1 ■ Baud rate: 900 ■ [Data bits: 8 Stop bits: 1] Parity : NONE ■ IP header in data:	p bits: 1] Parity : INONE *	Select a device: DV0-1 * Baud rate: \$500 * [Data bits: 8 Stop bits: 1] Parity : NONE * P header in data: # Feedback ON: #	Select a device: DVD-1 ▼ - Baud rate: 600 ▼ [Data bits: 8 Stop bits: 1] Parity : bone ▼ - P header in data: ✓ - Peedback ON: ✓ - IP Feedback: 192 168.188.56	Set-up	Matrix	Video Wall	RS-232		rinnware	
- Baud rate: 900 ▼ [Data bits: 8 Stop bits: 1] Parity : NONE ▼ - IP header in data: ∞	pp bits: 1] Parity : NONE *	- Baud rate: 5500 ▼ [Data bits: 8 Stop bits: 1] Parity : MONE M - IP header in data: ∞ - Feedback ON: ∞	- Baud rate: 1900 ▼ [Data bits: 8 Stop bits: 1] Parity : NONE ▼ - IP header indat: 2 - Feedback ON: 2 - IP Feedback: 192 (68.188.56				RS-232	IK	rimware	
- IP header in data: 🗹	pp bits: 1] Parity : NONE V	- IP header in data: ⊗ - Feedback ON: ⊗	- IP header in data: - Feedback ON: - IP Feedback: 192 168 168 56				RS-232	IK	rimware	
- IP header in data:	op bits: 1] Parity : NONE •	- IP header in data: ⊗ - Feedback ON: ⊗	- IP header in data: - Feedback ON: - IP Feedback: 192 168 168 56	Update your device's	RS-232 connec		RS-232	IK	Firmware	
		- Feedback ON:	- Feedback ON: - - IP Feedback: 192 168 168 56	Update your device's Select a device:	RS-232 connec		RS-232	IK	Firmware	
			- IP Feedback: 192.168.168.56	Update your device's Select a device: - Baud rate:	RS-232 connec DVD-1 ▼ 9600 ▼	tion settings here.			Firmware	
		- IP Feedback: 192.168.168.56		Update your device's Select a device: - Baud rate: - IP header in dat	RS-232 connec DVD-1 • 9600 • ta: 🗹	tion settings here.			Firmware	
- IP Feedback: 192.168.168.56			Save	Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON:	RS-232 connec DVD-1 • 9600 • ta: •	tion settings here.			riimwaie	
2 ma		Save		Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON:	RS-232 connec DVD-1 • 9600 • ta: •	tion settings here.			riimware	
				Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback:	RS-232 connec DVD-1 • 9600 • ta: •	tion settings here.			riimware	
Save				Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback:	RS-232 connec DVD-1 • 9600 • ta: •	tion settings here.			riimware	
				Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback:	RS-232 connec DVD-1 • 9600 • ta: •	tion settings here.			rimware	
				Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback:	RS-232 connec DVD-1 • 9600 • ta: •	tion settings here.			riimwate	
		Data to send in HEX (ex: 4013815505)	Data to send in HEX (ex: A013B155C5)	Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback: Save	RS-232 connec DVD-1 ▼ 9600 ▼ ta: 192.168.168.	tion settings here. [Data bits			rimware	
Data to send in HEX (ex: A013B155C5)		Data to send in HEX (ex: A013B155C5)	Data to send in HEX (ex: A013B155C5)	Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback: Save	RS-232 connec DVD-1 ▼ 9600 ▼ ta: 192.168.168.	tion settings here. [Data bits			Pirmware	

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.

Muxlab Network Co		11)				Langua	ge: En
Products	Settings	Softwa	re Update	Help			
SELECTED P Setup 1 : Hdmi (55/756) Muxl	ab Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Select a device:	- •						
Select a device: - IR Mode: - IP Feedback: Save	· •						
- IR Mode: - IP Feedback:	•	B155C5)					
- IR Mode: - IP Feedback: Save	•	B155C5)					
- IR Mode: - IP Feedback: Save Data to send in H	• HEX (ex: A013	B155C5)					

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).

	Settings	Softwa	re Update	Help		
SELECTED I	PRODUCT	:				
Setup 1 : Hdmi	Over IP (5007	752/753/754/75	5/756) Muxla	b Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device	's IR settings here					
Select a device:	DVD-1 V					
- IR Mode:	Emitter 🔻					
- IP Feedback:	0.0.0.0					
Save						 1
Save	HEX (ex: A013	B155C5)				
	HEX (ex: A013	B155C5)				

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).

Products	Settings	Softwar	e Update	Help			
SELECTED			55/750) Manua				
Setup 1 : Hdmi	Over IP (500	11521153115411	55/756) Muxia	id Matrix Virt	uai		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
				Source (TX)			
DISPLAY			SO	JRCE			
RX-1 (500754-RX)		v2.1.0	DVD	I-1 (500754-TX)		v2.1.0	

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 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.

roducts Settings Software Update Help Network Administration Intervank Settings. Jacobie DeCP:	Language: English
Intwork See the form below if you'd like to set manual network settings. Jac DHCP: Ves • No Padress: 122 168 168 50	
ise the form below if you'd like to set manual network settings. Jse DHCP:Yes ● No Padress: 192 168 168 50	
Padress: 192 168 168 50	
192 . 168 . 168 . 50	
Network mask:	
255 . 255 . 0	
Router:	
192 . 168 . 168 . 1	
Save	
© 2016 MuxLab Inc. version; 1.4.8. msbite app	

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).

Products Settings Software Update Help Network Administration User Accounts Settings Software Update User Accounts Software Update Software Update User Accounts Software Update Software Update User Account Or select a User to edit Image: Software Update Software Update Var Hame Software Update Software Software Update Var Hame Software Update Software Software Contes Update Software Software Restore the unit With the selected data file Software Software Software Software Man Software Man Software Man Software Update Software Backup deads Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man Software Man <td< th=""><th>Muxlab Network</th><th>Controller (500811)</th><th></th><th></th><th>Langu</th><th>age: English</th></td<>	Muxlab Network	Controller (500811)			Langu	age: English
User Accounts Create a new User Account Or select a User to edit: Tree password: Create a new User Account Or select a User to edit: Tree password: Create Update Dewes Restore data Resto	Products	Settings	Software Update	Help		
Create a new User Account Or select a User to edit: • User Name • Derifinm new password. • Confirm new password. • User Type: • Create & Update Deleme Restore data Restore the unit with the selected data file Specify file: Create is 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 data Backup data Backup data Backup file data and save it in a file Backup file data Backup ID edita B	Network	Administration				
User Kame rev password: Continn wer password: Continned Logs Develop late Develop late Continned Logs Develop Logs	User Accounts					
Create Update Deverse Restore data Restore the unit with the selected data file Specify file: Choose the 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 and save it in a file Backup Get Logs Get Logs Develoa Logs	User Name new password: Confirm new passw	_				
Restore the unit with the selected data file Specify file: Choose the I/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		Delete				
Backup the data and save it in a file Eactup Get Logs Get all logs in a 2p file Download Logs Delete	Restore the unit Specify file: Chi WARNING ! You	ose file No file chosen		using the same as the cor	troller this backup file come from !!!	
Get all logs in a zip file Download Logs Delete Logs	Backup the data	and save it in a file				
		zip file				
	Download Logs	Delete Logs				

Figure 113: Settings Screen: Administration Tab

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.

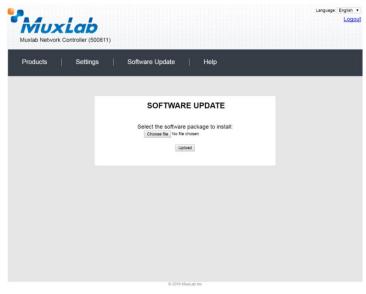


Figure 114: Software Update Screen

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).

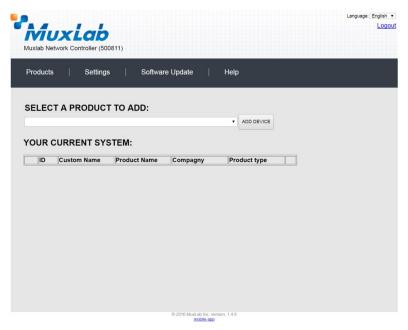


Figure 116: Products Screen – Initial View

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).

CT TO ADD:		ADD DEVICE		
		ADD DEVICE		
rol Panel (500816-I				
		uct Type		
	1758/759) 500757) 265 (500762))	1758/759) 500757) 265 (500762)	1758/759) uct Type 100757) 265 (500762)	1758/759) uct Type 2000 100757) 265 (500762)

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 117), without a product being added.

Reversion Reverse Controller (500811)	Language: English 🔻 Logout
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP (500752/753/754/755/756)	
© 2016 Mart ab line version: 1.4.6 mobile app	

Figure 118: Products Screen – Naming a Product

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

MuxLak Muxlab Network Controller (5					Language: <u>English</u>
Products Settin	gs ∣ Software	e Update	Help		
SELECT A PRODUC			ADD DEVICE		
ID Custom Name X 1 Setup 1	Product Name Hdml Over IP (500752/753/754/755/756)	Compagny	Product type Matrix Virtual	Select	
	Hdml Over IP	Mundah		Select	

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).

	Controller (50081)	Do you wan	68.50 says: t to load previous store	ed device list ?	Cancel	Language: English
Products	Settings	Softwa	re Update	Help		
	PRODUCT : ni Over IP (5007		55/756) Muxla	ıb Matrix Virl	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Set-up Modify any availa	able settings and click	Save to apply you	ur 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).

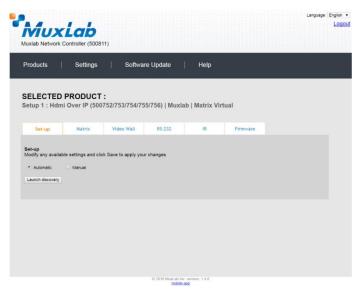


Figure 121: Products Screen – Set-up Tab

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).

	_									-	anguage:	
		Lab										Log
		Controller (5008	(11)									
		,										
Produ	icts	Settings	Soft	vare Update	Help							
SELE	ECTED	PRODUCT	·:									
Setup	1 : Hdm	i Over IP (500	-)752/753/754/	755/756) Mu	xlab Matrix	Virtual						
/ u p												
Se	et-up	Matrix	Video Wall	RS-232	IR		Firm	nware				
Set-up		le cettings and ali	ok Save to apply	your changes								
Modify		ole settings and cli	ck Save to apply ;	your changes								
Modify Aut	any availab	O Manual	ck Save to apply	your changes								
Modify Aut Launc	any availab tomatic :h discovery	O Manual	ck Save to apply	your changes								
Modify • Aut Launc Displa	any availab tomatic th discovery y (1 RX)	Manual			MASK							
Modify • Aut Launc Displat Port#	any availab tomatic th discovery y (1 RX) Name	Manual	1AC address	IP address	MASK 255 255 0	DHCP		Reboot	Detail			
Modify • Aut Launc Displa	any availab tomatic th discovery y (1 RX)	Manual		IP address	MASK 255 255 255 0		DIP	Reboot	Detail			
Modify autorial Launorial Displat Port# 0	any availab tomatic th discovery y (1 RX) Name TX1	Manual	1AC address	IP address				Reboot	Detail			
Modify autorial Launorial Displat Port# 0	any availab tomatic th discovery y (1 RX) Name	Manual	1AC address	IP address				Reboot	Detail			
Modify autorial Launorial Displat Port# 0	any availab tomatic th discovery y (1 RX) Name TX1 e (1 TX)	Manual	1AC address	IP address				Reboot	Detail			
Modify Aut Launc Displa Port# 0 Source	any availab tomatic th discovery y (1 RX) Name TX1 e (1 TX)	Manual	1AC address 00-08-78-00-7D-2A	IP address 192.168.168.72	255.255.255.0			Reboot	Detail			
Modify Aut Launc Displa Port# 0 Source Port#	any availab tomatic th discovery y (1 RX) Name TX1 e (1 TX) Name	Manual	IAC address 00-08-78-00-7D-2A IAC address	IP address 192.168.168.72	255.255.255.0 MASK		DIP					

Figure 122: Products Screen – Set-up Tab

									inguage:	Loo
Muxlab Network	Controller (5008	11)								200
Products	Settings	∣ Softv	vare Update	Help						
	D PRODUCT ni Over IP (500		755/756) Mu	xlab Matrix	Virtual					
Set-up	Matrix	Video Wall	RS-232	IR	Firm	nware				
Set-up Modify any availa	able settings and cli	ck Save to apply :	your changes							
	O Manual	ck Save to apply <u>;</u>	your changes							
Modify any availa Automatic	O Manual	ck Save to apply <u>y</u>	your changes							
Modify any availa • Automatic Launch discover	Manual	ck Save to apply <u>y</u> IAC address	your changes IP address	MASK	DHCP DIP					
Modify any availa • Automatic Launch discover Display (1 RX)	Manual Y		IP address	MASK 255.255.255.0		Reboot	Cancel	Detail		
Modify any availa • Automatic Launch discover Display (1 RX) Port# Name	Manual Y	IAC address	IP address			Reboot	Cancel	Detail		
Modify any availa Automatic Launch discover Display (1 RX) Port# Name 0 RX1 Source (1 TX)	Manual Y	IAC address 00-08-78-00-7D-2A	IP address 192.168.168.72	255.255.255.0	2	Reboot	Cancel	Detail		
Modify any availa Automatic Launch discover Display (1 RX) Port# Name 0 RX1	Manual Y	IAC address	IP address			Reboot	Cancel	Detail		
Modify any availa Automatic Launch discover Display (1 RX) Port# Name RX1 Source (1 TX) Port# Name	Manual Y	IAC address 00-08-78-00-7D-2A IAC address	IP address 192.168.168.72	255.255.255.0 MASK				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 Col								Lai	iguage: Enj
Produ		Settings		vare Update	Help					
	ECTED P 1 : Hdmi C		T : 00752/753/754/	755/756) Mi	ıxlab Matrix	Virtual				
Se	et-up	Matrix	Video Wall	R5-232	IR	Fin	mware			
 Aut Launc 	h discovery	settings and d	non care to apply	your onungeo						
• Aut Launc Displa	h discovery y (1 RX)	-			MACK					
 Aut Launc 	h discovery y (1 RX)	-	MAC address 00-08-78-00-7D-2A	IP address 192.168.168.72	MASK 255.255.255.0		Reboot	Detail	UPDATED	
• Aut Launc Displa Port# 1 0 Source	h discovery y (1 RX) Name RX1 e (1 TX)	Manual	MAC address 00-08-78-00-7D-2A	IP address 192.168.168.72	255.255.255.0	2 🗆	Reboot	Detail	UPDATED	
• Aut Launc Displa Port# 1 0	h discovery y (1 RX) Name RX1 e (1 TX)	Manual	MAC address	IP address			Reboot		UPDATED	
Aut Launc Display Port# 0 Source Port#	ih discovery y (1 RX) Name RX1 e (1 TX) Name	Manual	MAC address 00-08-78-00-7D-2A MAC address	IP address 192.168.168.72 IP address	255.255.255.0 MASK		Reboot	Detail	UPDATED	

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	1
Custom Name:	RX1
Model:	500755-RX
MAC Address:	00-0B-78-00-7D-2A
IP Address:	192.168.168.72 (DHCP: ON)
FW Version:	2.0.9
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).

						Language:	English •
Muxlab Network		11)					20900
Products	Settings	Softwa	ire Update	Help			
	PRODUCT hi Over IP (500	-	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	the displays you wa	ant to change, use th	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	'S]	
RXI			> Save cum		•		
Connect]	
			© 2016 MuxLab Inc				

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).

Muxlab Network		1)					Language:	English •
Products	Settings	Softwa	re Update	Help				
SELECTED Setup 1 : Hdm		-	55/756) Muxl	ab Matrix Virtu	Jal			
Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
Connect your disp bottom to make th DISPLAY	plays to the desired and connections.	sources below. One	ce you've selected	the displays you war	nt to change, use t	he "Conne	ect" button at the	
RX1		Audio 1 V Ca	ancel	Current active Preset:				
Connect			2	No preset selected Save current connectio Save current connectio Delete following preset	ns in following preset v ns as new preset: Create	ID: 1		
			© 2016 MuxLab Ir	ic version: 1.4.8				

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).

	Controller (5008	11)				
Products	Settings	Softwa	ire Update	Help		
	PRODUCT hi Over IP (500	: 752/753/754/75	55/756) Muxla	ab Matrix Vi	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Connect your disp bottom to make th		sources below. One	ce you've selected t	the displays you w		he "Connect" button at the
RX1		Audio 1 V SUC	CESS > Current ad		▼ ID: 0	
			> Save curr	ent connections in fo	llowing preset:	
			> Save cum	ent connections as n	ew preset: Create	
				ent connections as n owing preset:	ew preset:	
Connect					ew preset: Create	

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 v ID: 0
 > Save current connections in following preset: > Save current connections as new preset:
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.	
	OK Cancel	
ł		_

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).

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

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	¥	ID:	1	
> Save current connections in following pres	set:			
	•	ีรเ	JCCE	SS
> 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).

Muxlab Network	Controller (5008	11)				Language	Englis
Products	Settings	Software	e Update	Help			
	PRODUCT ni Over IP (500	: 752/753/754/755	5/756) Muxla	ab Matrix Viri	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
NO devices com	upatible with video	wall features found					
NO devices com	patible with video	wall features found	I				

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.

						Language:	Engli:
Muxlab Network C		1)					
Products	0-#	0-#	- 11- 4-4-	l Hala			
Products	Settings	Sontwar	e Update	Help			
SELECTED							
Setup 1 : Hdmi	Over IP (5007	52/753/754/75	5/756) Muxi	ab Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
bec-up	macrix	video watt	K3-232	ik	Tittiware		
Update your device	's RS-232 connect	ion settings here.					
Select a device:	• •						
- Baud rate:		[Data hita: (Chan bite: 4.1	Devite			
- IP header in da		[Data bits: 6	s Stop bits: 1]	Parity : NONE *			
- Feedback ON:							
- IP Feedback:							
Save							
Data to send in	HEX (ex: A013)	B155C5)					
Data feedback	received in HEX	1					
Send							
			© 2016 MuxLab In	c. version: 1.4.8			

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.

MUXLA Auxlab Network Contr		1)				Languag	e: English • Logoi
Products	Settings	Softwa	re 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: Select a device:	Audio 1 ¥	on octango nore.					-
- Baud rate: - IP header in data: - Feedback ON:	9600 ¥	[Data bits:	8 Stop bits: 1]	Parity : NONE *			
- IP Feedback ON: Save	192.168.168.5	6					
Data to send in HE	Y (ov: 00125						
Data to send in HE.							
Send							
Send							

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.

Muxlab Network C		1)				Langu	iage: Englis LO
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdmi			5/756) 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	¥						
Data to send in	HEX (ex: A013	B155C5)					
Send							
IR code receive	d in HEX						
Contine Code							

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).

	Settings	Softwa	re Update	Help		
		0752/753/754/75	5/756) Muxla	b Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your dev	ice's IR settings her	e.				
Select a devic	e: Audio 1 v					
- IR Mode:	Emitter *					
- IP Feedback	c: 0.0.0.0					
Save						
	in HEX (ex: A013	3B155C5)				
Data to send						
Data to send						

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** 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 141).

Muxlab Network (11)					Language: E	inglish ▼ Logout
Products	Settings	Soft	vare Update	Help				
SELECTED Setup 1 : Hdm			755/756) Muxla	ab Matrix Vir	tual			
Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
DISPLAY		cha	Displays (RX) boose file No file chose Apply	Source (TX)	to apply your			
RX1 (500755-RX)		v2.0.9	TX1	(500755-TX)	`	/2.0.9		
			© 2016 MuxLab In					

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 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.

Products Settings Software Update Help Network Administration Network Use the form below if you'd like to set manual network settings. Use DHCP: Yes No IP address: 192. 188. 50	Language: English
Network Use the form below if you'd like to set manual network settings. Use DHCP: Ves • No IP address:	
Use the form below if you'd like to set manual network settings. Use DHCP: Ves • No IP address:	
Use DHCP: Ves • No IP address:	
Network mask:	
255 . 255 . 255 . 0	
Router:	
192 . 168 . 168 . 1	
Save	
© 2016 MusLab Inc. version: 1.4.8	

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).

Network Administration User Account Or select a User to edit:	Muxlab Network Controlle	r (500811)		Language: Englis
User Accounts Create a new User Acount Or select a User to edit: Treate a new User Acount Or select a User to edit: Treate update Device Restore data Restore	Products Se	ettings Software Update	Help	
Create a new User Account Or select a User to edit: • User Hame • previous select and user it in a file • Backup data Backup file data and save it in a file Backup data Backup file data and save it in a file Backup data Backup file data and save it in a file Backup data Backup file Backup file data and save it in a file Backup file data and save it in a file Backup file Backup file Backup file Demine	Network Admin	istration		
User Kame new password: Continn mer password: Continned Logs Deter Logs Deter Logs Deter Logs Continued Logs Continued Logs Deter Logs Continued Log	User Accounts			
Create Update Device Restore data 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 file Eaclup	User Name new password: Confirm new password:		•	
Restore data Restore the unit with the selected data file Specify file: Choose the 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 file data and save it in a file Backup Get Logs Set all logs in a 2p file Download Logs Dewle Logs		·		
Backup the data and save it in a file Backup Get Logs Get all logs in a zip file Download Logs Delete	Restore the unit with the se Specify file: Choose file No WARNING ! You MUST FI	o file chosen	using the same as the controller this backup file	come from !!!
Get all logs in a zip file Download Logs Delete Logs	Backup the data and save i	it in a file		
	Download Logs Delete	Logs		
© 2016 MuxLab Inc. version: 1.4.8				

Figure 143: Settings Screen: Administration Tab

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.

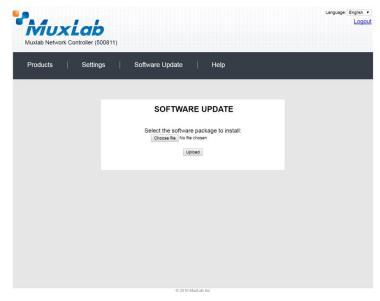


Figure 144: Software Update Screen

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).

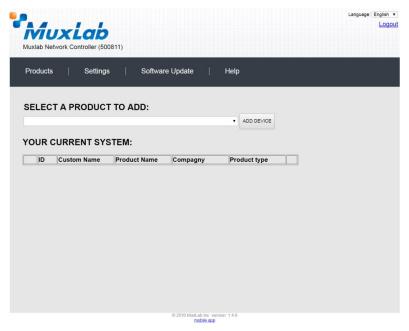


Figure 146: Products Screen – Initial View

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).

8-Button IP PoE Control Panel (500816-IP)	▼ Al	OD DEVICE		
Hdmi Over IP (500752/753/754/755/756)	_	Trees		
Hdmi Over IP 4K (500758/759)	uct	t Type		
Hdmi Over IP H264 (500757) Hdmi Over IP H264/H265 (500762)				
Matrix 16x16 (500480)				

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 147), without a product being added.

Muxiab Network Controller (500811)	Language: English ▼ Logout
Products Settings Software Upo	late Help
SELECT A PR Hdmi Over IP (5007 YOUR CURREI ID Custom Name: Setup 1 OK CANCEL	52/753/754/755/756)
0.20	6 Muduab Inc. version: 1.4.8 mobile app

Figure 148: Products Screen – Naming a Product

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

	UXLOR letwork Controller (5					Language: English <u>Logo</u>
Product	ts Settin	gs ∣ Software	e Update	Help		
	CT A PRODUC			ADD DEVICE		
ID X 1	Custom Name Setup 1	Product Name Hdml Over IP (500752/753/754/755/756)	Compagny Muxlab	Product type Matrix Virtual	Select	
		(500752/753/754/755/756)	Innanan		Celect	
			© 2016 MuxLab Inc. mobile a			

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	Controller (500811	Do you wan	58.50 says: to load previous stor	ed device list ?	Cancel	Language: Englisi
Products	Settings	Softwa	re Update	Help		
	PRODUCT : ni Over IP (5007	52/753/754/75	5/756) Muxla	ab Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Set-up Modify any availa	ble settings and click	Save to apply you	ır changes			
			© 2016 MuxLab In mobile			

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).

Mux						Language:	English
Iuxlab Network (Controller (50081 Settings		re Update	Help			
Products	Settings	Softwa	re Update	Help			
SELECTED	PRODUCT	:					
Setup 1 : Hdm	i Over IP (500	752/753/754/75	5/756) Muxla	ab Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
	le settings and clic	k Save to apply you	r changes				
,							
			© 2016 MuxLab In mobile				

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).

	b Network Control									L
Proc	lucts S	ettings S	oftware Update	Help						
	ECTED PRO	DUCT : r IP (500752/753/7	54/755/756) Mu	ıxlab Matrix	Virtua	I				
	Set-up M	latrix Video W	all RS-232	IR		Firm	ware			
• /		ngs and click Save to a ual	pply your changes							
Modi J Lau Disp	rý any available settil Automatic O Man nch discovery Iay (4 RX)	ual		MASK	DHCP					
Modi J Lau Disp	rý any available settli Automatic O Man nch discovery	ual MAC address	IP address -E2 192.168.168.64	MASK 255.255.255.0	DHCP		Reboot	Detail		
Modi Lau Disp	rý any available settli Automatic Man nch discovery Iay (4 RX) # Name	MAC address E2 00-08-78-00-70	IP address				Reboot	Detail		
Modi Lau Disp Port: 0	fý any available settli Automatic Man nch discovery Iay (4 RX) # Name RX-00-08-78-00-7D-1	MAC address E2 00-08-78-00-70 59 00-08-78-00-76	IP address -E2 192.168.168.64	255.255.255.0				Detail		
Modi Lau Disp Port: 0 0	fý any available settli Automatic Man nch discovery Iay (4 RX) # Name RX-00-08-78-00-7D-1 RX-00-08-78-00-7E-0	MAC address E2 00-05-78-00-70 59 00-08-78-00-70 55 00-08-78-00-76	IP address 192.168.168.64 559 192.168.168.60	255.255.255.0 255.255.255.0	•		Reboot			
Modi Lau Disp Port: 0 0 0 0	fý any available settli Automatic Man nch discovery lay (4 RX) # Name RX-00-0B-78-00-7D-1 RX-00-0B-78-00-7E-3 RX-00-0B-78-00-7E-3	MAC address E2 00-05-78-00-70 59 00-08-78-00-70 55 00-08-78-00-76	IP address D-E2 192.168.168.64 59 192.168.168.60 55E 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	fý any available settli kutomatic Man nich discovery Jay (4 RX) # Name RX-00-08-78-00-7E-4 RX-00-08-78-00-7E-4 RX-00-08-78-00-7E-4	MAC address E2 00-05-78-00-70 59 00-08-78-00-70 55 00-08-78-00-76	IP address D-E2 192.168.168.64 59 192.168.168.60 55E 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	rý any available settii uutomatic Man nch discovary Iay (4 RX) # Name RX-00-08-78-00-7E-1 RX-00-08-78-00-7E-1 RX-00-08-78-00-7E-1 RX-00-08-78-00-7E-1 RX-00-08-78-00-7E-1 RX-00-08-78-00-7E-1	MAC address E2 00-08-78-00-75 59 00-08-78-00-75 50 00-08-78-00-75 53 00-08-78-00-75 MAC address	IP address FE2 192.168.168.64 559 192.168.168.65 656 192.168.168.63 192.168.168.63 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	5 5 5	0 [0 [0 [0]	Reboot Reboot	Detail Detail		
Modil A constraints of the second se	fý any available settil uutomatic Man nch discoveny lay (4 RX) # Name RX-00-08-78-00-7E-1 RX-00-08-78-00-7E-1 RX-00-08-78-00-7E-1 RX-00-08-78-00-7E-1 RX-00-08-78-00-7E-1 CC (2 TX) # Name	MAC address E2 00-08-78-00-70 59 00-08-78-00-70 58 00-08-78-00-76 53 00-08-78-00-76 MAC address 00-08-78-00-70	IP address 122 102.168.168.64 123.168.168.65 122.168.168.63 122.168.168.63 IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	Ø Ø Ø DHCP	• [•] •]	Reboot Reboot	Detail Detail Detail		

Figure 152: Products Screen – Set-up Tab

		Controller (500									Ŀ
Prod	lucts	Settings	s ∣ Softv	vare Update	Help						
		PRODUC i Over IP (5	T : 00752/753/754/	755/756) Mu	ıxlab Matrix	Virtual	I				
	Set-up	Matrix	Video Wall	R5-232	IR		Fim	nware			
• A		Die settings and O Manual	click Save to apply	your changes							
Modif A Laun Displ	lý any availat utomatic		click Save to apply	your changes	MASK	DHCP	DIP				
• A Laun Displ	iy any availat uutomatic hch discovery lay (4 RX)				MASK 255.255.255.0	DHCP	DIP	Reboot	Detail		
Modif A Laun Displ Port#	iý any availat utomatic hch discovery l ay (4 RX) ≇ Name		MAC address	IP address				Reboot	Detail Detail		
Modif A Laun Displ Port# 0	y any availat uutomatic nch discovery lay (4 RX) # Name RX-1		MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0	۲					
Modif A Laun Displ Port# 0 0	y any availat utomatic nch discovery lay (4 RX) # Name RX-1 RX-2		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	255.255.255.0 255.255.255.0			Reboot	Detail		
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 availat utomatic tch discovery lay (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	Detail Detail		
A A Laun Displ Port# 0 0 0 Source	y any availat utomatic tch discovery lay (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	Detail Detail		
A A Laun Displ Port# 0 0 0 Source	y any availat utomatic the discovery ay (4 RX) 4 Name RX-1 RX-2 RX-3 RX-4 Ce (2 TX)		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 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	8 8 8 8		Reboot Reboot	Detail Detail		
Modifier A A Laun Disple Port# 0 0 0 0 0 0 0 Source Port#	ý any availat utomatic lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 Ce (2 TX) # Name		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		

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).

		Controller (50									1
Prod	lucts	Setting	s Softv	vare Update	Help						
		D PRODUC mi Over IP (5	CT: 500752/753/754/	755/756) Mu	ıxlab Matrix	Virtua	al				
	Set-up	Matrix	Video Wall	R5-232	IR		Fin	mware			
• /		O Manual	d click Save to apply	your changes							
Modi A Laur Disp	fý any avai Automatic	O Manual	d click Save to apply MAC address	your changes	MASK	DHC	PDIP				
Modi A Laur Disp	fý any avai Automatic nch discove Iay (4 RX)	O Manual		IP address	MASK 255.255.255.0	DHCF	P DIP	Reboot	Detail	UPDATE	0
Modi Laur Disp Porta	fý any avai Automatic nch discove Iay (4 RX) # Name	O Manual	MAC address	IP address 192.168.168.64					Detail Detail		
Modi A Laur Disp Ports 0	fý any avai Automatic nch discover Iay (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			Reboot			2
Modi A Laur Disp Porta 0 0	fy any avai Automatic Inch discove 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 Reboot	Detail	UPDATED	2
Modi Laur Disp Porta 0 0 0 0	fy any avai Automatic Inch discove 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 Reboot	Detail Detail		2
Modi A Lau Disp Ports 0 0 0 0 Sour	fý any avai Automatic Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 rce (2 TX)	O Manual	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-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 Reboot	Detail Detail		2
Modi A Lau Disp Ports 0 0 0 0 Sour	fý any avai Automatic Inch discove Iay (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 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.468.168.63	255.255.255.0 255.255.255.0 255.255.255.0	\$ \$		Reboot Reboot Reboot	Detail Detail Detail		2
Modi A Lau Disp Porta 0 0 0 0 Sour Porta	fý any avai Automatic Inch discover Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4 RX-4 W Ce (2 TX) # Name	O Manual yy	MAC address 00-08-78-00-7D-52 00-08-78-00-7E-52 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	v v v DHCF	PDIP	Reboot Reboot Reboot	Detail Detail		2

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 de la constant de						
Custom Name:	RX-1						
Model:	00756-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:	720P 60Hz						
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).

Muxlab Network		11)				Language:	English •
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdm			55/756) Muxla	ıb Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th		sources below. One	ce you've selected t	he displays you wa	ant to change, use th	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	S	ן	
RX-1		•	> Current ac No preset s		▼ ID: 1		
			> Save curre	ant connections in follo	owing preset:		
			> Save curre	ent connections as ne	w preset: Create		
			> Delete foli	owing preset:	•		
Connect							
			© 2016 MuxLab Inc				

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).

MUX Iuxlab Network	Controller (50081	11)					Languaş	je. En
Products	Settings	Softwa	re Update	Help				
	PRODUCT ni Over IP (500	: 752/753/754/75	55/756) Muxl	ab Matrix Vir	tual			
Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
Connect your disp bottom to make the DISPLAY		sources below. One	ce you've selected		ant to change, use t	the "Conne	ect" button at the	
RX-1		SDI Cam 1 V Ca	ancel	Current active Preset				
			>	No preset selected Save current connect Save current connect	ions in following preset v			
					Create			
			>	Delete following prese	et: •			
Connect			>	Delete following prese				

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 (5008	11)				Language: _	English Log
Products	Settings	Softwa	re Update	Help			
	PRODUCT ni Over IP (500	: 752/753/754/75	55/756) Muxla	b Matrix Vii	rtual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
bottom to make the			ce you've selected t	he displays you w	vant to change, use t	he "Connect" button at the	
DISPLAY		SOURCE		PRESE	TS		
RX-1		SDI Cam 1 V SUC	CESS > Current ad		▼ ID: 0		
				ent connections in fo			
			> Save curre	ent connections as n	ew preset: Create		
Connect			> Delete foli	owing preset:	¥		

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 v ID: 0
 > Save current connections in following preset: > Save current connections as new preset:
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 V ID: 1
> Save current connections in following preset: ▼
> Save current connections as new preset:
Create SUCCESS
> Delete following preset:

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.	
OK 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:	
T	SUCCES

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).

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

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	ID:	1	
> Save current connections in following prese	t:		
•	S	UCCES	SS
> Save current connections as new preset:			
Create			
> Delete following preset:			
· · · · · · · · · · · · · · · · · · ·	·		

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 (5008	11)				Language	Englis
Products	Settings	Software	e Update	Help			
	PRODUCT ni Over IP (500	: 752/753/754/755	5/756) Muxla	ab Matrix Viri	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
NO devices com	upatible with video	wall features found					
NO devices com	patible with video	wall features found	I				

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.

Muxlab Network C		1)				Language:	Englis Lo
Products	Settings	∣ Softwar	e Update	Help			
SELECTED Setup 1 : Hdmi			5/756) Muxi	ab Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device Select a device: - Baud rate: - IP header in d	• •		8 Stop bits: 1]	Parity : NONE ¥			
- Feedback ON: - IP Feedback: Save	<u>Ø</u>	_					
Data to send in	HEX (ex: A013	B155C5)					
Data feedback	received in HEX	(

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.

Muxiab Network Co			are Update	Help		
				1		
SELECTED P	RODUCT					
Setup 1 : Hdmi (55/756) Muxl	ab Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device's	RS-232 connec	non ootango noro.				
Update your device's Select a device:	SDI Cam 1 V	and settings from.				
Select a device:	SDI Cam 1 🔻		8 Stop hite: 1			 7
	SDI Cam 1 ¥ 9600 ¥		: 8 Stop bits: 1]] Parity : NONE *		
Select a device:	SDI Cam 1 ¥ 9600 ¥		: 8 Stop bits: 1]] Parity : NONE *		
Select a device: - Baud rate: - IP header in dat	SDI Cam 1 ▼ 9600 ▼ ta: ₹	[Data bits	: 8 Stop bits: 1]] Parity : NONE *		
Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback:	SDI Cam 1 ▼ 9600 ▼ ta: ♥	[Data bits	: 8 Stop bits: 1]] Parity : NONE V]
Select a device: - Baud rate: - IP header in dat - Feedback ON:	SDI Cam 1 ▼ 9600 ▼ ta: ♥	[Data bits	: 8 Stop bits: 1]] Parity : NONE ¥		
Select a device: - Baud rate: - IP header in da: - Feedback ON: - IP Feedback: Save	SDI Cam 1 ▼ 9600 ▼ ta: 192.168.168	[Data bits	: 8 Stop bits: 1]] Parity : NONE V		
Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback:	SDI Cam 1 ▼ 9600 ▼ ta: 192.168.168	[Data bits	: 8 Stop bits: 1]] Parity : NONE ¥		
Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback: Save Data to send in F	SDI Cam 1 9600 192.168.168 HEX (ex: A013	[Data bits 56 3B155C5)	: 8 Stop bits: 1]] Parity : NONE *		
Select a device: - Baud rate: - IP header in da: - Feedback ON: - IP Feedback: Save	SDI Cam 1 9600 192.168.168 HEX (ex: A013	[Data bits 56 3B155C5)	: 8 Stop bits: 1]] Parity : NONE ¥		

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.

	rk Controller (500					Language:	Er
Products	Settings	s ∣ Softwa	are Update	Help			
	D PRODUC	T: 00752/753/754/7	55/756) Mux	lab Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Select a dev - IR Mode: - IP Feedbac Save		•					
Data to sen	d in HEX (ex: A0)13B155C5)					
Send							
IR code rec	eived 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).

Muxlab Network		11)				Language:	
Products	Settings	Softwar	re Update	Help			
SELECTED Setup 1 : Hdm		: 752/753/754/75	5/756) Muxl	ab Matrix Virt	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your devic Select a device - IR Mode: - IP Feedback:							
Save Data to send ir	HEX (ex: A013	B155C5)					
Send							
IR code receive	ed in HEX						

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	Controller (5008)	11)					Language:	English • Logout
Products	Settings	Softw	/are Update	Help				
	PRODUCT hi Over IP (500		755/756) Muxla	ab Matrix Virt	ual			
Set-up	Matrix	Video Wall	RS-232	IR	Firmware			
DISPLAY		chan • c Cho	Displays (RX) Doose file No file chose Apply SO	Source (TX) en				
RX1 (500756-RX)	v2.0.8	SDI	Cam 1 (500756-T)	()	v2.0.8		
			© 2016 MaxLab In					

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 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.

WILLOB Muxlab Network Controller (500811)	Language: English
Products Settings Software Update Help	
Network Administration	
Network Use the form below if you'd like to set manual network settings.	
Use DHCP: Yes No	
IP address 192 (186 166 50 Network maak: 255 255 255 0 Route: 192 (186 168 1	
Save	
© 2016 Mad.ab Inc. version: 1.4.8. mobile age	

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).

Products Settings Software Update Help Network Administration User Accounts Software Update • Continue representation • • Outer Name • • Continue representation • • Restore the num with the selected data file • • Specify file: Concesting two files controller using the same as the controller this backup file come from !!! Restore Backup data Backup data Backup data Backup data Backup data Backup data Backup data Backup data Backup data Backup data Backup data • • • • • Backup data • • • • • Backup data • • • • • • Backup data • • • •	MuxLab	Language: English Log
User Accounts		
Testa a new User Account Or select a User to edit:	Network Administration	
User Vares Index Server	User Accounts	
Per pass-indi Continine password: User Type Content with the selected data file Specify file: Conce to 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 the data and save it in a file Backup Control at a and save it in a file Backup Develoats Set all logs in a zip file Deveload Logs Develoags Develoags Develoags Develoags Develoags Develoags Develoags Develoags Develoags Develoage De	Create a new User Account Or select a User to edit:	
Continuew password: Lear Type: Crease Update Delete Restore data 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 file: Backup data Backup file: Delete Logs Delete Logs Delete Logs	User Name	
User Type: Treats Update Devel	new password:	
Create Update Devel Restore the unit with the selected data file Specify file (Croces 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 and save it in a file Backup Get Logs Set al logs in a zip file Deveload Logs		
Restore data Restore the unit with the selected data file Specify file: (Croces file into 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 file Backup Backup file Backup Backup file Develode Logs Detee Logs	User Type: 🔻	
Restore file unit with the selected data file Specify file: Choose tie 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 R	Create Update Delete	
Backup the data and save it in a file Backup Set Logs Get all logs in a zip file Download Logs Deveload Logs Deve		backup file come from !!!
Backup the data and save it in a file Backup Set Logs Get all logs in a zip file Download Logs Deveload Logs Deve		
Get Logs Set all logs in a zip file Download Logs Devels Logs	Backup data Backup the data and save it in a file	
Get al logs in a zip file Downtosd Logs Detetta Logs	Backup	
Get al logs in a zip file Downtosd Logs Detetta Logs		
	Get Logs Get all logs in a zip file	
	Download Logs Delete Logs	

Figure 173: Settings Screen: Administration Tab

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).

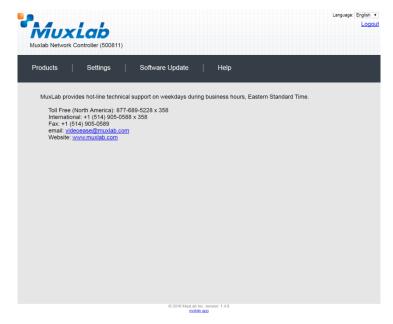


Figure 175: Help Screen

Extender Model 500757

Products Screen

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

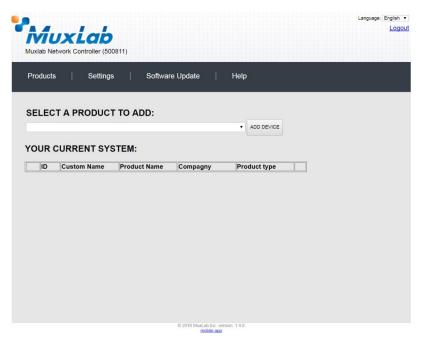


Figure 176: Products Screen – Initial View

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

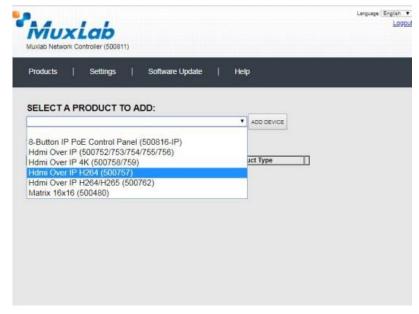


Figure 177: Products Screen – Selecting a Product

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 177), without a product being added.

Muxiab Network Controller (500811)	Language: English ▼ Logout
SELECT A PR Hdmi Over IP H: DOUR CURREI Dour outson Custon Name: Stup 1 OK CANCEL	
mobile app	

Figure 178: Products Screen – Naming a Product

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

	Network Controller (5					
Produ	cts Setting	gs ∣ Softw	are Update	Help		
SELF	ECT A PRODUC					
,	.or Arkoboc	IT TO ADD.		ADD DEVIC	E	
OUF	R CURRENT SY	STEM:				
ID		Product Name	Compagny	Product type		
X 1	Setup 1	Hdmi Over IP H264 (500757)	Muxlab	Matrix Virtual	Select	

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).

Muxiab Network Controller (500811)	192.168.168.50 says: Do you want to load previous stored	device list ?	×	Language: Englis
Products Settings	Software Update	Help		
SELECTED PRODUCT : Setup 1 : Hdmi Over IP H264 (5		'irtual		
Set-up Matrix	RS-232 Firmware			
Set-up Modify any available settings and click Sa	we to apply your changes			
Automatic 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).

Muxlab Network		1)			Language	English Log
Products	Settings	Softwa	re Update	Help		
	PRODUCT : Over IP H264		ıxlab Matrix Vi	irtual		
Set-up	Matrix	RS-232	Firmware			
Automatic Launch discovery	le settings and click	Save to apply you	ir changes			
			© 2016 MuxLab Inc. mobile ap			

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).

	AUX ab Network C										J
Proc	ducts	Setting	s ∣ Soft√	ware Update	Help						
	.ECTED		CT : 264 (500757)	Muxlab Matr	ix Virtual						
	Set-up	Matrix	RS-232	Firmware							
• / Lau	ifý any availab Automatic nch discovery	le settings and O Manual	d click Save to apply	your changes							
Modi J Lau Disp	ify any availab Automatic	-	d click Save to apply MAC address	your changes	MASK	DHCF	DIP				
Modi Lau Disp Porta 0	ify any availab Automatic nch discovery I lay (4 RX)	O Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0	DHCF	DIP	Reboot	Detail		
Modi Lau Disp	ify any availab Automatic nch discovery I lay (4 RX) # Name	O Manual	MAC address	IP address 192.168.168.64				Reboot Reboot	Detail Detail		
Modi Lau Disp Ports 0 0 0	fy any availab Automatic nch discovery lay (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		
Modi Lau Disp Port: 0 0	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 -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	 ✓ ✓ 		Reboot	Detail		
Modi Lau Disp Port: 0 0 0	fy any availab Automatic nch discovery lay (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		
Modi Lau Disp Ports 0 0 0 0 Sour	fy any availab Automatic Inch discovery Hay (4 RX) # Name 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 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* * *		Reboot Reboot	Detail Detail		
Modi Lau Disp Ports 0 0 0 0 Sour	ity 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 00-08-78-00-7D-E2 00-08-78-00-7E-56 00-08-78-00-7E-56 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	* * *		Reboot Reboot	Detail Detail		
Modi Lau Disp Ports 0 0 0 0 Sour Ports	ifý any availab Automatic lay (4 RX) # Name RX-00-08-78 RX-00-08-7	- Manual -00-7D-E2 -00-7E-59 -00-7E-5E	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 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	I DHCF		Reboot Reboot Reboot	Detail Detail Detail		
Modi Automatical	Ify any availab Automatic Inch discovery Itay (4 RX) # Name RX-00-08-78 RX-00-08 RX-008	- Manual -00-7D-E2 -00-7E-59 -00-7E-5E	MAC address 00-08-78-00-70-52 00-08-78-00-78-50 00-08-78-00-78-50 00-08-78-00-78-50 00-08-78-00-78-50 MAC address 00-08-78-00-70-D9	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 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	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail Detail Detail		

Figure 182: Products Screen – Set-up Tab

		Controller (50							Language	Log
Prod	lucts	Settings	s ∣ Softv	vare Update	Help					
0 E I	ECTED	PRODUC	· T .							
			264 (500757) I	Muxlab Matr	ix Virtual					
	Set-up	Matrix	RS-232	Firmware						
• A		O Manual	click Save to apply	your changes						
 Modif A Laun Displ 	ý any availa uutomatic nch discovery lay (4 RX)	O Manual			MASY	DHCD				
 Modif A Laun Displ 	ý any availa wtomatic nch discovery lay (4 RX) ≇ Name	O Manual	Click Save to apply MAC address 00-08-78-00-70-52	IP address	MASK 255.255.0	DHCP	Reboot	Detail		
Modif A Laun Displ Port#	ý any avalla uutomatic Ich discovery I ay (4 RX) ≠ Name <mark>RX-1</mark>	O Manual	MAC address	IP address			Reboot	Detail		
Modif A Laun Displ Port# 0	ý any availa wtomatic nch discovery lay (4 RX) ≇ Name	O Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0		Reboot Reboot	Detail Detail Detail		
Modif A Laun Displ Port# 0 0	ý any avalla utomatic ich 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	2 2	Reboot	Detail		
Modif A Laun Displ Port# 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ý any availa utomatic 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		
Modif A Laun Displ Port# 0 0 0 Source	ý any avalia utomatic the discovery lay (4 RX) 4 Name RX-1 RX-2 RX-3 RX-4 Ce (2 TX)	O Manual	MAC address 00-08-78-00-70-52 00-08-78-00-7E-58 00-08-78-00-7E-58 00-08-78-00-7E-63	IP address 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	8 8 8	Reboot Reboot	Detail Detail		
Modif A Laun Displ Port# 0 0 0 Source	ý any availa utomatic tch 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-50 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 IP2.468.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	I I I I I I I I I I I I I I I I I I I	Reboot Reboot Reboot	Detail Detail Detail		
Modif A Laun Displ Port# 0 0 0 0 Source Port#	ý any avalia utomatic ich discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 ce (2 TX) # Name	O Manual	MAC address 00-08-78-00-70-52 00-08-78-00-7E-58 00-08-78-00-7E-58 00-08-78-00-7E-63	IP address 192.168.168.66 192.168.168.65 192.168.168.63 IP2.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	8 8 8	Reboot Reboot	Detail Detail		
Modiff A Laun Displ Port# 0 0 0 0 0 Source Port# 0	ý any availa utomatic ich discovery (ay (4 RX) 4 Name RX-1 RX-2 RX-3 RX-4 (2 TX) 4 Name ce (2 TX) 4 Name DVD-1 DVD-2	O Manual	MAC address 00-08-78-00-70-52 00-08-78-00-76-59 00-08-78-00-76-59 00-08-78-00-76-59 00-08-78-00-76-59 MAC address 00-08-78-00-70-59	IP address 192.168.168.66 192.168.168.65 192.168.168.63 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	♥ ♥ ♥ DHCP	Reboot Reboot Reboot	Detail Detail 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).

		k Controller (5								Langua	ge: Engl
Prod	ducts	Setting	gs ∣ Softv	vare Update	Help						
		D PRODU(mi Over IP F	CT: 1264 (500757) 1	Muxlab Matr	ix Virtual						
	Set-up	Matrix	RS-232	Firmware							
• /	Automatic nch discove	O Manual		your changes							
 A Laur Disp 	nch discove Iay (4 RX)	O Manual			MASK	DHCE	DIP				
 A Laur Disp 	nch discove	O Manual	MAC address	IP address	MASK 255.255.255.0	DHCF	P DIP	Reboot	Detail	UPDATED	
• A Laur Disp	nch discove Ilay (4 RX) # Name	O Manual	MAC address 00-08-78-00-7D-E2	IP address				Reboot	Detail Detail		
Laur Disp Ports 0	nch discove 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					UPDATED UPDATED UPDATED	
A Lau Disp Ports 0 0	nch discove 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	
Laur Disp Ports 0 0 0	nch discove lay (4 RX) # Name RX-1 RX-2 RX-3	O Manual	MAC address 00-08-78-00-70-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 Lau Disp Porta 0 0 0 0 0 Sour 	nch discove I v (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4 rce (2 TX)	O Manual	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 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	* * *		Reboot Reboot	Detail Detail	UPDATED UPDATED	
 A Lau Disp Porta 0 0 0 0 0 Sour 	Itay (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-50 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	Ø Ø Ø DHCF		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
A Laun Disp Ports 0 0 0 Sour Ports	nch discove I v (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4 rce (2 TX)	O Manual	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 192.168.168.64 192.168.168.65 192.168.168.63 IP2.168.168.63 IP2.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	* * *		Reboot Reboot	Detail Detail	UPDATED UPDATED	
A	Han discover Hay (4 RX) # Name RX-1 RX-2 RX-3 RX-4	O Manual	MAC address 00-08-78-00-70-52 00-08-78-00-72-59 00-08-78-00-72-59 00-08-78-00-72-59 00-08-78-00-72-59 MAC address 00-08-78-00-7D-09	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	♥ ♥ ♥ DHCP		Reboot Reboot Reboot	Detail 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	I
Custom Name:	RX-1
Model:	500757-RX
MAC Address:	00-0B-78-00-7D-E2
IP Address:	192.168.168.64 (DHCP: ON)
FW Version:	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).

Muxlab Network		11)	Language: En	glish ▼ Logou
Products	Settings	Softwa	are Update Help	
SELECTED Setup 1 : Hdm			luxlab Matrix Virtual	
Set-up	Matrix	RS-232	Firmware	
Connect your disp bottom to make th	plays to the desired ae connections.	sources below. One	nce you've selected the displays you want to change, use the "Connect" button at the	
DISPLAY		SOURCE	PRESETS	
RX-1 Connect			Current active Preset: No preset selected ViD: Save current connections in following preset: Create Delete following preset: V	
			© 2016 MuxLab Inc. version: 1.4.8	

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).

Μυχ	-l -h						Langua	ge: Englis
	Controller (50081	1)						
Products	Settings	Softwa	are Update	Help				
	PRODUCT							
Setup 1 : Hdn	ni Over IP H264	4 (500757) M	uxlab Matrix	Virtual				
Set-up	Matrix	RS-232	Firmware					
DISPLAY	plays to the desired he connections.	SOURCE	ice you ve selected	the displays you want to o	-	ne "Conne	ect" button at the	
BY 1			ancel	Current active Preset:				
RX-1		DVD-1 ▼ C	ancel	No preset selected	•	ID: 1		
				Save current connections in f	ollowing preset:			
					•			
				Save current connections as				
					Create			
			:	Delete following preset:				
Connect			L		•			
Connect								

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).

Muxlab Network	Controller (5008	11)	Languag	e: English Log
Products	Settings	Softwa	re Update Help	
	PRODUCT		uxlab Matrix Virtual	
Set-up	Matrix	RS-232	Firmware	
Connect your dis bottom to make t		sources below. On	ce you've selected the displays you want to change, use the "Connect" button at the	
DISPLAY		SOURCE	PRESETS	
RX-1		DVD-1 V SUC	CCESS > Current active Preset: No preset selected VID: 0	
			> Save current connections in following preset:	
			> Save current connections as new preset: Create	
			> Delete following preset:	
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 v ID: 0
 > Save current connections in following preset: > Save current connections as new preset:
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.	
OK 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:			
	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	тѕ	
> Current active Preset:		
[1] Preset 1	•	ID: 1
> Save current connections in fo	llowing prese ▼	
[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:			
	۲	ีรเ	JCCE	SS
> Save current connections as new preset: Create				
> Delete following preset:	•			

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.

Mux						Language	English
	Controller (500811)					
Products	Settings	Softwa	re Update	Hel	р		
	PRODUCT : ni Over IP H264		xlab Matrix	Virtual			
Set-up	Matrix	RS-232	Firmware				
Update your devi	ce's RS-232 connecti	on settings here.					
Select a devic	e: -	٠					
- Baud rate:	T [Data bi	ts: 8 Parity bits	None Stop bi	e: 11			1
Save	[Data b	to: o [r and bito	. Hone otop bi				
Data to send i	n HEX (ex: A013E	8155C5)					
Send							
ocita							
			© 2016 MuxLab In	c. version: 1.4.	3		
			mobile	app			

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).

Auxlab Network	Controller (50081	1)			Langua	ge: English Log
Products	Settings	Softwa	re Update	Help		
	PRODUCT hi Over IP H264		xlab Matrix	Virtual		
Set-up	Matrix	RS-232	Firmware			
Update your devic	e's RS-232 connect	tion settings here.				
Select a device	e: DVD-1	•				
- Baud rate: Save	115200 💌 [Data b	oits: 8 Parity bits	: None Stop bi	s: 1]		
Data to send i	n HEX (ex: A013	B155C5)				

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).



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 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.

Network Administration Ise the form below if you'd like to set manual network settings. Ise DFCP: Yes + No Padress: 102: 168 Setter: 108 Setter: 108 Setter: 20 Setter: 30 Setter: 30	Muxiab Network Controller (500811)	Language: English Logi
tetwork see the form below if you'd like to set manual network settings. Ise DHCP: Yes * No Padress: 192 168 168 50 Letwork mak: 202 205 205 20 0 Letwork 202 168 168 1 Save	Products Settings Software Update H	elp
ise the form below if you'd like to set manual network settings. Jse DHCP: • Yes • No Padress: 150 168 168 50 Leftoring mak: 250 258 258 25 0 Louder: 122 158 158 1 Save	Network Administration	
Padress 192 164 168 50 eth-ork mask: 52 168 168 1 51 168 168 1 58 68 1	Network Use the form below if you'd like to set manual network settings.	
192 194 194 20 Head Instance 252 255 255 0 Gualar Save	Use DHCP: Yes • No	
akrovir mak: 502 258 258 0 toxdar: 192 168 168 1 Gave	IP address:	
258 258 0 todar: 28 168 18 1 Save	192 . 168 . 168 . 50	
louar 192 188 188 1 Sawe	Network mask:	
192 168 1 Save	255 . 255 . 255 . 0	
Save	Router:	
	192 . 168 . 168 . 1	
	Cave	
	© 2016 MusLab Inc. version: 1	48

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).

Muxlab Network	Controller (500811)			Language: Engl
Products	Settings	Software Update	Help	
Network	Administration			
User Accounts				
Create a new Use User Name new password: Confirm new password User Type:	rd:	Jser to edit:	٠	
	Delete			
· · ·		address of this controller u	sing the same as the controller t	is backup file come from !!!
Backup data Backup the data a Backup	nd save it in a file			
Get Logs Get all logs in a zi	o file			
Download Logs	Delete Logs			
			b Inc. version: 1.4.8	

Figure 200: Settings Screen: Administration Tab

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.

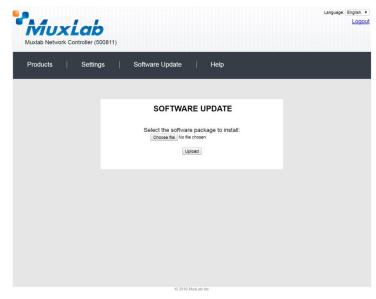


Figure 201: Software Update Screen

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

Products Screen

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

Muxlab Network Controller (50	0811)			Language: English V
Products Setting:	i Softwar	e Update 🛛 🛛	Help	
SELECT A PRODUC			ADD DEVICE	
ID Custom Name	Product Name	Compagny	Product type	
		© 2018 Must ab Inc. up	mine: 1.4.0	
		© 2010 Mad.do Inc. v nocide age		

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).

			* ADD DEVICE		
	500816-IP) 755/756)				
758/759)			uct Type		
	(62)				
	02)				
	(753/754/ 758/759) 00757)	1753/754/755/756) 758/759) 00757) 265 (500762)	//753/754/755/756) 758/759) 00757) 265 (500762)	1753/754/755/756) 758/759) 00757) 265 (500762)	1753/754/755/756) 758/759) act Type 00757) 265 (500762)

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 204), without a product being added.

Muxiab Network Controller (500811)	Language: English ▼ Logout
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP 44 Cucconserved Image: Cucconserved Image: Cucconserved Image: Cucconserved Image: Cucconserved	
mobile app	

Figure 205: Products Screen – Naming a Product

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

cts Setting		are Update	Help		
	T TO ADD:		ADD DEVIC	Œ	
	STEM: Product Name	Compagny	Product type		
Setup 1	Hdmi Over IP 4K (500758/759)	Muxlab	Matrix Virtual	Select	
	Custom Name	Hdmi Over IP 4K	Custom Name Product Name Compagny	R CURRENT SYSTEM: Custom Name Product Name Compagny Product type	R CURRENT SYSTEM: Custom Name Product Name Compagny Product type

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).

Muxiab Network Cor		192.168.168. Do you want to	50 says: load previous store	d device list ? OK	Cancel	Languag	e: English y
Products	Settings	Softwar	e Update	Help	~		
SELECTED PI Setup 1 : Hdmi C)758/759) M	uxlab Matri	ix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Set-up Modify any available s • Automatic	ettings and click S Manual	ave to apply your	changes				
			© 2016 MuxLab Ir mobile				

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).

Muxlab Network	Controller (5008	11)				English Log
Products	Settings	Softwa	re Update	Help		
	PRODUCT ni Over IP 4K (:		/luxlab Matri	ix Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Modify any availa Automatic Launch discover 	ble settings and clic	к save to apply you	ir cnanges			

Figure 208: Products Screen – Set-up Tab

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

Each 500758 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).

										L	anguage:	
	AUX ab Network C											Logo
Proc	ducts	Settings	s ∣ Softv	vare Update	Help							
SEL	ECTED F	RODUC	т:									
Setu	ıp 1 : Hdmi	Over IP 4	(500758/759)	Muxlab Ma	atrix Virtual							
	Set-up	Matrix	Video Wall	RS-232	HDMI-CEC		Firm	nware				
• ,		O Manual	click Save to apply	your changes								
Lau Disp	Automatic nch discovery Ilay (4 RX)	-			MACK	DHC						
Lau Disp	Automatic) Manual	MAC address 00-0B-78-00-7D-E2	IP address 192.168.168.64	MASK 255.255.255.0	DHCF	P DIP	Reboot	Detail			
• , Lau Disp	Automatic nch discovery Ilay (4 RX) # Name	• Manual 00-7D-E2	MAC address	IP address				Reboot	Detail Detail			
Lau Disp Port 0	Automatic nch discovery Ilay (4 RX) # Name RX-00-0B-78-	Manual 00-7D-E2 00-7E-59	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0							
Lau Disp Port 0 0	Automatic nch discovery hay (4 RX) # Name RX-00-0B-78- RX-00-0B-78-	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	•		Reboot	Detail			
 Lau Disp Port 0 0 0 0 	Automatic nch discovery Hay (4 RX) # Name RX-00-0B-78- RX-00-0B-78- RX-00-0B-78- RX-00-0B-78-	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			
 Lau Disp Port 0 0 0 0 	Automatic nch discovery Ilay (4 RX) # Name RX-00-0B-78- RX-00-0B-78- RX-00-0B-78- RX-00-0B-78-	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			
Disp Port 0 0 0 0 Sour	Automatic nch discovery Hay (4 RX) # Name RX-00-0B-78- RX-00-0B-78- RX-00-0B-78- RX-00-0B-78-	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			
Lau Disp Port 0 0 0 Sour Port 0 0	Automatic nch discovery Hay (4 RX) # Name RX-00-0B-78- RX-00-0B-78- RX-00-0B-78- RX-00-0B-78- rce (2 TX) # Name DVD-1	00-7D-E2 00-7E-59 00-7E-5E	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			Reboot Reboot	Detail Detail			
Disp Port 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Automatic nch discovery Hay (4 RX) # Name RX-00-0B-78- RX-00-0B-78- RX-00-0B-78- RX-00-0B-78- rce (2 TX) # Name	00-7D-E2 00-7E-59 00-7E-5E	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 IP2.468.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	S S DHCF		Reboot Reboot Reboot	Detail Detail Detail			
Au	Automatic nch discovery Ilay (4 RX) # Name RX-00-0B-78- RX-00-0B-	00-7D-E2 00-7E-59 00-7E-5E	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	S S DHCF		Reboot Reboot Reboot	Detail Detail Detail			
Lau Disp Port 0 0 0 Sour Port 0 0	Automatic nch discovery Ilay (4 RX) # Name RX-00-0B-78- RX-00-0B-	00-7D-E2 00-7E-59 00-7E-5E	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	S S DHCF		Reboot Reboot Reboot	Detail Detail Detail			

Figure 209: Products Screen – Set-up Tab

_		Lab								Languag	Log
		Controller (500									
TUXIC		Sontroller (Sot	,011)								
Pro	ducts	Settings	; ∣ Softv	vare Update	Help						
		PRODUC			4. 1						
Setu	ip 1 : Hdm	I Over IP 4P	(500758/759)		atrix virtuai						
			101. 10.0	05,000			Time				
	Set-up	Matrix	Video Wall	RS-232	HDMI-CEC		Fill	ware			
• . Lau	Automatic Inch discovery	Die settings and O Manual	click Save to apply	your changes							
Mod Lau Disp	Automatic Inch discovery Play (4 RX)				MACK	DHC					
Mod Lau Disp	Automatic Inch discovery Diay (4 RX) # Name		MAC address	IP address	MASK 255.255.255.0	DHCF	DIP	Reboot	Detail		
Mod Lau Disp	Automatic inch discovery blay (4 RX) # Name RX-1		MAC address	IP address				Reboot	Detail		
Mod Lau Disp Port 0	Automatic Inch discovery Automatic Inch dinch discovery Automatic Inch discovery Automatic Inch		MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0			Reboot	Detail		
Mod Lau Disp Port 0	Automatic inch discovery blay (4 RX) # Name RX-1		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						
Mod Lau Disp Port 0 0 0	Automatic Inch discovery Inlay (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	Detail Detail		
Mod Lau Disp Port 0 0 0	Automatic Inch discovery Inlay (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	Detail Detail		
Mod Lau Disp Port 0 0 0 0 Sou	Automatic Inch discovery Alay (4 RX) # Name RX-1 RX-2 RX-3 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	Detail Detail		
Mod Lau Disp Port 0 0 0 0 Sou	Automatic Inch discovery Itay (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4 I rce (2 TX)		MAC address 00-08-78-00-70-E2 00-08-78-00-7E-50 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 address	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 nch discovery ilay (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4 Free (2 TX) # Name		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 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 MASK	♥ ♥ ♥ ♥		Reboot Reboot Reboot	Detail Detail Detail		
Mod Automatical Mod Lau Disp Port 0 0 0 0 0 0 0 0 0 0 0 0 0	Automatic nch discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 Proce (2 TX) # Name DVD -1 DVD -1 DVD -1		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 00-08-78-00-7E-68 00-08-78-00-7D-09	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 MASK 255.255.255.0	♥ ♥ ♥ DHCF		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	Automatic nch discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 Proce (2 TX) # Name DVD -1 DVD -1 DVD -1		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 00-08-78-00-7E-68 00-08-78-00-7D-09	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 MASK 255.255.255.0	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail 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).

		Lab Controller (500	811)							Langu	
Prod	ucts	Settings	Softv	vare Update	Help						
SFL	ECTED	PRODUC	T:								
			(500758/759)	Muxlab Ma	atrix Virtual						
	Set-up	Matrix	Video Wall	RS-232	HDMI-CEC		Firm	ware			
	sec-up	matrix	video watt	K3-232							
		ole settings and	click Save to apply	your changes							
Modif A	ý any availat	, i i i i i i i i i i i i i i i i i i i	click Save to apply	your changes							
Modif A Laun Displ Port#	ý any availat utomatic inch discovery l ay (4 RX) # Name	O Manual	MAC address	IP address	MASK	DHCF					
Modif A Laun Displ Port# 0	ý any availat utomatic ich discovery l ay (4 RX) # Name RX-1	O Manual	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64	255.255.255.0			Reboot	Detail	UPDATED	
Modif A Laun Displ Port# 0 0	ý any availat utomatic ich 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	UPDATED	
Modif A Laun Displ Port# 0 0 0	y any availat utomatic tch 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	\$ \$		Reboot Reboot	Detail Detail	UPDATED UPDATED	
A A Laun Displ Port# 0 0 0 0	ý any availat utomatic ich 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 Source	ý any availat utomatic ich discovery ay (4 RX) f 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 192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0			Reboot Reboot	Detail Detail	UPDATED UPDATED	
Modifier A Laun Disple Port# 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ý any availat utomatic isch discovery ay (4 RX) Name RX-1 RX-2 RX-3 RX-3 RX-4 Ce (2 TX) 4 Name	O Manual	MAC address 00-08-78-00-7D-52 00-08-78-00-7E-50 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	♥ ♥ ♥ DHCF	DIP	Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Modif A Laun Displ Port# 0 0 0 0 0 Source Port# 0	y any availat utomatic ay (4 RX) Name RX-1 RX-2 RX-3 RX-4 e (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-68 00-08-78-00-7E-63 MAC address 00-08-78-00-7D-09	IP address 192.168.168.66 192.168.168.65 192.168.168.63 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	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Modifier A Laun Disple Port# 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ý any availat utomatic isch discovery ay (4 RX) Name RX-1 RX-2 RX-3 RX-3 RX-4 Ce (2 TX) 4 Name	O Manual	MAC address 00-08-78-00-7D-52 00-08-78-00-7E-50 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	♥ ♥ ♥ DHCF	DIP	Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	

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 Detai	I
201100 20141	
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 F	Format:
Auto-detect Resol	ution: 🗹
-	
HDR Mode:	Off
-	
Set HDCP Format	t: HDCP 1.4 ▼
Save Cancel	
	2

Figure 212: 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 213).

Muxlab Network	Controller (5008	11)				Language:	English V
Products	Settings	Softwa	are Update	Help			
	PRODUCT		Muxlab Matrix	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make the	plays to the desired he connections.	sources below. On	ce you've selected	the displays you wa	ant to change, use the	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	S]	
RX-1 Connect			> Save cum	selected ent connections in folic ent connections as new	Ŧ		
			© 2016 MuxLab Inc mobile				

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).

Mux	dah						Languag	English
	Controller (5008	11)						
Products	Settings	Softwa	are Update	Help				
) PRODUCT ni Over IP 4K (•	Muxlab Mati	rix Virtual				
		,						
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware			
Connect your dis bottom to make to DISPLAY		SOURCE	ice you've selecter	d the displays you wa	nt to change, use th	e "Connei	ct" button at the	
				> Current active Preset:				
RX-1		DVD-1 ▼ C	Cancel	> Current active Preset: No preset selected	۲	ID: 1		
RX-1		DVD-1 V			ons in following preset:	ID: 1		
RX-1		DVD-1 V		No preset selected	ons in following preset:	ID: 1		
RX-1				No preset selected	ons in following preset: v ons as new preset: Create	ID: 1		
RX-1 Connect				No preset selected > Save current connection > Save current connection > Save current connection	ons in following preset:	ID: 1		

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).

Muxlab Networ	k Controller (50081	1)				Language:	English • Logout
Products	Settings	Softwa	re Update	Help			
	D PRODUCT mi Over IP 4K (!	-	/luxlab Matri	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your di bottom to make	splays to the desired the connections.	sources below. On	ce you've selected	the displays you wa	int to change, use t	ne "Connect" button at the	
DISPLAY		SOURCE		PRESETS	5	7	
RX-1		DVD-1 V SUC	CESS > Current a	ctive Preset:	▼ ID: 0		
			> Save curr	ent connections in folic	wing preset:		
Connect			> Delete for	lowing preset:	•		
			© 2016 MuxLab In	e uereiee: 4.4.0			
			© 2016 MuxLab In mobile				

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
 > Save current connections in following preset: ▼ > Save current connections as new preset:
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.	
OK 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:			
▼	SL	JCCE	SS

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).

PRESE	тѕ	
> Current active Preset:		
[1] Preset 1	•	ID: 1
> Save current connections in fo	llowing prese ▼	
[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	¥	ID:	1	
> Save current connections in following pres	set:	-		
	•	SI	JCCE	SS
> Save current connections as new preset:				
Create				
> Delete following preset:				
	۲			

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 does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 223).

Muxlab Network		11)				Language: Engl
Products	Settings	Softwar	e Update	Help		
SELECTED Setup 1 : Hdm			luxlab Matri	x Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
NO devices comp	batible with video	wall features found	11			
			© 2016 Muxt.ab In mobile			

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.

SELECTED PROI Setup 1 : Hdmi Over	DUCT :	vare Update Muxlab Matrix	Help x Virtual		
Setup 1 : Hdmi Over		Muxlab Matrix	x Virtual		
Set-up Ma					
	trix Video Wall	RS-232	HDMI-CEC	Firmware	
Update your device's RS-2: Select a device: - Baud rate:	-		IS: 1]		
Save					
Data to send in HEX (e	ex: A013B155C5)				

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).

Mux	Lab					Language: En
Muxlab Network	Controller (50081 Settings		re Update	Help		
SELECTED Setup 1 : Hdm		: 500758/759) N	luxlab Matr	ix Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Update your device	e's RS-232 connec	tion settings here.				
- Baud rate: Save	115200 🔻 [Data I	bits: 8 Parity bits	: None Stop b	oits: 1]		
Data to send in	n HEX (ex: A013	B155C5)				
Send						
			© 2016 MuxLab I			

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.

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).

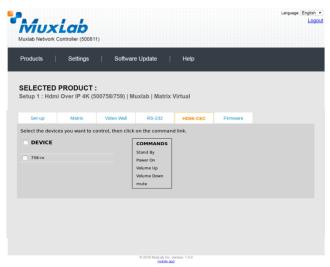


Figure 226: HDMI CEC Tab

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 227).

Muxlab Network C		11)				Language:	English • Logou
Products	Settings	Software	Update	Help			
SELECTED I Setup 1 : Hdmi		: 500758/759) Mu	xlab Matri:	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
		 Display 	rs (RX) lie No file chose Apply				
DISPLAY RX-1 (500757-RX) RX-2 (500757-RX) RX-3 (500757-RX) RX-4 (500757-RX)		v0.5.0.0.20160812 v0.5.0.0.20160812 v0.5.0.0.20160812 v0.5.0.0.20160812		URCE 0-1 (500757-TX) 0-2 (500757-TX)		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 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.

Products Settings Software Update Help Network Administration Network Use the form below if you'd like to set manual network settings. Use the CPC Ves * No IP address: 12 192 168 192 168 192 168 192 168	Network Administration stevork le the form below if you'd like to set manual network settings. le DHCP: Ves • No address: 22 168 50 took: 22 168 168 1	Muxlab Network Co	htroller (500811)			Language: 🗌	English Logo
Network Use the form below if you'd like to set manual network settings. Use the form below if you'd like to set manual network settings. IP address: 123_188_188_50 Network mask: 123_188_188_50 Router: 123_188_188_1	Stvork le the form below if you'd like to set manual network settings. le DHCP: Ves • No address: 22 188 188 50 etwork mak: 35 255 255 0 address: 188 188 1	Products	Settings	Software Update	Help		
Use the form below if you'd like to set manual network settings. Use the CPP: vs * No IP address: 192. 188. 188. 50 Network mark: 192. 188. 188. 50 Network mark: 192. 188. 188. 1	e the form below if you'd like to set manual network settings. ac DHCP: Ves * No address: so test for manual set of the so test is the so test of the so test of the so test of tes	Network /	dministration				
IP address 192 198 198 50 Network mask: 255 255 255 0 Router: 122 88 188 1	addreas 92 188 188 50 Hondrimak: 52 255 255 255 0 Johan 24 188 188 1		you'd like to set manu	al network settings.			
192 168 168 50 Networkmask: 255 255 255 0 Router: 192 168 188 1	92 168 168 50 Hellorid mark 52 255 255 25 25 5 Jacker 188 188 1	Use DHCP:	Yes 🖲 No				
192 168 168 50 Network maak: 255 255 255 0 Router:	92 168 168 50 Hellorid mark 52 255 255 25 25 5 Jacker 188 188 1	IP address:					
255 255 255 0 Rauter: 12 168 168 1	55 255 255 D Luter: 168 168 1						
Rolder. 192 188 188 1	suker 92 188 188 1	Network mask:					
192 - 168 - 168 - 1	92 . 168 . 168 . 1	255 . 255 . 255 . 0					
Save	ave	192 . 168 . 168 . 1					
oare		Paus					
		Save					
	© 2016 MuxLab Inc. version: 1.4.8			© 2015 Mul	ab loc service: 1.4.8		

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).

Muxlab Network	Controller (500811)			Language: Engl
Products	Settings	Software Update	Help	
Network	Administration			
User Accounts				
Create a new Use User Name new password: Confirm new password User Type:	rd:	Jser to edit:	٠	
	Delete			
· · ·		address of this controller u	sing the same as the controller t	is backup file come from !!!
Backup data Backup the data a Backup	nd save it in a file			
Get Logs Get all logs in a zi	o file			
Download Logs	Delete Logs			
			b Inc. version: 1.4.8	

Figure 229: Settings Screen: Administration Tab

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.

Muxiab Network Controller	(500811)	Language: Engli LC
Products Sett		
	SOFTWARE UPDATE	
	Select the software package to install: Choose file No file chosen	
	Upload	
	© 2016 MuxLab Inc	

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).

	UXLab etwork Controller (50				Language: Eng
Products	s Setting	s ∣ Softwar	e Update	Help	
SELEC	T A PRODUC	t to add:		ADD DEVICE	
YOUR	CURRENT SYS	STEM: Product Name	Compagny	Product type	

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).

Products	Settings		oftware Update	Help	
SELECT	A PRODUCT	TO ADD	i:	ADD DEVICE	
	PoE Control F IP (500752/75				
Hdmi Over Hdmi Over	IP 4K (500758 IP H264 (5007 IP H264/H265 16 (500480)	(57)		uct Type	
	10 (000 +00)				

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 233), without a product being added.

Muxiab Network Controller (500811)	Language: English • Logout
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP 44 Muxlab: Hdmi Over IP 4K (500758/759) O Custom OK CANCEL	
mobile app	

Figure 234: Products Screen – Naming a Product

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

		twork Controller (50					
Proc	ducts	i Setting	gs ∣ Softw	are Update	Help		
EL	EC	T A PRODUC	T TO ADD:		ADD DEVI	CE	
		CURRENT SY					
- î	1 D	Custom Name Setup 1	Hdml Over IP 4K (500758/759)	Compagny Muxlab	Product type Matrix Virtual	Select	

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 Co			50 says: load previous stored	d device list ? OK	Cancel	Language: E	English <u>Log</u>
Products	Settings	Software	e Update	Help			
SELECTED P Setup 1 : Hdmi C		0758/759) M	uxlab Matri	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Set-up Modify any available • Automatic	settings and click S Manual	ave to apply your	changes				
			© 2016 MuxLab In				

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).

Muxlab Network C	Lab ontroller (50081	11)				Language:	English
Products	Settings	Softwa	re Update	Help			
SELECTED I Setup 1 : Hdmi			/luxlab Matri	ix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Modify any available • Automatic Launch discovery	Manual	n ouro to apply you	n vinangoo				
			© 2016 MuxLab Ir	nc. version: 1.4.8			

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).

D PRODUC Imi Over IP 4I								
	K (500758/759)	Muxlab Ma	atrix Virtual					
Matrix	Video Wall	R5-232	HDMI-CEC) Fi	mware			
	MAC address	IP address	MASK					
	00-0B-78-00-7E-63	192.168.168.63	255.255.255.0			Detail		
	MAC address	IP address	MASK	DHCP DI	P			
	00-0B-78-00-7D-D9	192.168.168.62	255.255.255.0	e .	Reboot	Detail		
	00-0B-78-00-7D-0B	192.168.168.66	255.255.255.0	•	Reboot	Detail		
		@ 2016 March	ab Inc. version: 1.4.8					
			obile app					
)	 Manual Manual ery ery B-78-00-7E-59 B-78-00-7E-59 B-78-00-7E-65 B-78-00-7E-63 	MAC address B-78-00-7E-63 MAC address B-78-00-7E-63 MAC address B-78-00-7E-63 MAC address D-78-00-7E-63 MAC address D0-0B-78-00-7E-63 D0-0B-78-00-78-00-78-00 D0-0B-78-00-78-00-78-00 D0-0B-78-00-78-00 D0-0B-78-00-78-00 D0-0B-78-00-78-00 D0-0B-78-00-78-00 D0-0B-78-00-78-00 D0-0B-78-00-78-00 D0-0B-78-00-78-00 D0-0B-78-00-78-00 D0-0B-78-00-78-00 D0-0B-78-00 D0-78-00 D0-78-0	Manual ery MAC address IP address B-78-00-70-E2 00-08-78-00-70-E2 192.168.188.64 B-78-00-7E-E9 00-08-78-00-7E-E5 192.188.188.68 B-78-00-7E-E5 00-08-78-00-7E-E6 192.188.188.68 B-78-00-7E-E3 00-08-78-00-7E-E6 192.188.188.68	Manual Padress MASK B78-00-7D-E2 00-08-78-00-7E-59 192-168-168.64 256-255-256.0 B-78-00-7E-E5 00-08-78-00-7E-59 192-168-168.65 256-255-256.0 B-78-00-7E-63 00-08-78-00-7E-59 192-168-168.65 256-255-256.0 B-78-00-7E-63 00-08-78-00-7E-58 192-168-168.65 256-255-256.0 B-78-00-7E-63 00-08-78-00-7E-63 192-168-168.65 256-255-256.0 B-78-00-7E-63 00-08-78-00-7E-63 192-168-168.65 256-255-256.0	Manual MAC address IP address MASK DHCP DI B-78-00-7D-E2 00-08-78-00-7D-E2 192-168-168.64 255-255.05 ♥ B-78-00-7E-E6 00-08-78-00-7E-56 192-168-168.65 255-255.05 ♥ ■ B-78-00-7E-5E 00-08-78-00-7E-56 192-168-168.65 255-255.05 ♥ ■ B-78-00-7E-63 00-08-78-00-7E-63 192-168-168.65 255-255.05 ♥ ■ MAC address IP address MASK DHCP DI ■ ■	Manual MAC address IP address MASK DHCP DIP B-78-00-7D-E2 00-08-78-00-7D-E2 192.168.168.64 255.255.05 ✓ Reboot B-78-00-7E-E5 00-08-78-00-7E-E6 192.168.168.64 255.255.255.0 ✓ Reboot B-78-00-7E-E6 00-08-78-00-7E-E6 192.168.168.68 255.255.255.0 ✓ Reboot B-78-00-7E-63 00-08-78-00-7E-63 192.168.168.62 255.255.255.0 ✓ Reboot MAC address IP address MASK DHCP DIP Reboot Reboot Reboot Reboot Reboot Reboot Reboot Reboot Reboot Reboot	aliable settings and click Save to apply your changes Manual ery b MAC address IP address MASK DHCP DIP B-78-00-7D-E2 00-08-78-00-7D-E2 192-168-188.64 256-255.256	Manual ery) MAC address IP address MASK DHCP DIP B-78-00-7D-E2 00-0B-78-00-7D-E2 192 108.168.64 255 255 255.0 ♥ Reboot Detail B-78-00-7E-5E 00-0B-78-00-7E-5B 192 108.168.65 255 255 255.0 ♥ Reboot Detail B-78-00-7E-6E 00-0B-78-00-7E-6B 192 108.168.65 255 255 255.0 ♥ Reboot Detail B-78-00-7E-63 00-0B-78-00-7E-63 192 108.168.62 255 255 255.0 ♥ Reboot Detail MAC address IP address MASK DHCP DIP Reboot Detail 00-0B-78-00-7E-63 00-0B-78-00-7E-63 192 108.168.62 255 255 255.0 ♥ Reboot Detail

roducts	Setting	s Softv	ware Update	Help					
	D PRODUC mi Over IP 4ł	T: (500758/759)	Muxlab Ma	atrix Virtual					
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC		Firm	ware		
 Automatic Launch discove 	O Manual								
Launch discove Display (4 RX) Port# Name	rry	MAC address	IP address 19216816864	MASK 255 255 0	DHCP		Rebot	Detail	
Launch discove Display (4 RX) Port# Name 0 RX-1	rry	00-0B-78-00-7D-E2	192.168.168.64	255.255.255.0			Reboot	Detail	
Launch discove Display (4 RX) Port# Name 0 RX-1 0 RX-2	rry		192.168.168.64 192.168.168.60		*		Reboot	Detail	
Launch discove Display (4 RX) Port# Name 0 RX-1 0 RX-2	rry	00-0B-78-00-7D-E2 00-0B-78-00-7E-59	192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0					
Launch discove Display (4 RX) Port# Name 0 RX-1 0 RX-2 0 RX-3	rry	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	
Launch discover Display (4 RX) Port# Name 0 RX-1 0 RX-2 0 RX-3 0 RX-4	rry	00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E 00-08-78-00-7E-63	192.168.168.64 192.168.168.60 192.168.168.65 192.168.168.63	255 255 255 0 255 255 255 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).

			ab roller (50									
Prod	lucts		Settings	s Soft	ware Update	Help						
			RODUC	T: (500758/759)	Muxlab Ma	atrix Virtual						
	Set-up		Matrix	Video Wall	RS-232	HDMI-CEC		Firm	ware			
• A	fý any ava automatic nch discove	0 N	ettings and Aanual	click Save to apph	your changes							
Modif A Laur Displ	automatic nch discove lay (4 RX)	O N	-			MACK	DHC					
Modif A Laur Displ	utomatic nch discove	O N	-	click Save to apply MAC address	IP address	MASK 255.255.255.0	DHCF		Reboot	Detail		
Modif A Laur Displ Port#	utomatic nch discove lay (4 RX) # Name RX-1	O N	-	MAC address	IP address 192.168.168.64				Reboot	Detail		
Modif A Laur Displ Port# 0	utomatic nch discove l ay (4 RX) ≇ Name	O N	-	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0			Reboot	Detail	UPDA	TED
Modif A Laur Displ Port# 0 0	tutomatic nch discove lay (4 RX) # Name RX-1 RX-2	O N	-	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	•					red red
Modif A Laur Displ Port# 0 0 0 0 0	Automatic Inch discove Iay (4 RX) # Name RX-1 RX-2 RX-3	O N	-	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-55	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		red red
Modif A Laur Displ Port# 0 0 0 0 Sour	the discover and discover and (4 RX) # Name RX-1 RX-2 RX-3 RX-4	O N	-	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-55	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		red red
Modif A Laur Displ Port# 0 0 0 0 Sour	Automatic http://discove lay (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4 Ce (2 TX)	O N	-	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 192.168.168.64 192.168.168.65 192.168.66.63 192.168.66.63 IP2 address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0			Reboot Reboot	Detail Detail		red red
Modifier A A A A A A A A A A A A A A A A A A A	Automatic http://discove lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 ce (2 TX) # Name	O N	-	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 2 192.168.168.64 192.168.168.65 192.168.168.63 IP address 2 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail Detail Detail		red red

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).

Device Detai	1
Custom Name: Model: MAC Address: IP Address: FW Version: Group IP: Video Resolution:	RX-1 500759-RX 00-0B-78-00-7D-E2 192.168.168.64 (DHCP: ON) 1.0.1 225.0.102.254 Unknown
Audio Format:	
Set output ∨ideo F	Format:
Auto-detect Resol	ution:
-	
HDR Mode:	Off
-	
Set HDCP Format	t: 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		11)				Language:	English V
Products	Settings	Softwa	are Update	Help			
SELECTED Setup 1 : Hdm	PRODUCT hi Over IP 4K (Muxlab Matrix	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th	plays to the desired ne connections.	sources below. On	ce you've selected	the displays you wa	nt to change, use the	"Connect" button at the	
DISPLAY		SOURCE		PRESETS	3]	
RX-1			> Current ad	ctive Preset:			
Connect			> Save cum	ent connections in follo ent connections as nev	•		
			© 2016 MuxLab Inc mobile				

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).

SELECTED PRO Setup 1 : Hdmi Over Set-up M Connect your displays to t	atrix Vice he desired source ctions.	58/759) I ideo Wall es below. Oni	RS-232	HDMI-CEC	Firmware ht to change, use the '	"Connect" button a	at the
Connect your displays to t bottom to make the conne DISPLAY	atrix Vice he desired source ctions.	ideo Wall es below. On	RS-232	HDMI-CEC		"Connect" button a	at the
Connect your displays to t bottom to make the conne DISPLAY	he desired source ctions.	es below. On				"Connect" button a	at the
bottom to make the conne DISPLAY	ctions.		ce you've selecte	ed the displays you war	nt to change, use the '	"Connect" button a	at the
RX-1		OURCE		PI	RESETS		
RA-1		VD-1 VD-1 Ca	ancel	> Current active Preset:			
	DV	VD-1 • G	ancer	No preset selected	▼ ID	6 1	
				> Save current connection			
				> Save current connection	▼ ns as new preset: Create		
				> Delete following preset:			
Connect				L	•		

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).

P						Language	English 🔻
Mux	Lab						Logout
Muxlab Network 0		1)					
Products	Settings	Softwa	re Update	Help			
	PROPUST						
SELECTED Setup 1 : Hdm		-	Auxlab Matrix	x Virtual			
eccep i i i i i i i i i			indicate printerio				
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your dien	ave to the desired	eouroae balow. On	e vou've selected :	the dieplaye you wa	nt to change use the	"Connect" button at the	
bottom to make the		sources below. One	e you ve selected	the displays you wa	ni to change, use the	Connect button at the	
DISPLAY		SOURCE		PRESETS	\$		
RX-1		DVD-1 V SUC	OFOO	ctive Preset:	▼ ID: 0		
			No presert				
			> Save curr	ent connections in folio	wing preset:		
			> Save curr	ent connections as new	/ preset:		
				(Create		
			> Delete foil	lowing preset:	Ţ		
Connect						J	
			© 2016 MuxLab Inc mobile				

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
 > Save current connections in following preset: > Save current connections as new preset:
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.	
OK 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:			
	SL	JCCE	SS

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).

PRESETS				
> Current active Preset:				
[1] Preset 1	▼ ID: 1			
> Save current connections in followin	ıg preset: ▼			
[1] Old Preset				
Cre	ate			
> 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	¥	ID:	1	
> Save current connections in following pres	set:			
	•	ีรเ	JCCE	ESS
> 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	lome	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::			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	
				+	/ideo Wall Set-Up ∶ Step #2	
				+ \	/ideo Wall Set-Up : Step #3	

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 Detete	Drag n drop here a video wall template or Select a previous configuration from the "Saved Configuration" list	
2x2 3x3 4x4 Cust	- Drag n drop a video wall template	
	+ Video Wall Set-Up : Step #2	
	I 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 < V-Wall Selected: Save App Save as: new Configuration Create Delete	: ply	ID::		Drag n drop bere a video wall template or Select a previous configuration from the "Saved Configuration" list	
Leiete			Select all		
				 Drag n drop a video wall template 	
2x2 3x3	2x2 3x3 4x4 Custom 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 dimension					
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 pane shows an empty (unpopulated) video wall consisting of 4 monitors (Figure 256).

Muxiab MNC Home	e 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 wali template	
2x2 3x3 4	x4 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	Video Wall Devices +	Logo
Video Wall Set-up		Settings
Saved V-Wall + V-Wall Selected: ID::		
Save Appty Save as: new Configuration		
Create		
	Select all 🔄	
	- Drag n drop a video wall template	
2x2 3x3 4x4 C	stom Size	
	- Select and place Displays	
RX-1 RX-		
	➡ Video 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 v	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.

	Controller (5008	11)				Language:	
Products	Settings	Softwa	re Update	Help			
	PRODUCT i Over IP 4K (: 500758/759) N	/luxlab Matri	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Select a device - Baud rate: Save		bits: 8 Parity bits	: None Stop bi	ts: 1]			
- Baud rate: Save Data to send in			:: None Stop bi	ts: 1]			
- Baud rate: Save	r [Data		: None Stop bi	ts: 1]			
- Baud rate: Save Data to send in	r [Data		: None Stop bi	ts: 1]			

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	Softwa	re Update	Help		
	PRODUCT					
Setup 1 : Hdm	ni Over IP 4K (5	500758/759) N	/luxlab Matı	ix Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Update your devic	e's RS-232 connec	tion settings here.				
Select a device	e: DVD-1	•				
- Baud rate:	115200 • [Data b	its: 8 Parity bits	: None I Ston h	nits: 11		
Save	Tour Louis	no. o pr any bio	. Hone otop i			
						 1
Data to send i	n HEX (ex: A013	B155C5)				
Send]

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).

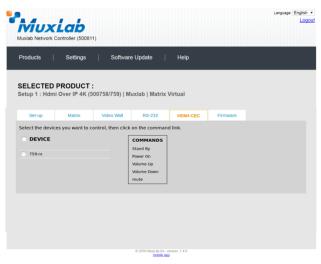


Figure 264: HDMI CEC Tab

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).

Muxlab Network Cor		11)				Language:	English Logo
Products	Settings	Software	e Update	Help			
SELECTED P Setup 1 : Hdmi C			uxlab Matri	ix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
DISPLAY RX-1 (500757-RX) RX-2 (500757-RX) RX-3 (500757-RX) RX-4 (500757-RX)		v0.5.0.0.2016081 v0.5.0.0.2016081 v0.5.0.0.2016081 v0.5.0.0.2016081	2 DVI 2 DVI 2 DVI	URCE D-1 (500757-TX) D-2 (500757-TX)		.0.20160812 0 .0.20160812 0	
			© 2016 MuxLab Ir				

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 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.

Products Settings Software Update Help Network Administration Network Administration Vise the form below if you'd like to set manual network settings. Use DHCP: Yes * No IP address: 192 188 25 256 Rower: 22 188 188 1		
Natwork Use the form below if you'd like to set manual network settings. Use DHCP: Ves * No IP address: 122.188.50 122.188.50 50 Network mark: 255.255.00 122.188.188.10 1	Network Administration	
Use the form below if you'd like to set manual network settings. Use DHCP: Vs * No Padress: 192. 188. 188. 50 Network mark: 255. 255. 0 Result: 192. 188. 188. 1		
IP address IB8 B0 1122 186 160 Network mask: 255 255 255 255 0 Router: 102 186 1		
192 168 168 50 Network mask: 255 255 255 25 0 Router: 192 168 188 1		
192 168 168 50 Network mask: 255 255 255 25 0 Route: 192 168 168 1	IP address:	
255 255 255 0 Router: 192 165 168 1		
Router: 192 156 156 1	Network mask:	
192 - 168 - 168 - 1	255 . 255 . 255 . 0	
Save	192 . 168 . 168 . 1	
Sare	Paul	
	Save	
	© 2016 MutLab Inc. version: 1.4.8	

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).

Administration r Accounts ate a new User Account Or select a User to edit:	Muxlab Networ	Controller (500811)	Language:	Englis Lo
r Accounts ate a new User Account Or select a User to adit: password: passw	Products	Settings Software Update	Help	
Name • Name • Name • Seasontd • film new password • trype: • tore data • tore data • tore the unit the selected data file • tore file • tore data • tore the unit the selected data file • tore file • tore data	Network	Administration		
<pre>rName password: passw</pre>	User Accounts			
Appleter Delete tore data Increase file cofy file: Choose file No file chosen RNING I You MUST FIRBT set the IP address of this controller using the same as the controller this backup file come from !!! store	User Name new password:		•	
Logs alp file	User Type: Create Updat			
kup data kup data and save it in a file atup Logs all logs in a zip file	Specify file: Cr	se file No file chosen	ing the same as the controller this backup file come from !!	
kup the data and save it in a file tup tug	Restore			
Logs al logs in a zip file	Backup data Backup the data Backup	nd save it in a file		
vninad Loos Delete Loos	Get Logs	o file		
	Download Logs	Delete Logs		

Figure 267: Settings Screen: Administration Tab

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 500755-AMP

Product Screen

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

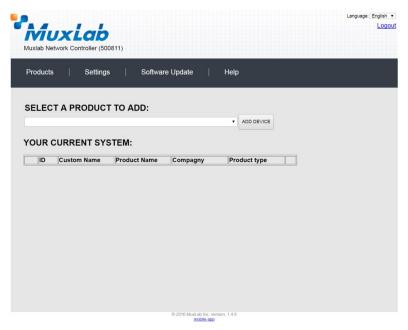


Figure 270: Products Screen – Initial View

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 271).

CT TO ADD:		ADD DEVICE		
		ADD DEVICE		
rol Panel (500816-I				
		uct Type		
	1758/759) 500757) 265 (500762))	1758/759) 500757) 265 (500762)	1758/759) uct Type 100757) 265 (500762)	1758/759) uct Type 2000 100757) 265 (500762)

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 271), without a product being added.

Reversion (500811)	Language: English v
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP (500752/753/754/755/756) YOUR CURRE D Custom Name: Setup 1 OK CANCEL	
© 20%6 Madiab file: version: 3.4.8 mobile age	

Figure 272: Products Screen – Naming a Product

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

Muxiab Network Controller (500811) Products Settings Software Update Help SELECT A PRODUCT TO ADD: V ADD DEVICE YOUR CURRENT SYSTEM:
ADD DEVICE
YOUR CURRENT SYSTEM:
ID Custom Name Product Name Compagny Product type
X 1 Setup 1 Hom Over IP (500752/753/756/756/756/7 Muxlab 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).

Muxlab Network	Controller (500811)	Do you want	58.50 says: to load previous stor	ed device list ?	Cancel	Language	e: English Loge
Products	Settings	Softwa	re Update	Help			
	PRODUCT : i Over IP (50075	2/753/754/75	5/756) Muxla	ab Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Set-up Modify any availab • Automatic	le settings and click	Save to apply you	ır changes				
			© 2016 MuxLab In				

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. 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 275).

Muxlab Network C	Controller (50081	1)				Lar	iguage: Engl
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdmi			5/756) Muxla	ab Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Modify any availabl Automatic Launch discovery	O Manual						
			© 2016 MuxLab In	c. version: 1.4.8			

Figure 275: 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 276). 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 277 (orange highlighted fields).

	_								Language	
Ń	โบง	Lab								Lo
		Controller (500	311)							
Produ	ucts	Settings	∣ Softv	ware Update	Help					
				· ·						
SEL	FCTFD	PRODUCT	г:							
				/755/756) Mu	xlab Matrix)	Virtual				
octup	p i i i i i i i i i	1 6101 11 (00	01021001104	100/100/1 Mu	Alaw Matrix	· ····uur				
s	Set-up	Matrix	Video Wall	RS-232	IR		Firmware			
Set-u	p									
Modify		ble settings and c	lick Save to apply	your changes						
Modify Au	y any availat	O Manual	lick Save to apply	your changes						
Modify Au Laun	ý any availat utomatic nch discovery	O Manual	ick Save to apply	your changes						
Modify Au Laun	y any availat utomatic	O Manual	lick Save to apply	your changes						
Modify a Au Laun Displa	ý any availat utomatic nch discovery	Manual	lick Save to apply	your changes IP address	MASK	DHCP	DIP			
Modify a Au Laun Displa	ý any availat utomatic nch discovery ay (1 RX)	Manual		IP address	MASK 255.255.255.0		DIP	Detail		
Modify Au Laun Displa Port#	y any availat utomatic nch discovery ay (1 RX) Name	Manual	MAC address	IP address				Detail		
Modify au Laun Displa Port# 0	y any availat utomatic nch discovery ay (1 RX) ! Name TX1	Manual	MAC address	IP address				Detail		
Modify au Laun Displa Port# 0	y any availat utomatic nch discovery ay (1 RX) Name	Manual	MAC address	IP address				Detail		
Modify au Laun Displa Port# 0 Source	y any availat utomatic nch discovery ay (1 RX) ! Name TX1	Manual	MAC address	IP address			Reboot	Detail		
Modify au Laun Displa Port# 0 Source	y any availat utomatic nch discovery ay (1 RX) Name TX1 ce (1 TX)	Manual	VAC address 00-08-78-00-7D-2A	IP address 192.168.168.72	255.255.255.0		Reboot	Detail		
Modify Au Laun Displa Port# 0 Source Port#	y any availat utomatic ach discovery ay (1 RX) Name TX1 Name TX1	Manual	VAC address 00-08-78-00-7D-2A VAC address	IP address 192.168.168.72	255.255.255.0 MASK		Reboot			

Figure 276: Products Screen – Set-up Tab

_									L	.anguage:	11111
	Network Con	ntroller (50081	11)								Log
Produc	cts	Settings	Softv	vare Update	Help						
		RODUCT		755/756) Mu	ıxlab Matrix	Virtual					
Set	t-up	Matrix	Video Wall	RS-232	IR	Fin	nware				
Set-up Modify a	any available s	ettings and clic	k Save to apply y	our changes							
Modify a Auto	omatic O	ettings and clic Manual	k Save to apply j	/our changes							
Modify a Auto	omatic O	, in the second s	k Save to apply y	vour changes							
Modify a auto Launch	omatic o n discovery r (1 RX)	Manual	k Save to apply y	rour changes IP address	MASK	DHCP DIP					
Modify a • Auto Launch Display Port# N	omatic o n discovery r (1 RX)	Manual Ma		, ,	MASK 255 255 255 0		Reboot	Cancel	Detail		
Modify a • Auto Launch Display Port# N	omatic O n discovery r (1 RX) Vame RX1	Manual Ma	AC address	IP address				Cancel	Detail		
Modify a Auto Launch Display Port# N 0 F	matic o n discovery r (1 RX) Vame RX1 (1 TX)	Manual M.	AC address	IP address			Reboot	Cancel	Detail		
Modify a Auto Launch Display Port# N Source Port# N	matic o n discovery r (1 RX) Vame RX1 (1 TX)	Manual M. O	AC address 0-08-78-00-7D-2A AC address	IP address 192.168.168.72	255.255.255.0	2	Reboot	Cancel	Detail		
Modify a Auto Launch Display Port# N Source Port# N	omatic o n discovery r (1 RX) Name RX1 (1 TX) Name	Manual M. O	AC address 0-08-78-00-7D-2A AC address	IP address 192.168.168.72	255.255.255.0 MASK		Reboot		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).

	Network Con	troller (500811)					
Prod	ucts	Settings Soft	ware Update	Help			
	ECTED PF p 1 : Hdmi O	ver IP (500752/753/754					
5	Set-up	Matrix Video Wall	RS-232	IR	Firmy	vare	
	utomatic O	Manual					
Laun		Manual					
Laun Displa	ich discovery	Manual MAC address	IP address	MASK	DHCP DIP		
Laun Displa	ay (1 RX)			MASK 255 255 255 0		Reboot Detail	UPDATED
Laun Displa Port# 0	ay (1 RX) Name	MAC address				Reboot Detail	UPDATED
Laun Displa Port# 0 Source	ay (1 RX) Name RX1	MAC address				Reboot Detail	UPDATED
Laun Displa Port# 0 Sourc	ay (1 RX) Name RX1 ce (1 TX)	MAC address 00-08-78-00-70-2A	192.168.168.72	255.255.255.0		Reboot Detail	

Figure 278: Saving Name Changes

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

Device Detail			Device Detail
Custom Name: TX1 Model: 500755-TX MAC Address: 00-06-78-0 IP Address: 192.168.16 FW Version: 21.1 Group IP: 239.255.1.1 Video Resolution: Not Applical Audio Format: 44.1 khz 44.1 khz	0-8A-66 8.111 (DHCP: OFF) 8		Custom Name: RX1 Model: 500755-RX AMP MAC Address: 00-08-76-00-8A-60 IP Address: 192-168.168.61 (DHCP: OFF) FW Version: 2.1.1 Group IP: 239.255.1.1 Video Resolution: NotApplicable Audio Format: 44.1 khz
Volume:	-0	+ (0)	Volume: _ 🗐 🔶 🔶
Secondary volume attenuation	n: _	Ξ +(0)	Bass: _ = + (0)
Bass:		+ (0)	Treble: _ = + (0)
Treble:		+(0)	Save Cancel
Input select: Microphone type:	Input #1 Microphone electret	*	
Microphone gain:	-0	+(0)	
Microphone bass:		+ (0)	
Microphone treble:		+ (0)	
Microphone detection level:	-0	+ (0) [0=off]	
Save Cancel			

Figure 279: 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 280).

						Language:	E
	Controller (50081	1)					
Products	Settings	Softwar	re Update	Help			
	PRODUCT						
Setup 1 : Hdn	ni Over IP (500)	752/753/754/75	5/756) Muxla	ab Matrix Vir	tual		
Cab up		Video Wall	RS-232	IR	Firmware		
Set-up	Matrix	video wall	R5-232	IR	Firmware		
Connect your disposition to make the		sources below. Onc	e you've selected t	the displays you wa	ant to change, use th	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	S]	
RX1		. v	> Current ad	tive Preset:			
RX1		• •	No preset s	elected	▼ ID: 1		
			> Save curre	ent connections in follo	owing preset:		
					•		
			> Save curr	ent connections as ne	w preset:		
					Create		
			> Delete foll	owing preset:			
Connect					*]	
Connect							
			© 2016 MuxLab Inc mobile				

Figure 280: 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 281).

Products	Settings	Softwar	e Update	Help			
	D PRODUCT ni Over IP (500	-	5/756) Mux	dab Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your dis oottom to make t		sources below. Onc	e you've selecte	d the displays you wa	nt to change, use the	e "Connect" butt	ton at the
2X1		Audio 1 T Car	ncel	> Current active Preset: No preset selected	•	D: 1	
X 1		Audio 1 • Car	ncel			D: 1	
8X1		Audio 1 V Car	ncel	No preset selected	ons in following preset:	D: 1	

Figure 281: 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 282).

Muxlab Network		11)				Language	English
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdm		-	55/756) Muxla	ıb Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th		sources below. One	ce you've selected t	the displays you wa	ant to change, use t	he "Connect" button at the	
DISPLAY		SOURCE		PRESET	s	7	
RX1		Audio 1 V	CESS > Current ac		▼ ID: 0		
				ent connections in folle	owing preset:		
			> Save curre	ent connections as ne	w preset: Create		
Connect			> Delete foli	owing preset:	T		
			© 2016 MuxLab Inc mobile				

Figure 282: Change Successful

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 v ID: 0
 > Save current connections in following preset: > Save current connections as new preset:
Preset 1 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).

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 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:
[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 285: Delete Preset

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

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

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:			
[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 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).

PRESE	тѕ	
> Current active Preset:		
[1] Preset 1	•	ID: 1
> Save current connections in fo	llowing prese ▼	
[1] Old Preset		
	Create	
> 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:				
[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 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 Extender 500755-AMP does not support the Video Wall feature. Clicking on this tab will display the following screen (Figure 290).

	Lab					Language: E
Products	Controller (5008		e Update	Help		
	D PRODUCT ni Over IP (500	: 752/753/754/75	5/756) Muxla	ab Matrix Virl	tual	
Set-up	Matrix	Video Wall	R5-232	IR	Firmware	
NO devices cor	npatible with video	wall features found	1!			
NO devices cor	npatible with video	wall features found	11			

Figure 290: 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 291). This is done either through the Network Controller or directly by connecting a PC to the RS-232 port of any transmitter or receiver.

Products Settings Software Update Help SELECTED PRODUCT : Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Value your device's RS-232 connection settings here. Select a device: • • • • Baud rate: • • [Data bits: 8 Stop bits: 1] Parity : NONE • • • • Pheader in data: * • • [Data bits: 8 Stop bits: 1] Parity : NONE • • • • IP Feedback ON: * • • • • • Data to send in HEX (ex: A013B155C5) Data feedback received in HEX Send	Muxlab Network C		11)				Language: Er
Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Vpdate your device's RS-232 connection settings here. Select a device: • • Baud rate: • • IP header in data: • IP header in data: • IP header in data: • IP feedback ON: • IP Geedback c: • Data to send in HEX (ex: A013B155C5) Data feedback received in HEX	Products	Settings	Softwar	re Update	Help		
Update your device's RS-232 connection settings here. Select a device: Baud rate: IData bits: 8 Stop bits: 1] Parity : NONE Feedback Feedback Feedback Feedback Feedback received in HEX				5/756) Muxl	ab Matrix Virl	tual	
Select a device: Baud rate: [Data bits: 8 Stop bits: 1] Parity : NONE = Peedback ON: Peedback: Bave Data to send in HEX (ex: A013B155C5) Data feedback received in HEX	Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Data to send in HEX (ex: A013B155C5) Data feedback received in HEX	Select a device - Baud rate: - IP header in d - Feedback ON	ata: ⊘		8 Stop bits: 1]	Parity : NONE *		
Data feedback received in HEX							
			,				
Send	Data feedback	received in HE)	ĸ				
	-						

Figure 291: 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 292). The IP Feedback field should also contain the IP address of the Network Controller.

Muxlab Network Cor		1)				Language	English
Products	Settings	Softwa	re Update	Help			
SELECTED PI Setup 1 : Hdmi O		-	55/756) Muxl	ab Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device's Select a device:	Audio 1 V	Journal of the					
- Baud rate: - IP header in data - Feedback ON: - IP Feedback:	9600 V a: V 192.168.168.5		8 Stop bits: 1] Parity : NONE *			
Save Data to send in H	EX (ex: A013	B155C5)					
Data feedback red	eived in HEX	(
Send							

Figure 292: 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 293) via the Network Controller. IR pass-through mode is also supported using an IR handheld remote as the control source.

Auxlab Network (Lab Controller (50081	11)				Language: Ei
Products	Settings	Softwa	re Update	Help		
	PRODUCT i Over IP (500)		55/756) Muxla	ab Matrix Virt	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Select a device - IR Mode: - IP Feedback:	• •	_				
Save	HEX (ex: A013	B155C5)				
Data to send in						
Data to send in						
	ed in HEX					

Figure 293: 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 294).

	Settings	Softwa	re Update	Help		
		0752/753/754/75	5/756) Muxla	b Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your dev	ice's IR settings her	e.				
Select a devic	e: Audio 1 v					
- IR Mode:	Emitter *					
- IP Feedback	c: 0.0.0.0					
Save						
	in HEX (ex: A013	3B155C5)				
Data to send						
Data to send						

Figure 294: 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 295).

Muxlab Network Co		1)					
Products	Settings	Sof	ware Update	Help			
SELECTED P Setup 1 : Hdmi (/755/756) Muxla	b Matrix Vi	rtual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
		chi	dify any available settin inges Displays (RX) hoose file No file chose	Source (TX)	e to apply your		
			Apply				
DISPLAY			SOL	JRCE			
RX1 (500755-RX AM	P)	v2.1.1	TX1	(500755-TX AM	P)	v2.1.1	

Figure 295: 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 296) 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.

Network Administration Network Use the form below if you'd like to set manual network settings. Use bHCP: Yes P address: 192 192 198 192 25 25 25	Muxlab Network	Language: Controller (500811)	English Loge
Network Ves No Use DHCP: Ves No IP address: 25 255 252 252 255 Router: 112 118 118	Products	Settings Software Update Help	
Network Ves No Use DHCP: Ves No IP address: 25 255 252 252 255 Router: 112 118 118			
Use the form below if you'd like to set manual network settings. Use DHOP: IP address: 1202 [186] 188] 50 Network mast: 256 [256] 255] 0 Reader: 192 [188] 188] 1	Network	Administration	
Use DHCP: Yes No Padoress: 112 188 188 50 Network mate: 255 255 255 0 Router: 112 188 188 1	Network		
IP address: 112_168_168_50 Network mata: 255_255_255_0 Router: 112_168_168_1	Use the form below	/ if you'd like to set manual network settings.	
192 168 168 50 Helerott Rast: 255 255 25 25 25 Route: 192 168 168 1	Use DHCP:	Yes No	
192 168 168 50 Helerott Rast: 255 255 25 25 25 Route: 192 168 168 1	ID address:		
Nebrock maak: 256 255 255 0 Rozer: 192 168 168 1		50	
255 255 25 0 Rozer: 192 188 188 1			
Rozar: 192 168 168 1		0	
	Router:		
Save	192 . 168 . 168 .	1	
Save			
	Save		

Figure 296: 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 297).

Muxlab Network Co	ontroller (500811)				Language: Englisi
Products	Settings	Software Update	Help		
Network	Administration				
User Accounts					
User Name new password:	Account Or select a	User to edit:	¥		
Confirm new password User Type:		•			
Create Update	Delete				
	the selected data file				
Specify file: Choose		addrass of this controller u	sing the same as the s	ontroller this backup file come	from III
Restore			sing the same as the c		
Backup data Backup the data and	save it in a file				
Backup					
Get Logs Get all logs in a zip t	ile				
Download Logs	Delete Logs				

Figure 297: Settings Screen: Administration Tab

Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 298). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

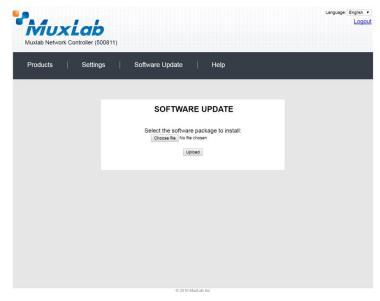


Figure 298: Software Update Screen

Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 299).



Figure 299: Help Screen

Extender Model 500762

Products Screen

Once the user has logged in, the **Products** screen will appear (Figure 300).

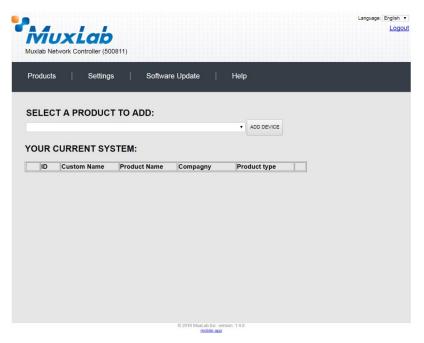


Figure 300: Products Screen – Initial View

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 301).

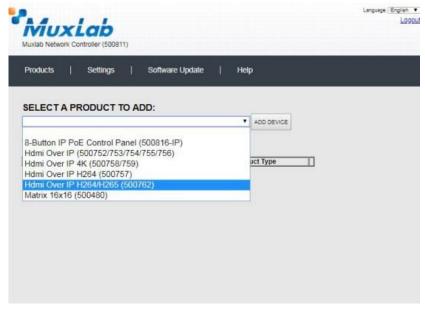


Figure 301: Products Screen – Selecting a Product

A dialog box appears asking the user to provide a custom name for the selected product (Figure 302). 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 300), without a product being added.

Mudab Network Controller (500811)	Language: English * Logout
Products Settings Software Update Help	
SELECT A PR Muxlab: Hdmi Over IP H264/H265 (500762) Hdmi Over IP H2 Custom Name: YOUR CURRE Custom Name: ID Custom OK CANCEL	
© 2017 Weils hours for 150 notik ag	

Figure 302: Products Screen – Naming a Product

The custom name has been added to YOUR CURRENT SYSTEM (Figure 303).

Muxlab Ne	etwork Controller (5	00811)				Languag	e: Englisi Loi
Product	s Settin	gs Softw	are Update	Help			
	T A PRODUC			ADD DEVI	CE		
D X 2	Custom Name Final_762	Product Name Hdmi Over IP H264/H265 (500762)	Compagny ^{Muxlab}	Product type Matrix Virtual	Select		
× 2	mai_roz	H264/H265 (500762)	Imuxiao	postrix virtual	Select		
			© 2017 Mitstablie.u mobile ap				

Figure 303: 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 304).

uxlab Network	a construction of the			ОК	Cancel	
Products	Settings	Software Upoa	ate He	ыр		
	PRODUCT Imi Over IP H	Г: 1264/Н265 (500762) Мі	uxlab Matrix \	Virtual		
Set-up	Matrix	Multiview/Videovail	R5-232	IR	Firmware	
Set-up Select the type	of setup to use.					
* Automatic	O Manual					

Figure 304: 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** of 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 305).

Products	Settings	Software Upda	ite He	lp		
ELECTED		264/H265 (500762) Mu	ixlab Matrix \	/irtual		
Set-up	Matrix	Multiview/Videowali	R5-232	IR	Firmware	
Set-up Modify any availa	able settings and	click Save to apply your change	65			
* Automatic	O Manual					
Leunch discover	Υ	Add Remote	Source			

Figure 305: 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 306).

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 307 (orange highlighted fields).

	ib Network C									L
Proc	ducts	Settir	igs So	ftware Updati	е не	lp				
Fina	.ECTED		CT : IP H264/H265 (Multh/iew/)		uxlab Matri PS-232	x Virtual	Firmware			
Set-		le settings a	nd click Save to app	ly your changes						
Modif		le settings a O Manual	nd click Save to app	ly your changes						
Modif	fy any availab	1000		ly your changes ADD Remote So	urce					
Modif + A	fy any availab Automatic	1000			urce					
Modif + A Lao Disp	fy any availab Automatic Inch discovery	1000			urce	GATEWAY	DHCP D	P		
Modif + A Lau Disp Porta 0	fy any availab Actomatic Inch discovery I lay (3 RX) # Name	1000	MAC address 26-08-5A-4C-A7-47	ADD Remote So IP address 192 198 198 89	MASK 265.255.255.0	192.168.168.1	DHCP D	P	Detail	
Modif Lao Disp Porta 0 0	fy any availab Inch discovery Ilay (3 RX) # Name RX-35-88.4 RX-62-19-1	O Menual	MAC eddress 26-09-5A-4C-47-47 C2-19-3F-7D-9D-AD	ADD Remote So IP address 192 198 198 98 192 198 198 98	MASK 265.255.255.0 265.256.255.0	192.168.168.1 192.168.168.1			Detail Detail	
Modif + A Lau Disp Porta 0	fy any availab Inch discovery Ilay (3 RX) # Name RX-35-88.4 RX-62-19-1	 Menual A-4C-A7-47 	MAC address 26-08-5A-4C-A7-47	ADD Remote So IP address 192 198 198 98 192 198 198 98	MASK 265.255.255.0	192.168.168.1	0.0	Reboot		
Modit + A Lau Disp Porta 0 0	fy any availab lutematic inch discovery itay (3 RX) # Name RX-35-85 RX-22-15- RX-42-81-5	O Menual	MAC eddress 26-09-5A-4C-47-47 C2-19-3F-7D-9D-AD	ADD Remote So IP address 192 198 198 98 192 198 198 98	MASK 265.255.255.0 265.256.255.0	192.168.168.1 192.168.168.1		Reboot Reboot	Detail	
Modifi Lato Disp Porta 0 0 0 Sour	fy any availab keomatic inch discovery Hay (3 RX) # Name RX-35-85- RX-C2-19- RX-42-61-6 rcce (2 TX)	O Menual	MAC address 26-86-54-42-47-47 C2-16-37-70-80-40 42-61-90-70-68-4C	ADD Remote So IP address 192,160,160,96 192,108,166,96 192,168,160,97	MASK 265.255.255.0 265.256.255.0 255.255.255.0	192 168 168 1 192 168 168 1 192 168 168 1	000	Reboot Reboot Reboot	Detail	
Modifi A Lato Disp Porta 0 0 0 Sour Porta	fy any availab ketomatic inch discovery itay (3 RX) # Name RX-32-19- RX-42-61-6 rce (2 TX) # Name	O Menual	MAC address 39:08:54:42:79:09 21:19:37:79:09:40 42:61:90:70:48:40 MAC address	ADD Remote So IP address 192, 168, 168, 96 192, 168, 168, 96 192, 168, 168, 97 IP address	MASK 265.265.265.0 265.265.265.0 265.265.265.0 MASK	192 108 100 1 192 108 108 1 192 109 100 1 192 109 100 1	DHCP D	Reboot Reboot Reboot	Detail Detail	
Modifi Lato Disp Porta 0 0 0 Sour	fy any availab keomatic inch discovery Hay (3 RX) # Name RX-35-85- RX-C2-19- RX-42-61-6 rcce (2 TX)	O Menual	MAC address 26-86-54-42-47-47 C2-16-37-70-80-40 42-61-90-70-68-4C	ADD Remote So IP address 192,160,160,96 192,108,166,96 192,168,160,97	MASK 265.255.255.0 265.256.255.0 255.255.255.0	192 168 168 1 192 168 168 1 192 168 168 1	000	Reboot Reboot Reboot	Detail Detail	

Figure 306: Products Screen – Set-up Tab

ĥ	lux	lab	,						Language	L
Muxda	ib Network Co	ontroller (5)	00811)							
Proc	ducts	Settin	gs (50	ftware Updati	e He	ip				
SEL	ECTED P	RODU	CT :							
Fina	1_762 : Hdr	ni Over I	P H264/H265	(500762) M	uxlab Matri	x Virtual				
	Set-up	Matrix	Multiview/	/Ideoviall	R5-232	(118	Firmw	are.		
		settings an	d click Save to app	ly your changes						
Modif	ty any available	0.000-5000		ly your changes ADD Remote So	urce					
Modif + A	fy any available Automatic	0.000-5000		-	urce					
Modif + A Lau Disp	fy any available Automatic Inch discovery	0.000-5000		-	MASK	GATEWAY	DHCP	DIP		
Modif + A Lau Disp PortA	ty any available Automatic Inch discovery Ilay (3 RX)	0.000-5000	MAC address 20-88-5A4C-A7-47	ADD Remote So IP address 192.168.169.98	MASK 255 255 255 0	192,168,168,1	DHCP	DP	t Detail	
Modit Lau Disp PortA 0 0	ty any available futomatic inch discovery illay (3 RX) f Name RG-1 RX-2	0.000-5000	MAC address 20-81-54-4C-47-47 C2-10-3F-70-9D-40	ADD Remote So IP address 192.168.169.96 192.158.169.96	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1	0	Reboo	t Detail	
Modif + A Lau Disp PortA	fy any available futomatic Inch discovery Nay (3 RX) # Name Ro-1	0.000-5000	MAC address 20-88-5A4C-A7-47	ADD Remote So IP address 192.168.169.96 192.158.169.96	MASK 255 255 255 0	192,168,168,1	0	Reboo	t Detail	
Modif Lau Disp PortA 0 0	ty any available futomatic inch discovery illay (3 RX) f Name RG-1 RX-2	0.000-5000	MAC address 20-81-54-4C-47-47 C2-10-3F-70-9D-40	ADD Remote So IP address 192.168.169.98 192.158.169.96	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1	0	Reboo	t Detail	
Modif Lau Disp Porta 0 0 0 Sour	fy any available Automatic In ch discovery May (3 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-3 RX-3 RX-3 RX-3 RX-3 RX-3	0.000-5000	MAC address 39-09-54-4C-47-47 C2 19-37-70-00-40 42-81-90-70-01-4C	ADD Remote So IP address 192.168.169.98 192.158.169.96	MASK 255 255 255 0 255 255 255 0	192,168,168,1 192,168,168,1 192,168,168,1	000	Reboo Reboo Reboo	t Detail	
Modif Lau Disp Porta 0 0 0 Sour	fy any available futomatic inch discovery flay (3 RX) f Name R0-1 R0-2 R0-3	0.000-5000	MAC address 20-81-54-4C-47-47 C2-10-3F-70-9D-40	ADD Remote So IP address 192,160,160,90 192,160,160,90 192,160,160,97	MASK 255 255 255 D 255 255 255 D 255 255 255 D	192.168.168.1 192.168.168.1	0	Reboo Reboo Reboo	t Detail t Detail	
Modifier A	fy any available futomatic inch discovery itay (3 RX) # Name RX-2 RC-3 rce (2 TX) # Name	0.000-5000	MAC address 2949 544C A794D A 21 1937 594D A 42 81 90 70 61 4C MAC address	ADD Remote So IP address 192,168,168,98 192,168,168,97 192,168,168,97 IP address	MASK 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	000	DIP	t Detail t Detail	

Figure 307: Name Editing

To save all name changes, click on **Save**. A green UPDATED tag will appear next to newly changed names (Figure 308).

h	<i>i</i> ux	Lak	,						Langua	e English
		Controller (5								
Pro	ducts	Settin	ngs Sol	ftware Update	e He	ip				
Fina	al_762 : H		IP H264/H265							
	Set-up	Matrix	Multiview/\	/Ideowali	RS-232	IR	Firmware			
		ble settings a	nd click Save to app	ly your changes						
Modi	ify any availa	O Manual		ly your changes ADD Remote So	urce					
Modi Lau	ify any availa Automatic	O Manual			utoe					
Modi	ify eny availa Automatic anch discoven	O Manual			utoe MASK	GATEWAY	DHCP DIP			
Modi Lau Disp Porta	ify any availa Automatic unch discoven play (3 RX)	O Manual	(ADD Remote Sou P address	MASK 265 265 265 0	192,168,168.1	DHCP DIP	Reboot	Detail	UPDATE
Modi Lau Disp Ports 0 0	ify any availa Automatic unch discover blay (3 RX) # Name RX1 R32	O Manual	MAC address 38-88-5A-4C-A7-47 C2-19-3F-7D-9D-A0	ADD Remote So P address 192 168 168 98 192 168 168 96	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1		Rebool	Detail	UPDATE
Modi Lau Disp Porta	ify eny availa Automatic anch discover olay (3 RX) # Name RX1	O Manual	MAC address 28-86-5A-4C-47-47	ADD Remote So P address 192 168 168 98 192 168 168 96	MASK 265 265 265 0	192,168,168.1	10 0		Detail	
Modi Lau Disp Porta 0 0	ity eny availa Actomatic unch discovery blay (3 RX) # Name RX1 RX1 RX2 R03	O Manual	MAC address 38-88-5A-4C-A7-47 C2-19-3F-7D-9D-A0	ADD Remote So P address 192 168 168 98 192 168 168 96	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1		Reboot	Detail	UPDATE
Modi Lau Disp Porta 0 0	ify any availa Automatic unch discover blay (3 RX) # Name RX1 R32	O Manual	MAC address 38-88-5A-4C-A7-47 C2-19-3F-7D-9D-A0	ADD Remote So P address 192 168 168 98 192 168 168 96	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1		Reboot	Detail	UPDATE
Modi Jusp Ports 0 0 0 Sources	ity eny availa Actomatic unch discovery blay (3 RX) # Name RX1 RX1 RX2 R03	O Manual	MAC address 38-88-5A-4C-A7-47 C2-19-3F-7D-9D-A0	ADD Remote So P address 192 168 168 98 192 168 168 96	MASK 255 255 255 0 255 255 255 0	192.168.168.1 192.168.168.1		Reboot	Detail	UPDATE
Modi Jusp Ports 0 0 0 Sources	ity eny availa Automatic anch discoven olay (3 RX) # Name Rot Rot Rot Rot Rot Rot Rot Rot Rot Rot	O Manual	MAC address 20-89-5A-4C-A7-47 72-19-37-70-90-40 42-81-90-70-89-4C	ADD Remote Sol P address 192 108 105 98 192 108 105 96 192 108 105 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 Ports 0 0 0 Sour	ity any availa Automatic unch discoven blay (3 RX) # Name RX1 RX2 RX2 RX2 RX2 RX2 RX2 RX2 RX2 RX2 RX2	O Manual	MAC address 39:09:54-42-74-47 C2:19:37:70:09:46 42:81:30:70:09:46 MAC address	ADD Remote Sot P address 192 168 168 36 192 168 168 36 192 168 168 37 P address	MASK 265 265 265 0 265 265 265 0 265 265 265 0 MASK	192.168.168.1 102.168.168.1 192.166.166.1 GATEWAY	DHCP DIP	Reboot Reboot	Detail Detail	UPDATE
Modi Lau Disp Ports 0 0 0 Sour Ports 1	ity any availa Automatic unch discoven Jalay (3 RX) # Name RX1 RX2 RX2 RX2 RX3 RX3 RX3 RX3 RX3 RX3 RX3 RX3 RX3 RX3	O Manual	MAC address 20-80-64-62-47-47 C2-19-07-70-80-40 42-81-80-70-80-40 MAC address 00-23-34-48-06-89	ADD Remote Sol P address 192.108.109.98 192.108.109.96 192.108.109.97 IP address 192.108.109.94	MASK 265 265 265 0 265 265 265 0 265 265 265 0 MASK 265 265 265 0	192.100.100.1 192.108.108.1 192.108.108.1 192.108.108.1 GATEVVAY 192.108.108.1	DHCP DIP	Reboot Reboot	Detail Detail Detail	UPDATE

Figure 308: 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 306. This will bring up a popup menu to fill-in relating to the remote source, as shown in Figure 309, and followed by Figure 310.

odel:	Select a product model ·	Model:	TX-Other T
ustom Name:	Enter a name of your choice	Custom Name:	Enter a name of your choice
MAC 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 309: Add a remote source Figure 310: 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 310.
- 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 311 for TX, and 312 for RX).

20

Custom Name:	DI	
Model:	TJI-500762	
MAC Address	00-22-33-4B	-50-09
IP Address:	192.168.168	94 (DHCP: OFF)
FW Version:	1.1.2	
Video Resolution:	1920x1080	
CPU Usage (%):	22	
Memory Usage (bytes):	357548/383	124
Birk LED	On Off	
Factory Reset:	Reset	
	The solution is the solution of the	
Mdeo Codec:	H.254-HigH	Profile *
Video Output Resolution	1920-1020	•
Video Bitrate control:	CBR	•
Video Bit Rate (kbps):	16000	[32-32000]
Video Frame per seo:	60	(5-60)
Group of Picture:	60	[5-300]
Audio Input:	HDBI	•
Audio Codeo:	AAC	
Audio Bit Rate (bps):	320000	[48000-320000]
Audio frequency (Hz):	43333	
and the second second second		
RTMP RTSP HLS	TS FLV N	ULTICAST
Multicast : Ena	bled +	
Huttigast IP - 220	100.0.17	
Nulticast Port : 370		
	10	

MAC Address: P Address: FW Version: Mdeo Resolution:	RX-500762 36-88-5A-4C-A7-47 192.168.168.98 (DHCP: OFF) 1.2.3
P Address: FW Version: Mdeo Resolution:	192.168.168.98 (DHCP: OFF)
FW Version: Ideo Resolution:	
deo Resolution:	1.2.3
	1920 x 1072
CPU Usage (%):	
vlemory Usage (bytes):	
Blink LED:	On Off
Factory Reset:	Reset
Multicast IP : 239.1 Multicast Port : 37000	
Save Cancel	

Figure 311: TX Device Detail Dialog

Figure 312: 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 313).

luxlab Network (Controller (500811))					
Products	Settings	Software (Jpdate	Help			
	PRODUCT : ami Over IP H2	64/H265 (50076	2) Mux	lab Matrix Vir	tual		
Set-up Connect your disp	Mutrix.	Multiview/Vide		R5-232	IR. u want to change	Firmwa	
Connect your disp		ources below. Once y	vou've sele				
Connect your disp at the bottom to ma	lays to the desired s ake the connections.	ources below. Once y	vou've sele	cted the displays you	want to change PRESETS set:	e, use the "Conn	
Connect your disp at the bottom to mi DISPLAY	lays to the desired a ake the connections.	ources below. Once y	you've sele OL	icted the displays yo	want to change PRESETS set:		
Connect your disp at the bottom to mi DISPLAY RX1 RX1 RX2	lays to the desired s ake the connections. SOURCE TX1 •	ources below. Once t PROTOC	you've sele OL	cted the displays you	u want to change PRESETS set: d	e, use the "Conn * ID: D	
Connect your disp at the bottom to m DISPLAY	lays to the desired s ake the connections. SOURCE TX1 * TX1 *	PROTOC AUTO AUTO	you've sele OL •	cted the displays you > Current active Pre- No preset selected	PRESETS set: d ections in following	e, use the "Conn • ID: D preset: •	

Figure 313: 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 314).

	Settings	Software	e Update	L)	Help			
	PRODUCT :					1.52		
nal_762 : He	imi Over IP H2	64/H265 (5007	(62) Mu	xlab	Matrix Vir	tual		
Set-up	Matrix	Multiview/W	ideowati	R	5-232	IR.	Firmware	
	to a fe the desided a					and the statement	, use the "Connect" buffs	
	ake the connections.	ources below. Onc	e you ve sei	ected th	e aispiays you	I want to change	, use the "connect" buth	90.
ISPLAY	SOURCE		PROTOCO)L		PRESE	15	
xt	TX2 *	Cancel	AUTO			active Preset:		
12	TX1 *	s anser	AUTO		No prese	tselected	* 10: 0	
900	T×1 *		AUTO	•	> Save cu	ment connections in	following preset:	
					1			
					> save ou	ment connections as	Create	
						ollowing preset:	Coreate)	

Figure 314: 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 315).

Muxdab Network	Controller (500811)	í.					
Products	Settings	Software	Update	Help			
	PRODUCT : dmi Over IP H26	64/H265 (50076	62) Mu	xlab Matrix Vir	rtual		
Set-up	Matrix	Multiview/Vid	eowall	RS-232	IR.	Firmwar	e:
Connect your disp at the bottom to m	lays to the desired so ake the connections.	ources below. Once	you've sel				
Connect your disp	ways to the desired so		you've sel				
Connect your disp at the bottom to m	lays to the desired so ake the connections. SOURCE	purces below. Once	you've sel	ected the displays yo	u want to change, PRESETS set:	use the "Conne	
Connect your disp at the bottom to m DISPLAY	lays to the desired so ake the connections.	purces below. Once	you've sel	ected the displays yo	u want to change, PRESETS set:		
Connect your disp at the bottom to m DISPLAY	isys to the desired so ake the connections. SOURCE TX2 * SUCCE	PROTOC	you've sel XOL	ected the displays you > Current active Pre- No preset selected	u want to change, PRESETS set. d	• ID: 0	
Connect your disp at the bottom to m DISPLAY RK1 RK2	Nays to the desired so are the connections. SOURCE TX2 • SUCCE TX1 •	PROTOC	you've sel COL •	ected the displays you - Current active Pre- No preset selected - Save ourrent consu	u want to change, PRESETS set. d	• ID: 0	

Figure 315: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 316) 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	D:	0
 > Save current connections in following preset: > Save current connections as new preset: 		
Preset 1 Create		
> Delete following preset:		

Figure 316: 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 317).

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 317: 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 318).

PRESETS
> Current active Preset:
[1] Preset 1 v ID: 1
> Save current connections in following preset:
> Save current connections as new preset:
Cleate
> Delete following preset:
L
[1] Preset 1

Figure 318: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 319).



Figure 319: 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 320).

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:			
TT	ิรเ	JCCE	SS

Figure 320: 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 321).

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 321: 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 322).

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

Figure 322: 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 323 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 323 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.

Settings RODUCT: il Over IP H264 Matrix		Muxlab Ma	Help rix Virtual		
i Over IP H264			rix Virtual		
			rix Virtual		
Matrix	Multiview/Videowal	85-232			
			IR	Firmware	
ideowall					
		Dist. 1 at			
a Name		ave Delete Cle	ar		
• Show Display	Show Sources	Connect Sto	p Reset		
: Step #1					
RX-500762	RX-500762	RX-500762			
Bottom Right #2	Top Left #3	Top Right #4			
ce. Double-click the	source for more set	tinas.			
TX-500762 Source 2					
	Name Show Display: Show Display: Show Display: Show Display: Show Display: Step #1 Ay Double-Click the Restorm Right gottom Rig	1 Name S 1 • Show Displays • Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image: Show Sources • Image: Show Sources 1 • Image:	1 Name Save Delete Cle 1 * Show Displays Show Sources 1 Cennect Sto 1 * Show Displays Show Sources 1 Cennect Sto 1 * Show Displays Show Sources 1 Cennect Sto 1 * Show Displays Show Sources 1 Cennect Sto 1 * Show Displays Show Sources 1 Cennect Sto 1 * Show Displays Show Sources 1 Cennect Sto 1 * Show Sources 1 Cennect Sto Sto Sto 1 * Show Sources * Show Sources	show Displays Show Sources Clear Show Displays Show Sources Connect Stop Reset Show Displays Show Sources Connect Stop Reset Stop Arr 100 arr	I wme Save Delete Clear * Show Displays Show Source Connect Stop Reset * Stop Reset

Figure 323: Multiview/Videowall Tab

The **"Config"** sub-section in Figure 323 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 323, 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 323. 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 324). Each display can

be resized on the grid by clicking and dragging the bottom right corner of the display (Figures 325). 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.

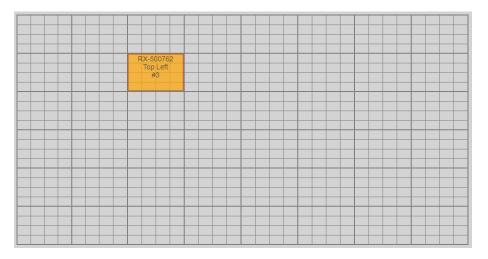


Figure 324 Placing displays

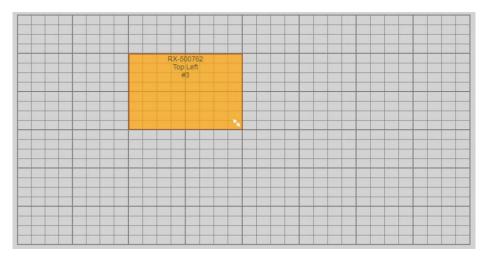


Figure 325 Sizing displays

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 326. 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.

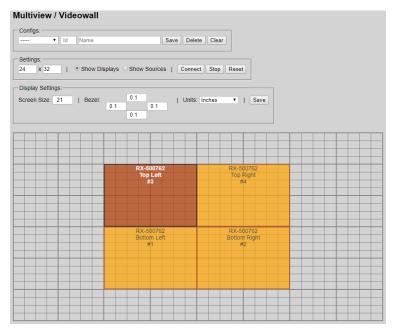


Figure 326 Configuring displays

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 327, 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 328. 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.

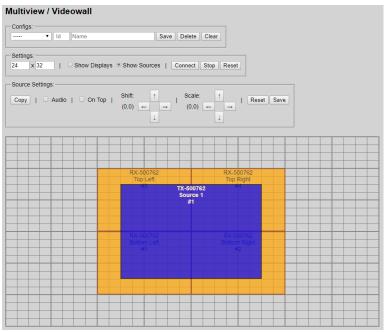


Figure 327 Adding Source Content to the Grid

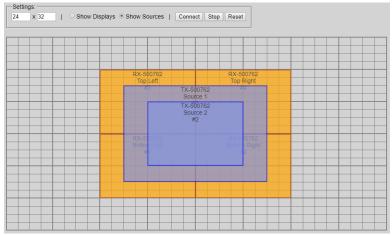


Figure 328 Adding more sources

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 329).

Muxlab Network Co	Lab ontroller (500811	1)				
Products	Settings	Software Update	Help			
-	ni Over IP H2	264/H265 (500762) Mu		irtual	-	
		Multiview/Videowall	RS-232	1R	Firmware	
Set-up	Matrix					
Update your device's	s RS-232 connect	tion settings here.				
		lion settings here.				
Update your device* Select a device: - Baud rate:	s RS-232 connect		ts: [†*]Parity: no	ne *		
Update your device* Select a device* - Baud rate: - IP Feedback:	s RS-232 connect		ts: [<u>† •</u>]Parity:[no	ne *		
Update your device* Select a device: - Baud rate:	s RS-232 connect		ts: [1*] Parity : [no	ne *		
Update your device* Select a device* - Baud rate: - IP Feedback:	s RS-232 connect	[Data bits: 💼 Stop bi	ts: <u>t =</u> Parity : not	ne #1		
Update your device* Select a device: Baud rate: - IP Feedback; Save	EX (ex: A013B1	[Data bits: 💼 Stop bi	ts: 1 • Parity : no	ne *		

Figure 329: 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 330).

						Language:	English
Muxi	13-16 No. 17-17-17-18						Lou
luxlab Network Cor	ntroller (500811)						
Products	Settings	Software Update	Help				
	-						
SELECTED PI				21.12			
final_762 : Hdm	i Over IP H20	54/H265 (500762) Mu	xlab Matrix Vi	irtual			
Set-up	Matrix	Multiview/Videowall	RS-232	IR	Firmware		
Update your device's	RS-232 connectio	o settings here					
		a second get the test					
Select a device:	TX2 *						
- Baud rate:							1
- Baud rate: - IP Feedback:	9500 *	[Data bits: e • Stop bit	(s. 1 * Parity : no	ne *			
- a recurrent	192.100.100.0						
Save							J
							1
	V /our A043046	5C5)					
Data to send in HE	A (6X: 4013B13						
Data to send in HE							
Data to send in HE Data feedback red							

Figure 330: 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 331).

Mux	Lab					Language	English Logo
duidab Network Ci	ontroller (50081	1)					
Products	Settings	Software Updat	te Help				
SELECTED F Final_762 : Hd		264/H265 (500762) N	fuxlab Matrix	Virtual			
Set-up	Matrix	Multiview/Videowall	R5-232	IR	Firmware		
Update your device Select a device:	's IR settings here						
- IR Mode: - IP Feedback:]
Save							i i
Data to send in H	IEX (ex: A013B1	155C5)					1
Send							
	100000						1
IR code received	I IN HEX						

Figure 331: 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 332).

Muxlab Network C	1040324-002			3		
Products	Settings	Software Updai	te Help			
SELECTED P	RODUCT					
		: 1264/H265 (500762) N	Auxlab i Matrix	Virtual		
11111_102.114		(000102) [1	interime l'interio	*11.564.61		
Set-up	Matrix	Multiview/Videowall	R5-232	IR.	Firmware	
Update your device	s IR settings here	e.				
Select a device:	TX2 *					
Science a device.	TAK T					
1	Disable *					
ID Moder	192.168.168	101				
- IR Mode: - IP Feedback:						
- IP Feedback:	102.100.104					
- IP Feedback:	102.100.100					 1
- IP Feedback:		155C5)				 1
- IP Feedback:		155C5)				
- IP Feedback:		155C5)				
- IP Feedback: Save		155C5)				
- IP Feedback: Save		155C5)]

Figure 332: 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 333).

ELECTED PROD								
inal_762 : Hdmi Ov	er IP H264/	H265 (5007	62) Muxlab	Matrix Virte	ıal			
Set-up	Matrix	Multiview/V	Ideowall	RS-232	IR		Firmware	
		your chang # Displays	jes	gs and click Save iource (TK) n	to apply			
			Apply					
DISPLAY			SOUR	CE				
RX1 (RX-500762) RX2 (RX-500762) RX3 (RX-500762)	V1.3 V1.3 V1.3			X-500762) X-500762)		112		

Figure 333: 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 334) 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 334: 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 335).

Mutab Network Controller (500811) Products Settings Software Update Help Network Administration User Accounts Create a new User Account Or select a User to edit: Optimizer Select a User to edit: Ver Namend Create a new User Account Or select a User to edit: Optimizer Select a User to edit: Optimizer Select Berline Optimizer Select Berline Create update Derline Restore the unit with the selected data file Specify file: Doorse file: Not MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore the unit with the selected data file Specify file: Doorse file: Specify file: Doorse file: Selectup file Selectup file: Sele	Mux	ab		
Network Administration User Accounts Create a new User Account Or select a User to edit: • User Name • • user Name • • User Yop: • • Create Update Delete Restore the unit with the selected data file Specify file: Concest Tile: Specify file: Concest Tile: • • Restore the unit with the selected data file Specify file: Concest Tile: • Restore data Restore data and save it in a file: • • • Backup data Backup data Backup data Backup file: • • Cet Logs Cet Logs • • • •	Muxlab Network C	ntroller (500811)	a Indate i Heln	
User Accounts Create a new User Account Or select a User to edit: User Name Inter Datassundt: Content are password: Content are pass				
Create a new User Account Or select a User to edit: User Name rev gassword. Confirm new password. User Type: Create Update Detel Restore the unit with the selected data file Specify file: Conces file. No MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Restore the unit with the selected data file Specify file: Specify	Network	Administration		
User Same ner password. Confirm mer password. User Type: Create Update Delete	User Accounts			
rev password Confirm we password Unders password Confirm we password Unders password Confirm we password Confirm Confirm We password Confirm Confi		ccount Or select a User to edit:		
Confine new password: User Type: Create Update Detere Restore the unit with the selected data file Specify file: Concestie 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 fata Backup fata Backup file Backup file Backup file				
Create Update Deates Restore the unit with the selected data file Specify file; Choose file No file chosen 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 Restore Backup data Backup data Backup file Backup file Specifie Get Logs Get all logs in a zip file Specifie Specifie				
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 file Get Logs Get all logs in a zip file	User Type:			
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 file Get Logs Get all logs in a zip file	Create Update	elete		
Restore Backup data Backup fieda and save it in a file Backup Cet Logs Get all logs in a zip file	Restore the unit with			
Backup the data and save it in a file Backup Get Logs Get all logs in a zip file		ST FIRST set the IP address of this	i controller using the same as the controller this ba	ckup file come from !!!
Get Logs Get all logs in a zip file	Backup the data an	save it in a file		
Get all logs in a zip file	Backup			
Download Logs Delete Logs	Get all logs in a zip			
	Download Logs	Delete Logs		

Figure 335: Settings Screen: Administration Tab

Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 336). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

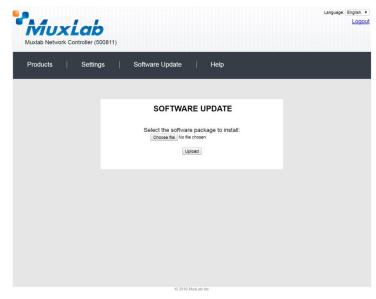


Figure 336: Software Update Screen

Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 337).

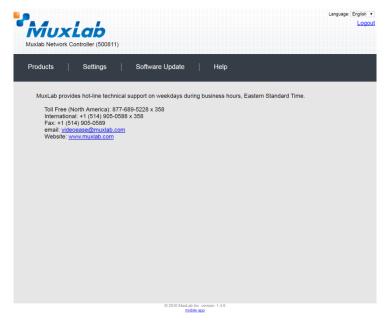


Figure 337: Help Screen

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 500811 Network Controller. This section describes how to accomplish this.

Products Screen

Once the user has logged in, the **Products** screen will appear (Figure 338).

MuxLab				Language: English Logi
Products Settings		e Update 🛛 🗍	Help	
SELECT A PRODUC	r to add:		ADD DEVICE	
YOUR CURRENT SYS		Compagny	Product type	
ID Custom Name	Product Name	Compagny	Product type	
		© 2016 MuxLab Inc. w		

Figure 338: 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 339).

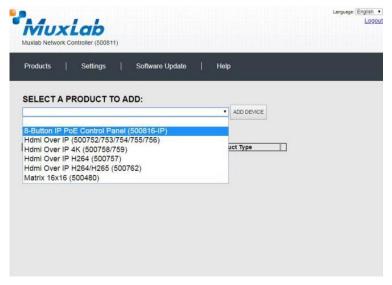


Figure 339: Products Screen – Selecting a Product

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 340). 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 338), without a product being added.

Muxlab: 8-But	ton IP PoE Control Panel (500816-IP)
Custom Name:	
Audio-Video Room	
Login:	
admin	*500816IP device login
Password	
nimbe	*500616IP device password

Figure 340: Naming and Login into the 500816-IP

The custom name has been added to YOUR CURRENT SYSTEM (Figure 341).

PRODUC	T TO ADD:		ADD D	2405		
				7005		
			- ADD DI	EVICE		
DENTOV	STEM					
		1	1			
-Video Room	Panel (500816-IP)	Muxlab	Controller	Select		
	tom Name -Video Room	8-Button IP PoE Control	tom Name Product Name Company	tom Name Product Name Company Product Type	tom Name Product Name Company Product Type Bettern Product Name Company Product Type Bettern Product Name Research	tom Name Product Name Company Product Type

Figure 341: 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 342).

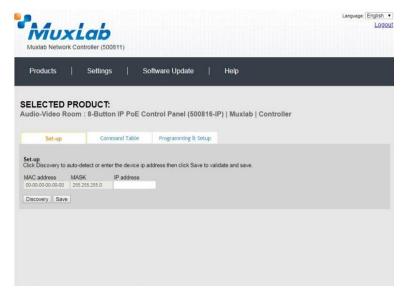


Figure 342: Set-up Tab – Discovering the 500816-IP

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 343).

	xLab rk Controller (5					Language: English Logo
Products	Setting	gs S	oftware Update	Ĩ	Help	
SELECTED Audio-Video F Set-up	Room : 8-But		ontrol Panel (500 Programming & S		P) Muxlab Controller	
Click Discovery to			address then click Save	e to val	idate and save.	
MAC address 00-00-00-00-00-00	MASK 255 255 255 0	IP address	-			
00-00-00-00-00	233.233.233.0	192,168,168				
Discovery Sav	9	102.100.100				

Figure 343: Set-up Tab – Set Unit IP Address

Press "**Save**" to record these settings. This will also automatically set the MAC Address and MASK (Figure 344).

nau	vian			
	xLab			
Muxlab Networ	rk Controller (50	00811)		
12.23.24	1			
Products	Setting	is So	oftware Update Help	
ELECTED	PRODUCT	•		
			ontrol Panel (500816-IP) Muxlab Controller	
2010-9100010	oom . o-butt			
		mmand Table	Programming & Setup	
Set-up	Cor		Programming a secup	
Set-up	Cor	filliand rable	Programming & Secup	
	Cor	initiand rable	Programming a secup	
iet-up				
iet-up lick Discovery to	auto-detect or ent	ter the device ip ac	address then click Save to validate and save.	
iet-up Click Discovery to MAC address	auto-detect or en	ter the device ip ac IP address	address then click Save to validate and save.	
iet-up lick Discovery to	auto-detect or en	ter the device ip ac	address then click Save to validate and save.	
iet-up Click Discovery to MAC address 00-00-5e-14-7e-97	auto-detect or ent MASK 255 255 255 0	ter the device ip ac IP address	address then click Save to validate and save.	
iet-up Click Discovery to MAC address	auto-detect or ent MASK 255 255 255 0	ter the device ip ac IP address	address then click Save to validate and save.	
iet-up Click Discovery to MAC address 00-00-5e-14-7e-97	auto-detect or ent MASK 255 255 255 0	ter the device ip ac IP address	address then click Save to validate and save.	
iet-up Click Discovery to MAC address 00-00-5e-14-7e-97	auto-detect or ent MASK 255 255 255 0	ter the device ip ac IP address	address then click Save to validate and save.	
iet-up Click Discovery to MAC address 00-00-5e-14-7e-97	auto-detect or ent MASK 255 255 255 0	ter the device ip ac IP address	address then click Save to validate and save.	
iet-up Click Discovery to MAC address 00-00-5e-14-7e-97	auto-detect or ent MASK 255 255 255 0	ter the device ip ac IP address	address then click Save to validate and save.	
iet-up Click Discovery to MAC address 00-00-5e-14-7e-97	auto-detect or ent MASK 255 255 255 0	ter the device ip ac IP address	address then click Save to validate and save.	
iet-up Click Discovery to MAC address 00-00-5e-14-7e-97	auto-detect or ent MASK 255 255 255 0	ter the device ip ac IP address	address then click Save to validate and save.	

Figure 344: Set-up Tab – Save Unit IP and MAC Address and Mask

2. Products Screen – Command Table Tab

Under the Command table tab (Figure 345), 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 500811 Network Controller into longer 500811 API (Application Program Interface) commands. The API Command will then instruct the 500811 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 500811 API commands directly. Therefore the 500816-IP sends shorter commands to the 500811 and the 500811 looks up the corresponding longer 500811 API command string to be executed. This adds an extra step in the decoding process of the API commands, but is necessary.

tware Update Help trol Panel (500816-IP) Muxlab Controller Programming & Setup
Programming & Setup
Muxlab Network Controller Api Command

Figure 345: Command Table Tab

Pressing on the "**Add Command**" button, brings up a new cross-reference entry, see Figure 346. 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 500811 will be used to look up the replacement actual API Command to be executed. The "**MuxLab Network Controller API Command**" field in Figure 346, contains the actual API Command. Reference the MuxLab API Command Document (file: MNC_500810_811_IP_Commands.PDF) for a detailed listing of all Muxlab API Commands for the 500811 Network Controller. This document is available on the 500811 webpage of the MuxLab website. Each command from the 500816-IP 8 Button Control Panel to be sent to the 500811 Network Controller will require an entry in this cross reference table.

Muxi	ab			Language: Englis
Muxlab Network Cor				
Products	Settings S	oftware Update	Help	
SELECTED PRO		ontrol Panel (500816-l	P) Muxlab Contr	oller
Set-up	Command Table	Programming & Setup		
Configure your device co	mmands here.			
Command N	3754	Murish Natan	rk Controller Api Command	
Commana re	ame	INCALLO METHO	re controller Apri Command	Delete
Refresh Add Comman	ht			

Figure 346: 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 500811 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 347). 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 348).
 - 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 500811, 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 500811 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.

MUX	troller (500911)	Language (<u>Engl</u> L
Products	Settings Software Update	Help
ELECTED PR	DUCT: : 8-Button IP PoE Control Panel (500	1816-IP) Muxlab Controller
Set-up	Command Table Programming & S	etup
Keypad Actions Setting	KeyBoard Button1 Button2	Button5 Button6
	Button3 Button4	Button7 Button8
Refresh		

Figure 347: Programming & Setup Tab – KeyBoard

AUX iab Network (Contraction of the second									
oducts	Setting	s	Soft	ware Upda	ate Help					
Set-up	m : 8-Butto			rol Panel Programmin	(500816-IP) Muxi y & Setup	ab Contro	lier			
Keypad	Mode								Star	dard v
Actions									-	
Button 1	Action	Event		Time(s)	Command Data	IR	Hex	-	•	•
Button 2	1	None	۲	0		*	60			
Button 3 Button 4	2	None	٠	1	[]	(¥)				
Button 5	3	None	٠	D.			- 63	ě.		
Button 6	4	None	٠	0	[]	(¥)				
Button 7	5	None	٠	0			10			0
				0		*				
Button 7	6	None	۲	0						

Figure 348: 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 500811 Network Controller. The 500811 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 500811 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 500811 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 500811 Network Controller.

Begin by entering the custom command name "**poweroff**" into the "**Command Name**" field, see Figure 349. This command will later be programmed into the 500816-IP and sent to the 500811 when Button 1 is pressed on the 500816-IP device. Next enter the actual API Command which will be executed by the 500811 into the "**MuxLab Network Controller API Command**" field in Figure 349, 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 500811 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".

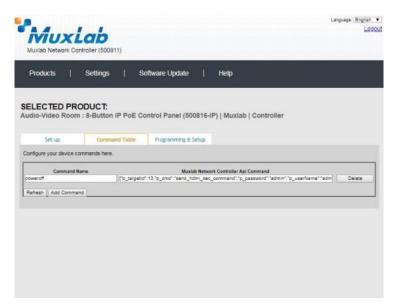


Figure 349: Command Table Tab – Entering Commands

Next program the 500816-IP device. Go to the "**Programming & Setup tab** -> **Actions**" section, see Figure 350.

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 500811 default IP address.

31337- is the 500811 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).

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ECTED P	PODUCT								
			trol Pane	l (500816-IP) Muxi:	ab Contro	ller			
Set-up	Com	mand Table	Programma	me & Setup					
Keypad	Mode							Star	ndard v
Actions								-	
Button 1	Action	Event	Time(s)	Command Data	IR	Hex	-	•	•
Button 2	1	IP_Send ¥	0	192 168 168 150-31337	¥.	8			
Button 3	2	None V	1		(T				
		None T	-			- 65			
Button 4			0			1000			
Button 5	3	(reprie •)							
Button 5 Button 6	3	(None T)	0		(
Button 5		30040042 HINT	0		· · · ·	0	0		
Button 5 Button 6 Button 7	4	(None V)							

Figure 350: Programming & Setup Tab – Actions

4. 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.

5. Appendix – IP Command API

The Muxlab API (Application Program Interface) Commands for the 500811 Network Controller are not covered in this document. They are covered in a separate document as follows:

File: MNC_500810_811_IP_Commands.PDF

which is available on the 500811 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 500811 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</u> <u>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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