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



Operation Manual

P/N: 94-000810-E SE-000810-E



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Table of Contents

1. O	vervie	W	5
	1.1.	Description	5
	1.2.	Features	6
2. Te	echnic	al Specifications	7
3. In	stalla	tion and Use	8
	3.1.	Part List	
	3.2.	Product Overview	9
	3.3.	Installation Procedure	10
	3.4.	Ethernet Web Interface – Device Management	
		Extender Model 500752	
		Extender Model 500753	
		Extender Model 500754	59
		Extender Model 500755	
		Extender Model 500756	
		Extender Model 500757	
		Extender Model 500758	
		Extender Model 500759	
		Extender Model 500755-AMP	
		Extender Model 500762	193
4. Tı	rouble	shooting	211
5. Aj	ppend	ix – IP Command API	212
5.1	IP C	ommand API: definition and format	212
	5.1.1	Definition	
	5.1.2	General Format	
5.2	IP C	ommand API for 500752\753\754\755\756: command/response list	
		Automatic discovery	
		Manual discovery	
		Get devices from the database	
		Update some devices attributes	
		Reboot device	
		Connect/disconnect device	
		Select and apply a preset	
		Save current matrix connections in a specific preset	
		Save current matrix connections in a Specific preset name	
	5.4.9	Save current matrix connections in a relay preset name	

6. Pı	roduct Warranty Policy	
5.4	Examples of commands	224
	5.3.5 Select and apply a preset	
	5.3.4 Update some ports attributes	
	5.3.3 Connect/disconnect device	
	5.3.2 Get all presets	
	5.3.1 Get all port status from the database	
5.3	IP Command API for 500480: command/response list	222
	5.2.17 VIDEO WALL: Changing source to a configuration (For 500754/500759)	
	5.2.16 VIDEO WALL: Select and apply a configuration (For 500754/500759)	
	5.2.15 VIDEO WALL: Connection command (For 500754/759)	
	5.2.14 Modify Administrator password OF THE MNC	
	5.2.13 Modify network setting OF THE MNC	
	5.2.12 Send data to IR (For 500752/753/754 (TX) and 500755/756 (TX & RX)	
	5.2.11 Send data to RS-232 (For 500753/754/755/756/757/758/759)	
	5.2.10 Delete a preset	



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.

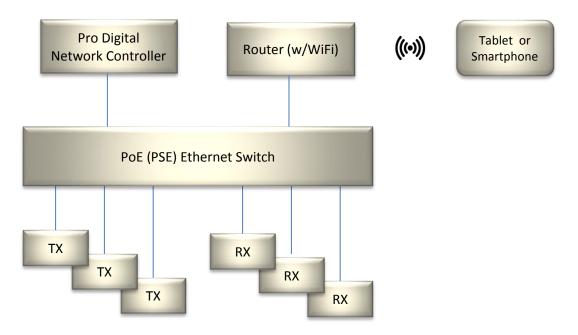


Figure 1: System Overview

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 ℃ to 50 ℃	
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.

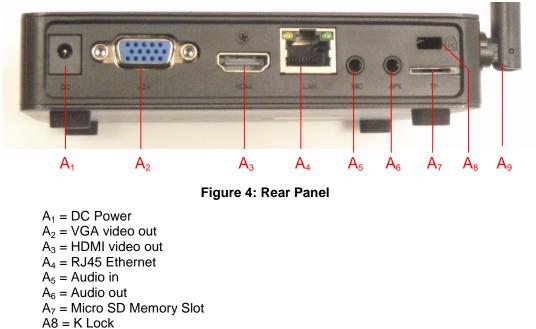
Figure 2: Base Unit



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)

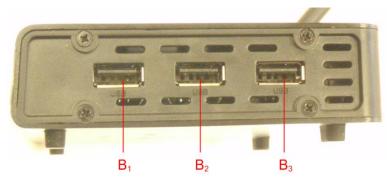


Figure 5: Side Panel

```
\begin{array}{l} B_1 = USB \; 2.0 \; \#1 \\ B_2 = USB \; 2.0 \; \#2 \\ B_3 = USB \; 2.0 \; \#3 \end{array}
```

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 192.168.168.55 (for the 500752, 500753, 500754 and 500756 Transmitters) and 192.168.168.56 (for the 500752, 500753, 500754 and 500756 Receivers), and 192.168.168.58 (for the 500758 and 500759 Transmitters) and 192.168.168.59 (for the 500759 Receivers).

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 ⋒	*	≡

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.

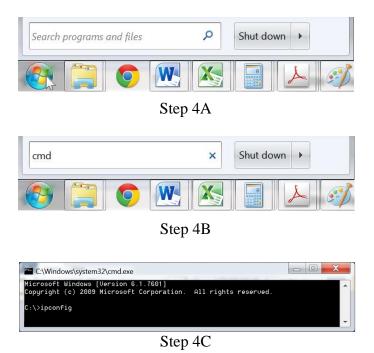


Figure 7: Determining Computer IP Address

The following screen will appear (Figure 8).

C:\Windows\system32\cmd.exe	
Connection-specific DNS Suffix . : Link-local IPv6 Address IPv4 Address	~
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:

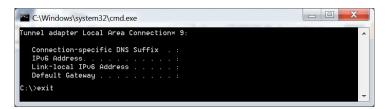
192.168.168.*x*

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.





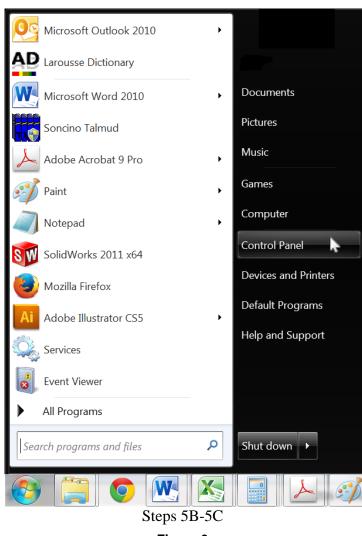
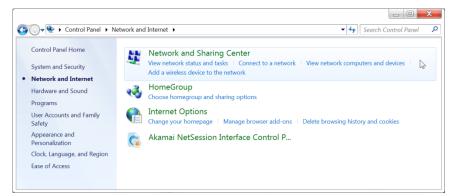
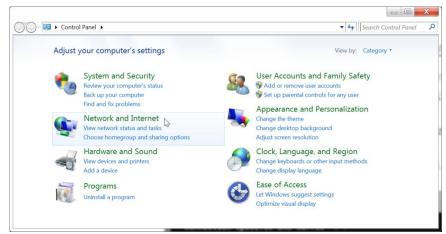


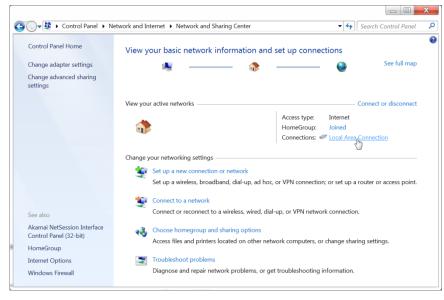
Figure 9



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

Internet 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 automa	atically					
• Us <u>e</u> the following DNS server addr	resses:					
Preferred DNS server:						
<u>A</u> lternate DNS server:	· · ·					
Validate settings upon exit Advanced						
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.

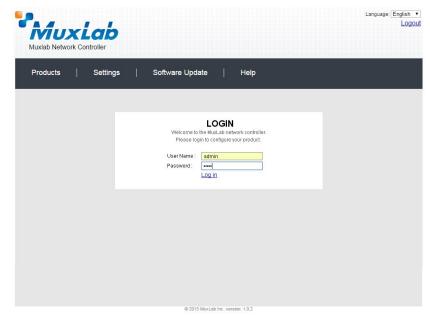


Figure 14 Login Screen

- 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

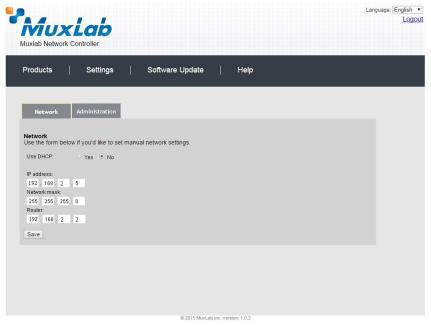


Figure 15 Network Settings Screen

- 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 NC 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: • • • P 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).

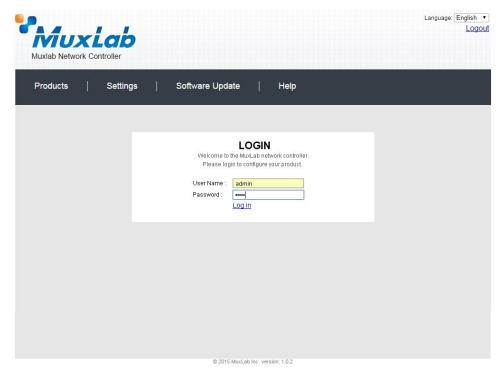


Figure 17 Login Screen

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	Pages
500752	HDMI	1080p/60	IR + PoE	22-39
500753	HDMI	1080p/60	RS232+IR+PoE	40-58
500754	HDMI (Video Wall Capable)	1080p/60	RS232+IR+PoE	59-81
500755	Audio	2 Ch Audio	RS232+IR+PoE	82-100
500756	SDI	3G-SDI	RS232+IR+PoE	101-119
500757	HDMI	1080p/30	RS232+IR+PoE	120-135
500758	HDMI	4K/30	Audio+RS232+IR+PoE	136-152
500759	HDMI (Video Wall Capable)	4K/30	Audio+RS232+IR+PoE	153-173
500755- AMP	Audio	2 Ch Audio w/AMP	RS232+IR+PoE(TX)	174- 192
500762	HDMI	1080p/60 & 4K/60	USB+RS232+IR+PoE	193-210

Table 2: Extender Models

Extender Model 500752

Products Screen

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

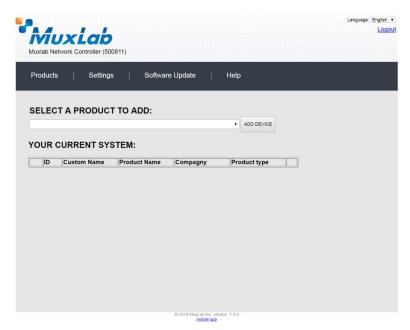


Figure 18: Products Screen – Initial View

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).

Muxiab Network Controller (500811)	Language: English ▼ Logout
Products Settings Software Update Help	
SELECT A PRODUCT TO ADD:	
© 2016 MuxLab Inc. version: 1.4.8 mobile app	

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.

Muxlab Network Co		Language: English 🔹 Logout
Products	Settings Software Update Help	
SELECT A PF Hdmi Over IP (YOUR CURRE	5 Custom Name: Setup 1 OK CANCEL	
	© 2016 Matub Inc. variant 1.4.8	
	C 2016 Multipline, version, 1,4,8 mobile app	

Figure 20: Products Screen – Naming a Product

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

	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).

								Langu	age: English
	ID Network Controlle								Log
Prod	lucts Set	ttings Soft	ware Update	Help					
	ECTED PROE p 1 : Hdmi Over I	DUC I : IP (500752/753/754	/755/756) Mu	uxlab Matrix	Virtual				
	Set-up Mat	trix Video Wall	R5-232	IR		Firmware			
	Automatic O Manua	gs and click Save to apply al	your changes						
• A			your changes						
 A Laur Displ 	Automatic O Manua		IP address	MASK	DHCPI	DIP			
 A Laur Displ 	Automatic Manua nch discovery lay (4 RX)	ai MAC address	IP address	MASK 255.255.255.0		DIP	Detail		
 A Laur Displ Port# 	Automatic Manua nch discovery lay (4 RX) # Name	MAC address 2 00-08-78-00-7D-E2	IP address 192.168.168.64				Detail Detail		
A Laur Displ Port# 0	Automatic Manua nch discovery lay (4 RX) # Name RX-00-0B-78-00-7D-E2	AC 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	•	Reboot			
A Laur Displ Port# 0 0	Automatic Manua nch discovery lay (4 RX) # Name RX-00-08-78-00-7D-E2 RX-00-08-78-00-7E-59	MAC address 2 00-08-78-00-70-52 3 00-08-78-00-7E-59 5 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		
A Laur Displ Port# 0 0 0	Automatic Manua nch discovery lay (4 RX) # Name RX-00-08-78-00-7D-E2 RX-00-08-76-00-7E-59 RX-00-08-76-00-7E-59	MAC address 2 00-08-78-00-7D-E2 3 00-08-78-00-7E-59 5 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 Reboot	Detail Detail		
A Laur Displ Port# 0 0 0	Automatic Manua nch discovery lay (4 RX) # Name RX-00-08-78-00-7D-E2 RX-00-08-76-00-7E-59 RX-00-08-76-00-7E-59	MAC address 2 00-08-78-00-7D-E2 3 00-08-78-00-7E-59 5 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 Reboot	Detail Detail		
A Laur Displ Port# 0 0 0 Sour	Automatic Manua nch discovery lay (4 RX) # Name RX-00-0B-78-00-7D-E25 RX-00-0B-78-00-7E-55 RX-00-0B-78-00-7E-53	MAC address 2 00-08-78-00-7D-E2 3 00-08-78-00-7E-59 5 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 Reboot	Detail Detail		
A Laur Displ Port# 0 0 0 Sour	Automatic Manua nch discovery lay (4 RX) # Name RX-00-08-78-00-7E-59 RX-00-08-78-00-7E-58 RX-00-08-78-00-7E-63 Ce (2 TX)	AC 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	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	I DHCP (Reboot Reboot Reboot	Detail Detail		
A Laur Displ Port# 0 0 0 0 Sour Port#	Automatic Manua nch discovery lay (4 RX) # Name RX-00-0B-78-00-7D-E5 RX-00-0B-78-00-7E-55 RX-00-0B-78-00-7E-53 RX-00-0B-78-00-7E-53 rce (2 TX) # Name	MAC address 2 00-08-78-00-7D-E2 3 00-08-78-00-7E-59 3 00-08-78-00-7E-53 3 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 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	I DHCP I	Reboot Reboot Reboot	Detail Detail Detail		
A Laur Displ Port# 0 0 0 O Sour Port# 0 0 0	Automatic Manua nch discovery lay (4 RX) # Name RX-00-08-78-00-7D-E5 RX-00-08-78-00-7E-55 RX-00-7E-55 RX-	AC address 0-08-78-00-70-52 0-08-78-00-72-52 0-08-78-00-72-52 0-08-78-00-72-52 0-08-78-00-72-52 MAC address 0-08-78-00-70-55	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 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	I DHCP I	Reboot Reboot Reboot Reboot	Detail Detail Detail Detail		
A Laur Displ O O O O O O Sour Port# O	Automatic Manua nch discovery lay (4 RX) # Name RX-00-08-78-00-7D-E5 RX-00-08-78-00-7E-55 RX-00-78-78-00-7E-55 RX-00-78-78-78-78-78-78-78-78-78-78-78-78-78-	AC address 0-08-78-00-70-52 0-08-78-00-72-52 0-08-78-00-72-52 0-08-78-00-72-52 0-08-78-00-72-52 MAC address 0-08-78-00-70-55	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 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	I DHCP I	Reboot Reboot Reboot Reboot	Detail Detail Detail Detail		

Figure 24: 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	C DHCP DIF	Reboot Reboot Reboot	Detail Detail Detail	

Figure 25: Name Editing

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

	_	_								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 Inch 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 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:	92.168.168.64 (DHCP: ON)					
FW Version:	.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 • Logou
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdm		: 752/753/754/75	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 the	e "Connect" button at the	
DISPLAY		SOURCE		PRESET	s]	
RX-1		· •	> Current ac No preset s		▼ ID: 1		
			> Save curre	ent connections in follo	owing preset:		
			> Save curre	ant 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).

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 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).

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 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:		
▼	SUCCES	SS

Figure 35: Confirmation of Deleted Preset

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

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

Figure 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:	-	10.05	
	•	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	Controller (5008	11)				Language: English • Logou
Products	Settings	Softwa	re Update	Help		
	PRODUCT ni Over IP (500		55/756) Muxla	ab Matrix Virl	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
NO devices com	patible with RS-23	2 features found !				
			© 2016 MuxLab In			

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 Set-up Matrix Video Wall R5-232 IR Firmware Modify any available settings and click Save to apply your changes * Diplays (RK) Gourse (TK) Choose first Note choose DISPLAY SOURCE RX-1 (500752-RX) V2.10 DVD-1 (500752-TX) V2.10	Auxlab Network C		1)					Language: English Logi
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 Choose file No file chosen Apply DISPLAY SOURCE	Products	Settings	Softwa	ire Update	Help			
Modify any available settings and click Save to apply your changes				/55/756) Muxla	ab Matrix Vir	tual		
changes • Displays (RX) © Source (TX) Choose file No file chosen Apply DISPLAY SOURCE	Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
			ehan D	ges isplays (RX) ose file No file chosen Apply	Source (TX)	to apply your		
RX-1 (500752-RX) v2.1.0 DVD-1 (500752-TX) v2.1.0								
	RX-1 (500752-RX)	1	v2.1.0	DVE	D-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).

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:	User to edit:			
Create Update	Delete				
Specify file: Choo	ith the selected data file se file No file chosen MUST FIRST set the IP		sing the same as the c	ontroller this 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	p file				
Download Logs	Delete Logs				
			Inc. version: 1.4.8		

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.

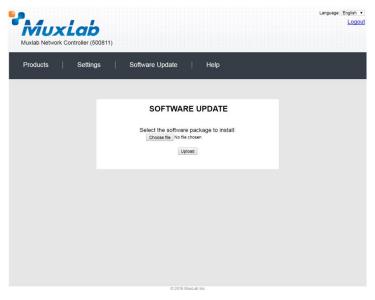


Figure 45: Software Update Screen

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).

Muxiab Network Controller (500811)	Language: English ▼ Logout
Products Settings Software Update Help	
SELECT A PRODUCT TO ADD: Hdmi Over IP (500752/753/754/755/756) Hdmi Over IP 4K (500758/759) Hdmi Over IP H264 (500757) Matrix 16x16 (500480)	
© 2016 MuxLab Inc. version: 1.4.8 mobile.app	

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).

ħ	iuxLa	dr						L
	b Network Control							
Prod	lucts S	ettings Si	oftware Update	Help				
	ECTED PRO		E 4/7EE/7EC) MA		Mintere			
setu	p 1 : Hami Ovei	r IP (500752/753/7	54//55//50) MI	ixiad Matrix	virtua	1		
	Set-up N	latrix Video W	all RS-232	IR		Firmware		
• 4		ngs and click Save to ap	oply your changes					
Modi A Laur	fý any available setti Automatic O Man		oply your changes					
Modi Laur Disp Porta	fý any available settli Automatic Man nch discovery Iay (4 RX) # Name	ual MAC address	IP address	MASK	DHCF			
Modi Laur Disp Porta 0	fý any available settli Automatic Man nch discovery Iay (4 RX) # Name RX-00-08-78-00-7D-	MAC address E2 00-08-78-00-7D	IP address -E2 192.168.168.64	255.255.255.0	۲	Reboo		
Modi A Laur Disp Porta 0 0	fý any available settil Automatic Man nch discovery lay (4 RX) # Name RX-00-08-78-00-7D- RX-00-08-78-00-7E-	MAC address E2 00-08-78-00-7D 59 00-08-78-00-7E	IP address +E2 192.168.168.64 -59 192.168.168.60	255.255.255.0 255.255.255.0	 ✓ ✓ 	Reboo	Detail	
Modi Laur Disp Porta 0 0	fý any available settil Automatic Man nch discovery lay (4 RX) # Name RX-00-0B-78-00-7D- RX-00-0B-78-00-7E- RX-00-0B-78-00-7E-	MAC address E2 00-08-78-00-70 59 00-08-78-00-76 55 00-08-78-00-76	IP address +E2 192.168.168.64 -59 192.168.168.60 -5E 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *	Reboo Reboo Reboo	t Detail t Detail	
Modi A Laur Disp Porta 0 0	fý any available settil Automatic Man nch discovery lay (4 RX) # Name RX-00-08-78-00-7D- RX-00-08-78-00-7E-	MAC address E2 00-08-78-00-70 59 00-08-78-00-76 55 00-08-78-00-76	IP address +E2 192.168.168.64 -59 192.168.168.60	255.255.255.0 255.255.255.0	 ✓ ✓ 	Reboo	t Detail t Detail	
Modi Laur Disp Porta 0 0 0 0	fý any available setti kutomate Man nch discovery lay (4 RX) # 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 00-08-78-00-70 59 00-08-78-00-76 55 00-08-78-00-76	IP address +E2 192.168.168.64 -59 192.168.168.60 -5E 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *	Reboo Reboo Reboo	t Detail t Detail	
Modi A Lau Disp Porti 0 0 0 Sour	fý any available setti kutomatic Man nch discovery 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- Ce (2 TX)	MAC address E2 00-08-78-00-70 55 00-08-78-00-75 56 00-08-78-00-75 53 00-08-78-00-75	IP address +E2 192.168.168.64 59 192.168.168.65 62 192.168.168.65 63 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	5 5 5 5	Reboo Reboo Reboo	t Detail t Detail	
Modi A Lau Disp Porta 0 0 0 0 Sour Porta	fý any available setti uutomatic Man nch discovany 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- Cce (2 TX) # Name	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 53 00-08-78-00-75	IP address FE2 192-163.168.64 54 192-168.168.65 54 192-168.168.63 192.168.168.63 IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	Ø Ø Ø DHCF	Reboo Reboo Reboo	Detail Detail t Detail	
Modil Automatical Automatical	fý any available setti witomatic Man nch discovery 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	MAC address E2 00-08-78-00-70 59 00-08-78-00-76 58 00-08-78-00-76 53 00-08-78-00-76 MAC address 00-08-78-00-70	IP address +E2 192.168.168.64 -59 192.168.168.65 -56 192.168.168.63 -192.168.168.63 -192.168.168.63	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 MASK 255 255 255 0	♥ ♥ ♥ DHCF	Reboo Reboo Reboo Reboo Reboo Reboo	t Detail t Detail t Detail	
Modi A Lau Disp Porta 0 0 0 0 Sour Porta	fý any available setti uutomatic Man nch discovany 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- Cce (2 TX) # Name	MAC address E2 00-08-78-00-70 59 00-08-78-00-76 58 00-08-78-00-76 53 00-08-78-00-76 MAC address 00-08-78-00-70	IP address FE2 192-163.168.64 54 192-168.168.65 54 192-168.168.63 192.168.168.63 IP address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0 MASK	Ø Ø Ø DHCF	Reboo Reboo Reboo	t Detail t Detail t Detail	

Figure 53: Products Screen – Set-up Tab

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).

	ab Networ		Iler (5008*	11)								
Prod	ducts	s	ettings	Softv	vare Update	Help						
			DUCT r IP (500	-	755/756) Mu	ıxlab Matrix	Virtua	al				
	Set-up	N	Aatrix	Video Wall	R5-232	IR		Fin	mware			
• /		O Mar	-	ck Save to apply	your changes							
Modi	ifý any ava Automatic nch discove Iay (4 RX)	O Mar	nual		your changes	MASK	DHC	PDIP				
Modi	ifý any ava Automatic nch discové	O Mar	nual	AC address 0-08-78-00-7D-E2	IP address	MASK 255.255.0	DHCF	P DIP	Reboot	Detail	UPDAT	ED
Modi A Laur Disp Ports	ify any ava Automatic nch discove Ilay (4 RX) # Name	O Mar	nual M	AC address	IP address 192,168.168.64					Detail Detail		
Modi	ifý any ava Automatic nch discove Ilay (4 RX) # Name RX-1	O Mar	nual M 0	AC address 9-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0	۲		Reboot			ED
Modi A Lau Disp Porta 0 0	ifý any ava Automatic nch discove Ilay (4 RX) # Name RX-1 RX-2	O Mar	nual 0 0	AC address 0-0B-78-00-7D-E2 0-0B-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	UPDAT	ED
Modi Lau Disp Porta 0 0 0	Automatic Automatic Automatic Automatic Alay (4 RX) # Name RX-1 RX-2 RX-3	O Mar	nual 0 0	AC address 0-08-78-00-7D-E2 0-08-78-00-7E-59 0-08-78-00-7E-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		ED
Modi A Laur Disp Porta 0 0 0 0 Sour	ify any ava Automatic Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-4	O Mar	- M 0 0 0	AC address 0-08-78-00-7D-E2 0-08-78-00-7E-59 0-08-78-00-7E-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		ED
Modi A Laur Disp Porta 0 0 0 0 Sour	ify any ava Automatic Itay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 rce (2 TX)	O Mar	M 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AC address 0-08-78-00-7D-E2 0-08-78-00-7E-59 0-08-78-00-7E-65 0-08-78-00-7E-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 0 255 255 255 0	5 5 5		Reboot Reboot Reboot	Detail Detail		ED
Modi A Laun Disp Ports 0 0 0 Sour Ports	ny any ava Automatic Ilay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 rce (2 TX) # Name	O Mar	M 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AC address 0-08-78-00-70-E2 0-08-78-00-7E-59 0-08-78-00-7E-63 0-08-78-00-7E-63 AC 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 MASK	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail Detail Detail		ED

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 disp bottom to make th		sources below. On	ce you've selected	the displays you wa	int to change, use	the "Conne	ect" button at the	
DISPLAY		SOURCE	Γ	F	RESETS]	
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 TID:	1
> Save current connections in following preset:	
> Save current connections as new preset: Create	
> Delete following preset:	CCESS

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).

PRESE	TS
> Current active Preset:	
[1] Preset 1	▼ ID: 1
> Save current connections in fo	llowing preset: ▼
[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	• 10	D: 1	
> Save current connections in following prese	et:		
	<u>-</u> [SUCC	ESS
> Save current connections as new preset: Create			
> Delete following preset:			
	•		

Figure 66: Confirmation of Changed Preset Name

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

3. Products Screen - Video Wall Tab

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

	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) Muxla	ab Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device Select a device: - Baud rate: - IP header in d - Feedback ON:	: • •		3 Stop bits: 1]	Parity : NONE •		
- IP Feedback:						
Data to send in	HEX (ex: A013	B155C5)				
Data feedback	received in HEX	(
Send						
			© 2016 MuxLab In			

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.

Muxlab Network Con		1)				Language	English •
Products	Settings	Softwa	re Update	Help			
SELECTED P Setup 1 : Hdmi C			55/756) Muxl	ab Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device's Select a device:	DVD-1 ¥						
- Baud rate: - IP header in dat - Feedback ON:	9600 ▼ a:	[Data bits:	8 Stop bits: 1]	Parity : NONE *			
- IP Feedback:	192.168.168.5	6					
Save							
Save	EX (ex: A013E	3155C5)					
Save	EX (ex: A013E	3155C5)		_			

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).

	Controller (50081	1)					Language: English Logi
Products	Settings	Softwa	re Update	Help			
	D PRODUCT Imi Over IP (500	-	'55/756) Muxla	ab Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
DISPLAY		ehang Di	splays (RX) se file No file chosen Apply	ngs and click Save Source (TX) URCE	to apply your		
RX-1 (500753-	RX)	v2.1.0		D-1 (500753-TX)		2.1.0	

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.

Products Settings Software Update Help Network Administration Network Use the form below if yourd like to set manual network settings. Use DHCP: Yes * No If address: 125 125 255 255 255 Retain 122 188	Muxlab Network	Language Controller (600811)	English Log
Natwork Use the form below if you'd like to set manual network settings. Use DHCP: Ves No P address: 132 158 50 Network maak: 235 255 0 Rader: 112 1188 16	Products	Settings Software Update Help	
Use the form below if you'd like to set manual network settings. Use DHCP: vs • No Paddress: 122_168_168_50 Network maak: 255_255_255_0 Reduin: 122_168_168_1	Network	Administration	
Use DHCP: Ves * No P address: 192 188 188 50 Network mask: 255 255 255 0 Router: 192 188 188 1			
192 168 168 50 Network maak: 255 255 255 0 Router:			
Net-ork maak: 255 255 255 0 Review: 1122 158 158 1		50	
Router 192 188 188 T	Network mask:		
192 - 168 - 168 - 1		0	
Save		1	
	Save		
		© 2016 MuaLab Inc. version; 1.4.8 mobile app	

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).

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 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.

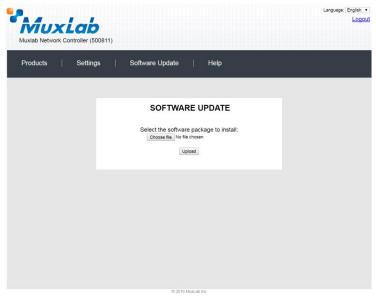


Figure 75: Software Update Screen

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).

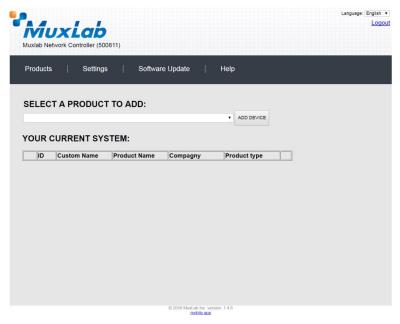


Figure 77: Products Screen – Initial View

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).

Muxiab Network Controller (500811)	Language: English ▼ Logout
Products Settings So	tware Update Help
SELECT A PRODUCT TO ADD: Hdmi Over IP (500752/753/754/755) Hdmi Over IP 4K (500758/759) Hdmi Over IP H264 (500757) Matrix 16x16 (500480)	756)
	© 2016 Mad.ab Inc. version: 1.4.8 mobile.aco

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.

Language: Muxiab Network Controller (500811)	English •
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP (500752/753/754/755/756) YOUR CURRE ID Custom	
© 2019 Martub Inc. version: 1.4.6	

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).

	b Network Co									L
Prod	lucts	Settings	s Softv	vare Update	Help					
	ECTED P		T : 00752/753/754/	755/756) Mu	ıxlab Matrix	Virtual				
	Set-up	Matrix	Video Wall	R5-232	IR		irmware			
• A	İy any available	settings and	click Save to apply	your changes						
Modif A Laur Displ	y any available utomatic C Inch discovery lay (4 RX)				MASK		D			
Modif A Laur Displ	ý any available uutomatic nch discovery	Manual	click Save to apply MAC address 00-08-78-00-70-E2	IP address	MASK 255.255.255.0	DHCP E		Detail		
Modif A Laur Displ Port#	y any available uutomatic C Inch discovery l ay (4 RX) # Name	0-7D-E2	MAC address 00-08-78-00-7D-E2	IP address				Detail Detail		
Modif A Laur Displ Port# 0	ý any available utomatic ⊂ nch discovery lay (4 RX) ≠ Name RX-00-0B-78-0	0-7D-E2 0-7E-59	MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0	₹ ₹	Reboot			
Modif A Laur Displ Port# 0 0	y any available utomatic C tch discovery lay (4 RX) # Name RX-00-0B-78-0 RX-00-0B-78-0	0-7D-E2 0-7E-59 0-7E-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 Reboot	Detail		
Modif A Laur Displ Port# 0 0 0 0 0	y any available utomatic tch discovery ay (4 RX) # Name RX-00-0B-78-0 RX-00-0B-78-0 RX-00-0B-78-0	0-7D-E2 0-7E-59 0-7E-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 Reboot	Detail Detail		
Modifier A A A A A A A A A A A A A A A A A A A	y any available witomatic the discovery lay (4 RX) # Name RX-00-0B-78-0 RX-00-0B-78-0 RX-00-0B-78-0	0-7D-E2 0-7E-59 0-7E-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 Reboot Reboot	Detail Detail		
Modifier A A A A A A A A A A A A A A A A A A A	y any available utomatic hch discovery tay (4 RX) t Name RX-00-0B-78-0 RX-00-0B-78-0 RX-00-0B-78-0 RX-00-0B-78-0 CRX-	0-7D-E2 0-7E-59 0-7E-5E	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 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 192.168.168.63	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0		Reboot Reboot Reboot Reboot	Detail Detail		
Modifier A A Laur Displication A Displication A A A A A A A A A A A A A A A A A A A	vany available utomatic tch discovery lay (4 RX) RX-00-0B-78-0 Name	0-7D-E2 0-7E-59 0-7E-5E	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 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	♥ ♥ ♥ DHCP E	Reboot 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 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).

	ab Networ		Iler (5008*	11)								
Prod	ducts	s	ettings	Softv	vare Update	Help						
			DUCT r IP (500	-	755/756) Mu	ıxlab Matrix	Virtua	al				
	Set-up	N	Aatrix	Video Wall	R5-232	IR		Fin	mware			
• /		O Mar	-	ck Save to apply	your changes							
Modi	ifý any ava Automatic nch discove Iay (4 RX)	O Mar	nual		your changes	MASK	DHC	PDIP				
Modi	ifý any ava Automatic nch discové	O Mar	nual	AC address 0-08-78-00-7D-E2	IP address	MASK 255.255.0	DHCF	P DIP	Reboot	Detail	UPDAT	ED
Modi A Laur Disp Ports	ify any ava Automatic nch discove Ilay (4 RX) # Name	O Mar	nual M	AC address	IP address 192,168.168.64					Detail Detail		
Modi	ifý any ava Automatic nch discove Ilay (4 RX) # Name RX-1	O Mar	nual M 0	AC address 9-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0	۲		Reboot			ED
Modi A Lau Disp Porta 0 0	ifý any ava Automatic nch discove Ilay (4 RX) # Name RX-1 RX-2	O Mar	nual 0 0	AC address 0-0B-78-00-7D-E2 0-0B-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	UPDAT	ED
Modi Lau Disp Porta 0 0 0	Automatic Automatic Automatic Itay (4 RX) # Name RX-1 RX-2 RX-3	O Mar	nual 0 0	AC address 0-08-78-00-7D-E2 0-08-78-00-7E-59 0-08-78-00-7E-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		ED
Modi A Laur Disp Porta 0 0 0 0 Sour	ify any ava Automatic Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-4	O Mar	- M 0 0 0	AC address 0-08-78-00-7D-E2 0-08-78-00-7E-59 0-08-78-00-7E-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		ED
Modi A Laur Disp Porta 0 0 0 0 Sour	ify any ava Automatic Itay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 rce (2 TX)	O Mar	M 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AC address 0-08-78-00-7D-E2 0-08-78-00-7E-59 0-08-78-00-7E-65 0-08-78-00-7E-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 0 255 255 255 0	5 5 5		Reboot Reboot Reboot	Detail Detail		ED
Modi A Laun Disp Ports 0 0 0 0 Sour Ports	ny any ava Automatic Ilay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 rce (2 TX) # Name	O Mar	M 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AC address 0-08-78-00-70-E2 0-08-78-00-7E-59 0-08-78-00-7E-63 0-08-78-00-7E-63 AC 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 MASK	♥ ♥ ♥ DHCF		Reboot Reboot Reboot	Detail Detail Detail		ED

Figure 85: Saving Name Changes

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

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

Figure 86: Device Detail Dialog

2. Products Screen - Matrix Tab

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

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 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:		
▼	SUCCES	SS

Figure 94: Confirmation of Deleted Preset

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

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

Figure 95: Change Current Active Preset

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

PRESETS]
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre-	set:	-		
	•	S	JCCE	SS
> 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 #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 4 V-Wall Selected: Save App Save as: new Configurate Create	ply	ID::		Drag n drop here a video wall template or Select a previous configuration from the "Saved Configuration" list	
Delete			Select all	- Drag n drop a video wall template	
2x2 3x3	4x4	Cust	om Size		
				+ Video Wall Set-Up : Step #2	
				+ Video Wall Set-Up : Step #3	

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).

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

Figure 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 -				Logo
Video Wall Set-up							Settings
Saved V-Wall - V-Wall Selected: Save Apply Save as:	ID::						
new Configuration Create Delete							
		Select all)				
			🗕 Drag r	n drop a video wall templa	ate		
2x2 3x3 4	(4 Cus	tom Size					
			- Se	elect and place Displays			
RX-1	RX-2		RX-3	RX-4]		
			+ ∨id	eo Wall Set-Up : Step #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).

Muxlab MNC Home Setup site Video	Wall Devices -	Logou
Video Wall Set-up		Settings
Saved V-Wall + V-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 Delete	RX-1 Sh H.0,V0 Sc H:0,V0	RX-4 Sh H.0,V.0 Sc H:0,V/0
Selec	ct all 📄 — Drag n drop a video wall template	
2x2 3x3 4x4 Custom Siz		
RX-1 RX-2	- Select and place Displays	
	- Select Source to connect	
DVD TX-00-0B-78-00-7D-0B		

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 Walt Rs-232 IR Firmware		Settings	Softwar	e Update	Help		
Update your device's RS-232 connection settings here. Select a device: DVD-I ■ - Baud rate: 900 ■ [Data bits: 8 Stop bits: 1] Parity : NONE ■ - IP header in data: ∞ - Feedback ON: ∞							
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. Select a device: DVD-1 • -Baud rate: 0VD-1 • - Baud rate: 1000 • [Data bits: 8 Stop bits: 1] Parity : NONE • - Feedback ON:		PODUCT					
Set-up Matrix Video Wall RS-232 JR Firmware Update your device's RS-232 connection settings here. Select a device: DVD-1 = - Baud rate: 500 • [Data bits: 8 Stop bits: 1] Parity : NONE = - IP header in data: - Feedback ON:			-	5/756) Muxlal	b Matrix Virt	ual	
Update your device's RS-232 connection settings here. Select a device: DVD-I ■ - Baud rate: 900 ■ [Data bits: 8 Stop bits: 1] Parity : NONE ■ - IP header in data: ∞ - Feedback ON: ∞		(****		, , , , , , , , , , , , , , , , , , , ,			
Update your device's RS-232 connection settings here. Select a device: DVD-I ■ - Baud rate: 900 ■ [Data bits: 8 Stop bits: 1] Parity : NONE ■ - IP header in data: ∞ - Feedback ON: ∞	Set-up	Matrix	Video Wall	PC-222	ID	Firmware	
Select a device: DVD-1 * -Baud rate: 9500 * -IP header in data: -Feedback ON:	ber op	max in	mace man	10 232			
- Baud rate: 9900 ■ [Data bits: 8 Stop bits: 1] Parity : NoNE ■ - IP header in data: ∞ - Feedback ON: ∞	Update your device's	RS-232 connect	tion settings here.				
- IP header in data: ♂ - Feedback ON: ♂	Select a device:	DVD-1 V					
- IP header in data: ♂ - Feedback ON: ♂							
- Feedback ON:		0000 -	[Data hits: 8	B Stop bits: 1] F	Parity : NONE *		
	- Baud rate:	9600 •					
- IP Feedback: 192.168.168.56	- IP header in dat	a: 🕑	[Data bits. c				
	- IP header in data - Feedback ON:	a: 🕑	[Data bits. c				
Caua	- IP header in data - Feedback ON:	a:					
	- IP header in dat - Feedback ON: - IP Feedback:	a:					
	- IP header in data - Feedback ON:	a:					
Data to send in HEX (ex: A013B155C5)	- IP header in dat: - Feedback ON: - IP Feedback: Save	a: 2 192.168.168.5	56				

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		1)				Languaç	e: Eng
Products	Settings	Softwa	re Update	Help			
SELECTED P Setup 1 : Hdmi (55/756) Muxla	ab Matrix Virl	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device's Select a device:	IR settings here						
- IR Mode: - IP Feedback:							
- IP Feedback:		_					
- IP Feedback:	IEX (ex: A013	B155C5)					
- IP Feedback:	IEX (ex: A013	B155C5)					
- IP Feedback: Save		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	Softwar	re Update	Help		
SELECTED I	PRODUCT					
Setup 1 : Hdmi		-	5/756) Muxl	ab Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device	's IR settings here					
Select a device:						
- IR Mode:	Emitter 🔻					
- IP Feedback:	0.0.0.0					
Save						
Data to condin						
Data to send in	HEX (ex: A013	,				

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		e Update	Help			
SELECTED F	RODUCT	:					
Setup 1 : Hdmi	Over IP (500	752/753/754/7	55/756) Muxla	ab Matrix Virt	ual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
		chang * Dis		ngs and click Save Source (TX)	to apply your		
			Apply				
DISPLAY			SO	URCE			
RX-1 (500754-RX)		v2.1.0	DVD	0-1 (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.

Muxlab Network	Language. Er Controller (500811)	nglish 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 .	50	
Network mask:		
255 . 255 . 255 .	0	
Router:		
192 . 168 . 168 .	.1	
Save		
	© 2016 MuxLab Inc. version: 1.4.8. mobile.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 Mana Software Update Software Software Software Backup deads Software Mana Software Mana Software Software Software Mana Software Mana Software Software Software Software Mana Software Mana Software Software Software Software Mana Software Mana Software Software Software Software Software Mana Software Doftware	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	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.

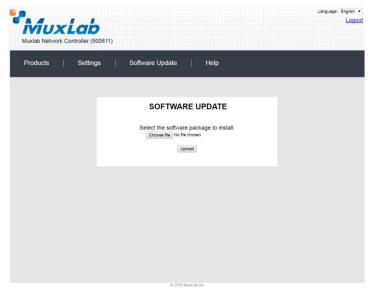


Figure 114: Software Update Screen

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).

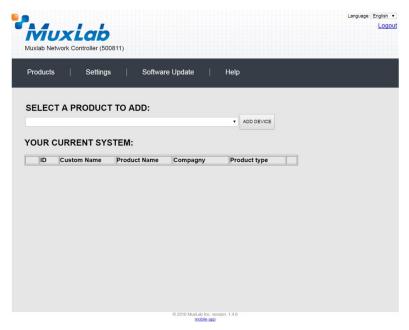


Figure 116: Products Screen – Initial View

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).

Muxiab Network Controller (500811)	Language: English ▼ Logout
Products Settings Software Update Help	
SELECT A PRODUCT TO ADD:	
ADD DEVICE	
Hdmi Over IP (500752/753/754/755/756)	
Hdmi Over IP 4K (500758/759)	
Hdmi Over IP H264 (500757) Matrix 16x16 (500480)	
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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.

Muxlab Network Controller (500811)	Language: English ¥ Logout
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP (500752/753/754/755/756) YOUR CURRE ID Custon W CANCEL	
© 2016 Maduab Inc. version: 14.8	

Figure 118: Products Screen – Naming a Product

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

		rk Controller (50					Language: En
Prod		Setting		e Update	Help		
		A PRODUC			ADD DEVICE		
(D Ci	ustom Name	Product Name	Compagny	Product type		
	D Ci		Product Name	Mundah	Product type Matrix Virtual	Select	
				© 2016 MuxLab Inc. mobile ap			

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).

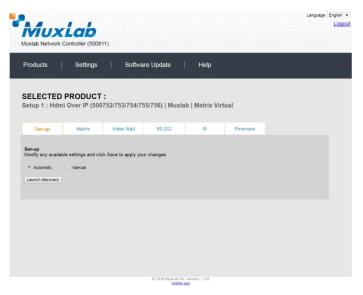


Figure 121: Products Screen – Set-up Tab

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

_	_	_								guage: Englis
		Controller (5008	11)							Lo
Prod	lucts	Settings	Softv	vare Update	Help					
		PRODUCT i Over IP (500		755/756) Mu	ıxlab Matrix	Virtual				
	Set-up	Matrix	Video Wall	RS-232	IR	Firr	nware			
Set-u Modif		ble settings and clie	ck Save to apply y	your changes						
• A		O Manual	ck Save to apply y	your changes						
• A	fy any availat	O Manual	ck Save to apply y	your changes						
Modif A Laur Displ	fy any availat automatic nch discovery	Manual	ck Save to apply y	your changes IP address	MASK	DHCP DIP				
Modif A Laur Displ	fy any availat Automatic nch discovery Iay (1 RX)	_ Manual	IAC address	-	MASK 255 255 255 0		Reboot	Cancel	Detail	
Modif A Laur Displ Port# 0 Source	fy any availat automatic Inch discovery Iay (1 RX) ¥ Name RX1 ce (1 TX)	Manual	IAC address 10-08-78-00-7D-2A	IP address 192.168.168.72	255.255.255.0	2	Reboot	Cancel	Detail	
Modif A Laur Displ Port# 0 Source Port#	fy any availat automatic Inch discovery Iay (1 RX) ¥ Name RX1 ce (1 TX) ¥ Name	Manual M C	IAC address 10-08-78-00-7D-2A IAC address	IP address 192.168.168.72 IP address	255.255.255.0 MASK				Detail	
Modif A Laur Displ Port# 0 Source	fy any availat automatic Inch discovery Iay (1 RX) ¥ Name RX1 ce (1 TX)	Manual M C	IAC address 10-08-78-00-7D-2A IAC address	IP address 192.168.168.72 IP address	255.255.255.0	2	Reboot	Cancel	Detail	
Modif A Laur Displ Port# 0 Source Port#	fy any availat wutomatic Inch discovery Iay (1 RX) # Name RX1 Ce (1 TX) # Name TX1	Manual M C	IAC address 10-08-78-00-7D-2A IAC address	IP address 192.168.168.72 IP address	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).

	iux	Lab	•							.anguage:	
	b Network C										
Prod	lucts	Setting	s Softv	ware Update	Help						
SEL	ECTED	PRODUC	ст:								
Setur	p1:Hdmi	Over IP (5	500752/753/754	(755/756) Mi	uxlab Matrix	Virtual					
5	Set-up	Matrix	Video Wall	R5-232	IR	Firm	ware				
Set-u Modif		le settings and	I click Save to apply	your changes							
• A	ý any availabl utomatic nch discovery	le settings and O Manual	I click Save to apply	your changes							
Modif A Laun Displa	y any availabl utomatic nch discovery lay (1 RX)										
Modify Au Laun Displa Port#	ý any availabl automatic nch discovery lay (1 RX) # Name		MAC address	IP address	MASK 255 255 0	DHCP DIP	Reboot	Detail	UPDATE		
Modify a Ai Laun Displa Port# 0 Source	ý any availabl utomatic inch discovery lay (1 RX) f Name RX1 ce (1 TX)		MAC address 00-08-78-00-7D-2A	IP address 192.168.168.72	255.255.255.0	2	Reboot	Detail	UPDATE	D	
Modify a Ai Laun Displa Port# 0 Source	ý any availabl utomatic nch discovery la y (1 RX) ¢ Name RX1		MAC address	IP address			Reboot	Detail	UPDATE	D	
Modify and Laun Displa Port# 0 Source Port#	y any availabl automatic nch discovery lay (1 RX) f Name RX1 ce (1 TX) f Name TX1		MAC address 00-08-78-00-7D-2A MAC address	IP address 192.168.168.72 IP address	255.255.255.0 MASK				UPDATE	D	

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).

Mux	Lab					Language:	English • Logou
Muxlab Network		11)					
Products	Settings	Softwa	are Update	Help			
SELECTED Setup 1 : Hdm		-	55/756) Muxla	ab Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Connect your disp bottom to make th	plays to the desired the 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]	
RX1		- *	> Current ac		▼ ID: 1		
			> Save cum	ent connections in foll ent connections as ne lowing preset:	owing preset:		
Connect					۲]	
			© 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).

Muxlab Network		11)				Language: Engl La
Products	Settings	Softwa	re Update	Help		
SELECTED Setup 1 : Hdm		: 752/753/754/75	55/756) Muxla	ıb Matrix Vi	rtual	
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 v	vant to change, use t	he "Connect" button at the
DISPLAY		SOURCE		PRESE	TS	7
RX1		Audio 1 V	no preserv		 ID: 0 Idowing preset: 	
				ent connections as n	•	
Connect			> Delete foil	owing preset:	•	

Figure 128: Change Successful

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

PRESETS
> Current active Preset:
No preset selected 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	

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).

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 134: Change Current Active Preset

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

PRESETS				
> Current active Preset:				
[1] Old Preset	۲	ID:	1	
> Save current connections in following pre-	set:		JCCE	
> 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		11)				Language: Englis
Products	Settings	Software	e Update	Help		
	PRODUCT ni Over IP (500	: 752/753/754/755	j/756) Muxla	ab Matrix Viri	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
NO devices com	patible with video	wall features found	I			
NO devices com	patible with video	wall features found	I			
			© 2016 MuxLab Inc	c version: 1.4.8		

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 ¥	en settings 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.

ettings DUCT : r IP (50075 atrix ettings here.		nre Update 55/756) Muxta RS-232	Help ab Matrix Virt	tual Firmware		
atrix ettings here.						
ettings here.	Video Wall	RS-232	IR	Firmware		
*	_					
(ex: A013B	155C5)					
IEX						
		(ex: A013B155C5)	(ex: A013B155C5)	(ex: A013B155C5)	(ex: A013B155C5)	(ex: A013B155C5)

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** dropdown list and selecting the local device from the list, and then inputting the IP address of the far device in the **IP Feedback** field. The user then clicks on **Save**.

6. Products Screen - Firmware Tab

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

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	
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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 Co	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		
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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).

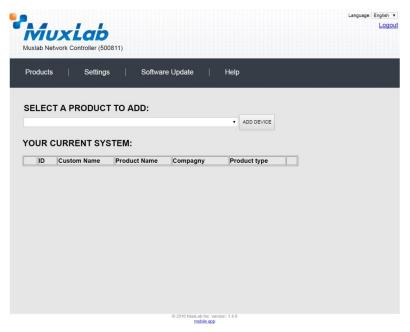


Figure 146: Products Screen – Initial View

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).

Muxlab Network Controller (500811)		Language: <u>Eng</u> ish ▼ Logout
Products Settings	Software Update Help	
SELECT A PRODUCT TO A		DEVICE
Hdmi Over IP (500752/753/754/ Hdmi Over IP 4K (500758/759)	755/756)	
Hdmi Over IP H264 (500757) Matrix 16x16 (500480)	oduc	t type
	© 2016 MuxLab Inc. version: 1.4.8	

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 Update Help	
SELECT A PR Hdmi Over IP (500752/753/754/755/756) YOUR CURREI ID Custom Name: Stup 1 OK CANCEL	
© 2016 Noti Jah Inc. version: 1.4.8 mobiles 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).

	ab Network Control		1)								L
Proc	ducts S	ettings	Softv	vare Update	Help						
	ECTED PRO			755/756) Mu	ıxlab Matrix	Virtua	ıl				
	Set-up N	atrix	Video Wall	RS-232	IR		Fim	nware			
• /	up Ify any available setti Automatic O Man nch discovery		k Save to apply	your changes							
Modi • / Lau Disp	ný any available setti Automatic Man nch discovery Iay (4 RX)	ual			MASK	DHC					
Modi • / Lau Disp	Ifý any available setti Automatic O Man nch discovery	ual	.C address	your changes IP address 192.168.168.64	MASK 255.255.255.0	DHCF		Reboot	Detail		
Modi Lau Disp	Irý any available settli Automatic Man nch discovery I lay (4 RX) # Name	ual E2 00-	C address -08-78-00-7D-E2	IP address	255.255.255.0	DHCF Ø	P DIP	Reboot	Detail		
Modi Lau Disp Port: 0	ný any available setti Automatic Man nch discovery Ilay (4 RX) # Name RX-00-08-78-00-7D-	Lal MA E2 00- 59 00-	C address -08-78-00-7D-E2 -08-78-00-7E-59	IP address 192.168.168.64				Reboot Reboot	Detail]	
Modi Lau Disp Port: 0 0	Itý any available settil Automatic Man nch discovery Iay (4 RX) # Name RX-00-08-78-00-7D- RX-00-08-78-00-7E-	MA E2 00- 59 00- 5E 00-	C address oB-78-00-7D-E2 oB-78-00-7E-59 oB-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60	255.255.255.0 255.255.255.0	•		Reboot			
Modi Lau Disp Port: 0 0 0 0	Itý any available settil Automatic Man nch discovery Ilay (4 RX) # Name RX-00-0B-78-00-7D- RX-00-0B-78-00-7E- RX-00-0B-78-00-7E-	MA E2 00- 59 00- 5E 00-	C address oB-78-00-7D-E2 oB-78-00-7E-59 oB-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		
Modil A protection A protect	ný any available setti Automate Man nch discoveny 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-	MA E2 00 59 00 5E 00 33 00	C address -08-78-00-7D-E2 -08-78-00-7E-59 -08-78-00-7E-5E -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]	
Modil A protection A protect	rý any available setti Automate Man nch discovery iay (4 RX) # Name R:X-00-08-78-00-7E- R:X-00-08-78-00-7E- R:X-00-08-78-00-7E- R:X-00-08-78-00-7E-	MA E2 00 59 00 55E 00 33 00 MA	C address -08-78-00-7D-E2 -08-78-00-7E-59 -08-78-00-7E-63 -08-78-00-7E-63 C address	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]]]	
Modil A constraints of the second se	ný any available setti Automate Man neh discovery Hay (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- Cree (2 TX) # Name	MA E2 00 59 00 56 00 53 00 MA MA	C address -08-78-00-7D-E2 -08-78-00-7E-59 -08-78-00-7E-56 -08-78-00-7E-63 -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 MASK	Ø Ø Ø DHCF		Reboot 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	RS-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-63 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 192.168.168.63 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).

										Language	
		Controller (50									Lo
Prod	lucts	Setting	s Softv	vare Update	Help						
SEL	ECTED		:т:								
			00752/753/754/	755/756) Mu	ıxlab Matrix	Virtua	1				
	Set-up	Matrix	Video Wall	R5-232	IR		Fin	mware			
• 4	Automatic	O Manual	l click Save to apply	your changes							
 A Laur Displ 	Automatic nch discovery Iay (4 RX)	O Manual			1400/	DUIO					
● A Laur Displ	Automatic nch discovery Iay (4 RX) # Name	O Manual	MAC address	IP address	MASK	DHC			Detail		
 A Laur Displ 	Automatic nch discovery Iay (4 RX)	O Manual		IP address 192,168.168.64	MASK 255.255.255.0 255.255.0			Reboot	Detail		
A Laur Displ Port# 0	Automatic nch discovery 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 Reboot	Detail	UPDATED	
A Laur Displ Port# 0 0	Automatic nch discovery lay (4 RX) # Name RX-1 RX-2	O Manual	MAC address 00-08-78-00-70-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			
A Laur Displ Port# 0 0 0 0	Automatic Inch discovery Iay (4 RX) # Name RX-1 RX-2 RX-3	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-5E	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0 255.255.255.0	* *		Reboot Reboot Reboot	Detail Detail	UPDATED UPDATED	
A Laur Displ Port# 0 0 0 Sour	Automatic Inch discovery Iay (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	UPDATED UPDATED	
A Laur Displ Port# 0 0 0 Sour	Automatic Inch discovery Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4	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 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2.468.168.63	255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0 255 255 255 0	5 5 5		Reboot Reboot Reboot	Detail Detail	UPDATED UPDATED	
A Laur Displ Port# 0 0 0 0 Sour Port#	Automatic nch discovery lay (4 RX) # Name RX-1 RX-2 RX-3 RX-3 RX-4 rce (2 TX) # Name	O Manual	MAC address 00-06-78-00-7D-E2 00-08-78-00-7E-50 00-08-78-00-7E-50 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.63 I92.168.168.63 IP address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	v v v DHCF		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
A Laur Displ O O O O O Sour Port# O	Automatic Inch discovery Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 FX-4 SDI Cam 1 SDI Cam 2	O Manual	MAC address 00-08-78-00-70-52 00-08-78-00-70-52 00-08-78-00-76-56 00-08-78-00-76-58 00-08-78-00-70-59 MAC address 00-08-78-00-70-59	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 Reboot	Detail Detail Detail	UPDATED UPDATED	

Figure 154: Saving Name Changes

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

Device Detai	1
Custom Name:	RX-1
Model:	500756-RX
MAC Address:	00-0B-78-00-7D-E2
IP Address:	192.168.168.64 (DHCP: ON)
FW Version:	2.0.8
Group IP:	239.255.1.1
Video Resolution:	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 Resol	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	۲	ID:	1	
> Save current connections in following pres	set:			
	•	SI	JCCE	ess
> Save current connections as new preset:				
> Delete following preset:				
	۲			

Figure 165: Confirmation of Changed Preset Name

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

3. Products Screen - Video Wall Tab

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

Muxiab Network Controller (500811)						Language	Language: English	
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: Er
Products	Settings	Softwar	e Update	Help		
SELECTED Setup 1 : Hdmi			5/756) Muxla	ab Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device Select a device: - Baud rate: - IP header in d - Feedback ON:	: • •		3 Stop bits: 1]	Parity : NONE •		
- IP Feedback:						
Data to send in	HEX (ex: A013	B155C5)				
Data feedback	received in HEX	(
Send						
			© 2016 MuxLab In			

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.

MUX A		11)				.anguage: English <u>Logo</u>
Products	Settings	Softwa	are Update	Help		
SELECTED P Setup 1 : Hdmi (55/756) Muxl	ab Matrix Virt	ual	
				IR	Firmware	
Set-up Update your device's	Matrix RS-232 connec	Video Wall	RS-232	ik	Timmare	
Update your device's Select a device:		tion settings here.			Tittinare	
Update your device's Select a device: - Baud rate:	RS-232 connec SDI Cam 1 ¥ 9600 ¥	tion settings here.	RS-232		Tittinac	
Update your device's Select a device: - Baud rate: - IP header in dat	RS-232 connec SDI Cam 1 • 9600 • a:	tion settings here.				
Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON:	RS-232 connec SDI Cam 1 • 9600 • a: •	tion settings here.				
Update your device's Select a device: - Baud rate: - IP header in dat	RS-232 connec SDI Cam 1 • 9600 • a:	tion settings here.				
Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON:	RS-232 connec SDI Cam 1 • 9600 • a: •	tion settings here.				
Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback:	RS-232 connec SDI Cam 1 • 9600 • a: •	tion settings here.				
Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback:	RS-232 connec SDI Cem 1 • a: 192.168.168.	tion settings here. [Data bits				
Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback: Save Data to send in F	RS-232 connect SDI Cem 1 • 9600 • a: 192.168.168. EX (ex: A013	tion settings here. [Data bits 56 BB155C5)				
Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback: Save	RS-232 connect SDI Cem 1 • 9600 • a: 192.168.168. EX (ex: A013	tion settings here. [Data bits 56 BB155C5)				
Update your device's Select a device: - Baud rate: - IP header in dat - Feedback ON: - IP Feedback: Save Data to send in F	RS-232 connect SDI Cem 1 • 9600 • a: 192.168.168. EX (ex: A013	tion settings here. [Data bits 56 BB155C5)				

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:[English Log
Products	Settings		re Update	Help			
SELECTED Setup 1 : Hdm		: 752/753/754/75	5/756) Muxl	ab Matrix Vir	tual		
Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
Update your device Select a device	-	9.					
- IP Feedback: Save	192.168.168	8.56					
Data to send in	HEX (ex: A013	B155C5)					
Send							
IR code receive	ed in HEX						
Get IR code							
			© 2016 MuxLab In				

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).

Muxiab Network Controller (Language: English ▼ Logout
Products Settir	ngs Software l	Update Help		
	(500752/753/754/755/7	756) Muxlab Matrix Virt		
Set-up Matrix	Video Wall	RS-232 IR	Firmware	
DISPLAY	 Displays 	available settings and click Save t (RX) Source (TX) e No file chosen Apply SOURCE	to apply your	
RX1 (500756-RX)	v2.0.8	SDI Cam 1 (500756-TX	() v2.0.8	
		© 2016 MuxLab Inc. version: 1.4.8		

Figure 171: Firmware Tab

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

Settings Screen

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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.

Products Settings Software Update Help Network Administration Network Use the form below if you'd like to set manual network settings. Use DHCP: Ves • No Prederess 122 125 168 Retwork 168	Muxiab Network Controller (500811)	Language: English Logo
Natwork Use the form below if you'd like to set manual network settings. Use DHCP: Ves No IP address: 122_168_5 50 Network meak: 255_256_256_0 0 Instant 112_168_168_1 1	Products Settings Software Update Help	
Use the form below if you'd like to set manual network settings. Use DHCP: vs • No Padress: 132. 168. 168. 50 Network mask: 132. 168. 168. 1	Network Administration	
IP address 192 188 188 50 Network mask: 255 255 255 0 Router: 192 188 188 1		
192 168 168 50 Network maak: 255 255 255 0 Router: 192 188 188 1	Use DHCP: O Yes III No	
255 255 255 0 Router: 192 168 168 1	192 . 168 . 168 . 50	
Restor: 192 156 156 1		
Save	192 . 168 . 168 . 1	
	Save	
	© 2016 MusLab Inc. version: 1.4.8 mobile app	

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).

Network Administration	Muxlab Network Co	ontroller (500811)				Language: Engl
User Accounts Create a new User Account Or select a User to edit: Prev pass-ord: Contin new password: Contin new	Products	Settings	Software Update	Help		
Create a new Viser Account Or select a User to edit: User Hame rev password: Confirm new password: Create Update Device Create Update Device Restore the unit with the selected data file Specify file: Concestifie: 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 data and save it in a file Backup field ata and save it in a file Backup field and and save it in a file Backup field field and save it in a file Backup field and save it in a file Backup field and save it in a file Backup field field and save it in a file Backup field f	Network	Administration				
Uark Iame new password: Contin maw password	User Accounts					
User Type: Create Update Deter Restore data Restore the unit with the selected data file Specify file: Crocces 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 the data and save it in a file Backup Get Logs Get Logs in a zip file	Create a new User a User Name new password:	Account Or select a Us	ser to edit:	*		
Restore data Restore the lunk 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						
Restore the unit with the selected data file Specify file: Choose file No file chosen WARNING 1 You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Backup data Backup the data and save it in a file Backup file Get Logs Get Logs Get all logs in a zip file	Create Update I	Velete				
Backup the data and save it in a file Backup Get Logs Get all logs in a zip file	Specify file: Choose	file No file chosen	ddress of this controller u	sing the same as the cor	ntroller this backup file come fre	om !!!
Get Logs Get al logs in a zip file		save it in a file				
Download Logs Devis Logs	Get Logs	le				
	Oet all logs in a zip i					
© 2016 MuxLab Inc. version: 1.4.8		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.

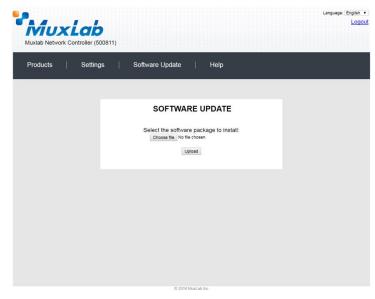


Figure 174: Software Update Screen

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).

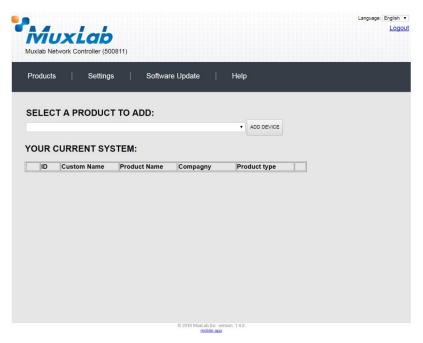


Figure 176: Products Screen – Initial View

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

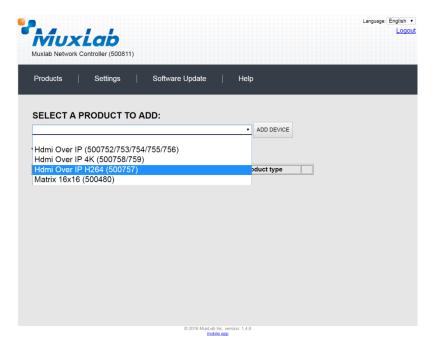


Figure 177: Products Screen – Selecting a Product

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	- 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 Ilay (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 MASK	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 255.255.255.0	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 uutomatic Ich discovery Iay (4 RX) ≢ Name RX-1 RX-2	O Manual	MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	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 00-08-78-00-7E-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 00-08-78-00-70-E2 00-08-78-00-70-E3 00-08-78-00-75-50 00-08-78-00-75-50 00-08-78-00-75-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 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 00-08-78-00-7E-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		
Modif 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).

	-									Language	e: Englis Lo
		k Controller									
Proc	ducts	Setti	ngs ∣ Soft∖	ware Update	Help						
		D PRODU									
Setu	ıp 1 : Hd	lmi Over IP	H264 (500757)	Muxlab Mati	rix Virtual						
	Set-up	Matri	x RS-232	Firmware							
•	Automatic	O Manual									
Lau	nch discove nay (4 RX)	ery									
Lau Disp	nch discove	ery	MAC address	IP address	MASK	DHCF	DIP				
Lau Disp	nch discove Play (4 RX)	ery	MAC address 00-08-78-00-7D-E2		MASK 255.255.255.0	DHCF	P DIP	Reboot	Detail	UPDATED	
Lau Disp Port	nch discove alay (4 RX) # Name	ery		192.168.168.64				Reboot Reboot	Detail Detail	UPDATED UPDATED	
Lau Disp Porta	nch discove blay (4 RX) # Name RX-1	ery	00-08-78-00-7D-E2	192.168.168.64 192.168.168.60	255.255.255.0	۲					
Lau Disp Ports 0	nch discove play (4 RX) # Name RX-1 RX-2	ery	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 Disp Porte 0 0	Manch discove May (4 RX) # Name RX-1 RX-2 RX-3	ery	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	Manch discove May (4 RX) # Name RX-1 RX-2 RX-3	ery	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	May (4 RX) # Name RX-1 RX-2 RX-3 RX-4 RX-4	ery	00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E 00-0B-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		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	ery	00-08-78-00-70-E2 00-08-78-00-7E-59 00-08-78-00-7E-58 00-08-78-00-7E-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	Ø Ø Ø 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	nch discove lay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 rce (2 TX) # Name	ery	00-0B-78-00-7D-E2 00-0B-78-00-7E-59 00-0B-78-00-7E-5E 00-0B-78-00-7E-63	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	5 5 5		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Lau Disp Ports 0 0 0 0 0 0 0 Sour Ports 0	Inch discove Iay (4 RX) # Name RX-1 RX-2 RX-3 RX-4 rce (2 TX) # Name DVD-1	ery	00-08-78-00-7D-E2 00-08-78-00-7E-59 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	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		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Lau Disp Ports 0 0 0 0 0 0 0 Sour Ports 0	# Name RX-1 RX-2 RX-3 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4	ery	00-08-78-00-7D-E2 00-08-78-00-7E-59 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	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		Reboot Reboot Reboot	Detail Detail Detail	UPDATED UPDATED	
Lau Disp Porte 0 0 0 0 0 0 Sour Porte 0 0	# Name RX-1 RX-2 RX-3 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4 RX-4	ery	00-08-78-00-7D-E2 00-08-78-00-7E-59 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	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		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		11)	
Products	Settings	Softwa	are Update Help
SELECTED Setup 1 : Hdm		-	uxlab Matrix Virtual
Set-up	Matrix	RS-232	Firmware
Connect your disp bottom to make th		sources below. On	ce you've selected the displays you want to change, use the "Connect" button at the
		SOURCE	DECETC
DISPLAY		SOURCE	PRESETS
DISPLAY RX-1		SOURCE	> Current active Presat:
			> Current active Preset:
			COurrent active Preset: No preset selected No preset selected Save current connections in following preset:
			CCESS
RX-1			> Current active Preset: No preset selected ID: 0 > Save current connections in following preset: > Save current connections as new preset: Create > Delete following preset:

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 VID: 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:		
	SUCC	ESS

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).

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

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	ID:	1	
> Save current connections in following prese	t:		
•	S	UCCES	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).

			Sonwa	re Update	Help		
SELE	CTED	PRODUCT					
			4 (500757) Mu	ıxlab Matrix	Virtual		
Se	t-up	Matrix	RS-232	Firmware			
Update	your devic	e's RS-232 conne	ction settings here.				
Select	a device	: DVD-1	*				
- Bauc	i rate:	115200 🔻 [Data	bits: 8 Parity bits	None Stop bit	ts: 11		
Save		1.2					
Gave						 	
Data t	o send ir	HEX (ex: A01	3B155C5)				
Send						 	

Figure 197: RS-232 Tab - Selecting a Device

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

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

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

IR Pass-through

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

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

4. Products Screen - Firmware Tab

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



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.

Muxiab Network Controller (500811)	Language: English Log
Products Settings Software Update Help	
Network Administration	
Network Use the form below if you'd like to set manual network settings.	
Use DHCP: O Yes ® No	
IP address:	
192 . 168 . 168 . 50	
Network mask: 255 . 255 . 255 . 0	
200 . 200 . 200 . 0 Router:	
192 . 168 . 168 . 1	
Save	
© 2016 MusLab Inc. version: 1.4.8 mobile app	

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).

Products Settings Network Administration Jer Accounts Create a new Viser Account Or select a User to edit: User Npe: Create a logdation Deprime: Create a logdation Deprime: Create a logdation Create a logdat		Language: English
Products Settings Software Update Help Network Administration Jser Accounts	Muxiah	Log
Products Settings Software Update Help Network Administration Jser Accounts	VIUXLAD	
Network Administration Jeer Accounts	Iuxlab Network Controller (500811)	
Network Administration Jeer Accounts		
Jeer Accounts	Products Settings Software Update Help	
Jeer Accounts		
Jeer Accounts		
Treate a new User Account Or select a User to edit:	Network Administration	
Treate a new User Account Or select a User to edit:		
User Name her password: her pa	User Accounts	
The password: Content me password: Content with the selected data file Specify file: Concent in 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 MARNING 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	Create a new User Account Or select a User to edit:	
Cerdim new password: Lee Type: Crease Update Device Restore data Restore the unit with the selected data file Specify file: Choose file No file chosen ARANING 1 You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Restor	User Name	
User Type:	new password:	
Create Update Delete Restore data Restore the unit with the selected data file Specify file: Create in 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 de tal and save it in a file Backup Backup data Backup d	Confirm new password:	
Restore data Restore the unit with the selected data file Specify file: [Concesting 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 B	User Type: 🔹	
Restore data Restore the unit with the selected data file Specify file: [Concesting 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 B	Ander Haden Balan	
Restore the 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 ackup data and save it in a file Backup file Choose a point of the come file Devented Logs Devented Logs	Create Update Delete	
Restore the 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 ackup data and save it in a file Backup file Choose a point of the come file Devented Logs Devented Logs		
Specify file: Choose file No file chosen WARNING ! You MUST FIRST set the IP address of this controller using the same as the controller this backup file come from !!! Restore Sackup data Backup file data and save it in a file Backup Devented Logs Deven	Restore data	
AARNING 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 file Backup Backup Devented Logs Devented L		
Restore ackup data ackup the data and save it in a file Backup bet Logs Devnloed Log	Specify file: Choose file No file chosen	
Restore ackup data ackup the data and save it in a file Backup bet Logs Devnloed Log	WARNING I You MUST FIRST set the IP address of this controller using the same as the controller this backun file co	me from III
Sackup data Sackup the data and save it in a file Backup Sat Logs Sat all logs in a zip file Downtoad Logs Delete Logs		
Backup the data and save it in a file Backup Set Logs Set al logs in a zip file Download Logs Delete Logs	Restore	
Backup the data and save it in a file Backup Set Logs Set al logs in a zip file Download Logs Delete Logs		
Backup the data and save it in a file Backup Set Logs Set al logs in a zip file Download Logs Delete Logs		
Beckup Set Logs Set al logs in a zip file Download Logs Delete Logs	Backup data Backup the data and save it in a file	
Set Logs Set all logs in a zip file Download Logs Delete Logs		
Set allogs in a zip file Downtosd Logs Detets Logs	Backup	
Set allogs in a zip file Downtosd Logs Detets Logs		
Set allogs in a zip file Downtosd Logs Detets Logs	Get Logs	
	Get all logs in a zip file	
	Download Loos Delete Loos	
	noulinen roĝe	

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 (500				Language: English ▼ Logou
Products Settings	Softwar	re Update	Help	
SELECT A PRODUCT			ADD DEVICE	
YOUR CURRENT SYS	FTEM: Product Name	Compagny	Product type	
		© 2016 MuxLab Inc. v mobile app		

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).

Muxiab Network Controller (500811)	Language∶English ▼ Logou
Products Settings Software Update Help	
SELECT A PRODUCT TO ADD:	
× A	ADD DEVICE
Hdmi Over IP (500752/753/754/755/756) Hdmi Over IP 4K (500758/759)	
	uct type
© 2016 MuxLab Inc. version: 1.4.8	

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 V
Products Settings Software Update Help	
SELECT A PR Hdmi Over IP 44 Cucconserved Docusor Cucconserved Cucconserved	

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).

Muxlab Network Cor			50 says: load previous store	d device list ?	Cancel	Language: [English Log
Products	Settings	Softwar	e Update	Help			
SELECTED P Setup 1 : Hdmi C		0758/759) M	luxlab Matr	ix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Modify any available Automatic	Manual	ave to apply you	rcnanges				

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.

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 208).

Muxlab Network C	Lab controller (50081	11)				Language: En
Products	Settings	Softwa	re Update	Help		
SELECTED Setup 1 : Hdmi			/luxlab Matr	ix Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Modify any availabl Automatic Launch discovery	Manual					
			© 2016 MuxLab In mobile			

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	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 ich 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 ich 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 • Logou
Products	Settings	Softwa	are Update	Help			
	PRODUCT		Muxlab Matri:	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			No preset : > Save curr > Save curr	ent connections in folic	Ŧ		
			© 2016 MuxLab In 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).

Auxlab Network		11)				Language:	English Logo
Products	Settings	Softwa	are Update	Help			
SELECTED Setup 1 : Hdm		-	Muxlab Mati	rix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th DISPLAY		sources below. Or SOURCE	nce you've selecter		nt to change, use the	"Connect" button at the	
RX-1		DVD-1 T	ancel	> Current active Preset: No preset selected	▼ ID		
				 Save current connection Save current connection 	ons in following preset:		
Connect				> Delete following prese			
Connect							

Figure 214: Change Connection

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

Muxlab Network	Controller (50081	1)				Language:	English • Logout
Products	Settings	Softwa	re Update	Help			
	PRODUCT hi Over IP 4K (5	-	Muxlab Matri	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th		sources below. On	ce you've selected	the displays you wa	int to change, use th	e "Connect" button at the	
DISPLAY	SOURCE			PRESET]		
RX-1		DVD-1 V SUC	CESS > Current a	ctive Preset:	▼ ID: 0		
			> Save curr	ent connections in folic	wing preset:		
					v preset: Create		
Connect			> Delete for	lowing preset:	•		
			© 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.

VIUX uxlab Network (Lab Controller (50081	11)				Language:	E
Products	Settings	Softwar	e Update	Help			
	PRODUCT i Over IP 4K (: 500758/759) M	luxlab Matr	ix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Jpdate your device Select a device - Baud rate:		tion settings here.	None Stop b	its: 1]			
Save							
Data to send in	HEX (ex: A013	B155C5)					
Send							
			© 2016 MuxLab I	inc. version: 1.4.8			

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).

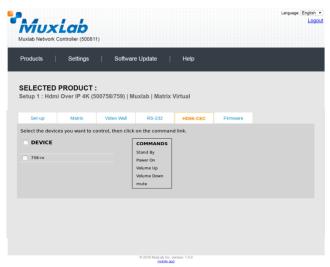


Figure 226: HDMI CEC Tab

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 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 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).

	UXLOD letwork Controller (50				Language: Eng
Product	ts Settings	s Softwar	e Update 🛛 🗎	Help	
SELEC	CT A PRODUC	t to add:		ADD DEVICE	
	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).

Muxiab Network Controller (500811)	Language: English ▼ Logour
Products Settings Software	Update Help
SELECT A PRODUCT TO ADD:	
	ADD DEVICE
Hdmi Over IP (500752/753/754/755/756) Hdmi Over IP 4K (500758/759)	
Hdmi Over IP H264 (500757) Matrix 16x16 (500480)	oduct type
	© 2016 Mud.ab Inc. version: 1.4.8

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 controller (5008	11)				Language:	English Log
Products	Settings	Softwa	re Update	Help			
SELECTED Setup 1 : Hdmi			/luxlab Matri	ix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Set-up Modify any availabl • Automatic Launch discovery	e settings and clic	k Save to apply you	ır changes				
			© 2016 MuxLab Ir				

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).

	ucts Settin	gs ∣ Softv	vare Update	Help				
	ECTED PRODU		Muxlab Ma	atrix Virtual				
s	et-up Matrix	Video Wall	R5-232	HDMI-CEC	E Fir	mware		
	ch discovery ay (4 RX)							
	Name	MAC address	IP address	MASK	DHCP DI			
0	RX-00-0B-78-00-7D-E2 RX-00-0B-78-00-7E-59	00-0B-78-00-7D-E2 00-0B-78-00-7E-59	192.168.168.64	255.255.255.0 255.255.255.0			Detail	
0	RX-00-0B-78-00-7E-59	00-0B-78-00-7E-5E	192.168.168.65	255.255.255.0			Detail	
0	RX-00-0B-78-00-7E-63	00-0B-78-00-7E-63	192.168.168.63	255.255.255.0			Detail	
Sourc	e (2 TX)							
Port#	Name	MAC address	IP address	MASK	DHCP DI	P		
0	DVD -1	00-0B-78-00-7D-D9	192.168.168.62	255.255.255.0		Reboot	Detail	
0	DVD-2	00-0B-78-00-7D-0B	192.168.168.66	255.255.255.0		Reboot	Detail	
Save			0.0010.11	ab Inc. version: 1.4.8				
Save			© 2016 MUXL					
Save			© 2016 MUXLI <u>m</u>	obile app				

Tou	ucts	Settings	Soft	ware Update	Help					
		PRODUC	T : (500758/759)	Muxlah Mr	atrix Virtual					
etu	p i . Huili	Over IP 4r	(500756/759)							
	Set-up	Matrix	Video Wall	RS-232	HDMI-CE		Firm	nware		
	bec-up	macrix	Tideo Tratt	10-232	TIDIII OL			inc. c		
• A	utomatic ich discovery	O Manual	click Save to apply	your changes						
 A Laun Displa Port# 	utomatic ich discovery ay (4 RX) Name		MAC address	IP address	MASK 255 255 255 0	DHCF		Reboot	Detail	
 A) Laun Displa Port# 0 	utomatic ich discovery ay (4 RX)			IP address 192.168.168.64	MASK 255.255.255.0 255.255.255.0	DHCF	P DIP	Reboot	Detail	
 Ai Laun Displa Port# 0 0 	utomatic ich discovery ay (4 RX) f Name RX-1		MAC address 00-08-78-00-7D-E2	IP address 192.168.168.64 192.168.168.60	255.255.255.0					
 Ai Laun Displa <li< th=""><th>utomatic ich discovery ay (4 RX) F Name RX-1 RX-2</th><th></th><th>MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59</th><th>IP address 192.168.168.64 192.168.168.60 192.168.168.65</th><th>255.255.255.0 255.255.255.0</th><th>*</th><th></th><th>Reboot</th><th>Detail</th><th></th></li<>	utomatic ich discovery ay (4 RX) F Name RX-1 RX-2		MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59	IP address 192.168.168.64 192.168.168.60 192.168.168.65	255.255.255.0 255.255.255.0	*		Reboot	Detail	
 A Laun Displ: Port# 0 0 0 0 	utomatic ich discovery ay (4 RX) f 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 Laun Displi Port# 0 /ul>	ay (4 RX) A 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 Laun Displi Port# 0 /ul>	utomatic ch discovery ay (4 RX) Name RX-1 RX-2 RX-3 RX-4 Ce (2 TX)		MAC address 00-08-76-00-7D-E2 00-08-76-00-7E-50 00-08-76-00-7E-50 00-08-76-00-7E-63	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2 address	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	5 5 5 5		Reboot Reboot	Detail Detail	
A	utomatic ch discovery ay (4 RX) e Name RX-1 RX-2 RX-3 RX-4 ce (2 TX) e Name		MAC address 00-08-78-00-7D-E2 00-08-78-00-7E-59 00-08-78-00-7E-63 00-08-78-00-7E-63 MAC address	IP address 192.168.168.64 192.168.168.65 192.168.168.65 192.168.168.63 IP2 address 192.168.168.62	255.255.255.0 255.255.255.0 255.255.255.0 255.255.255.0	v v v DHCF		Reboot Reboot Reboot	Detail Detail Detail	

Figure 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	I	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 utomatic 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	UPDAT	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			
	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 the	plays to the desired ne connections.	sources below. On	ce you've selected	the displays you wa	int to change, use the	"Connect" button at the	
DISPLAY		SOURCE		PRESETS	6]	
RX-1 Connect			> Save cum	selected 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).

Auxlab Network	Controller (5008	11)				Langua	ge: English Logo
Products	Settings	Softwa	are Update	Help			
SELECTED Setup 1 : Hdm		-	Muxlab Mat	rix Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th DISPLAY		sources below. Or SOURCE	ice you've selecte		nt to change, use the '	"Connect" button at the	
RX-1		DVD-1 T	ancel	> Current active Preset: No preset selected	▼ ID		
				 Save current connection Save current connection 	ons in following preset:		
Connect				> Delete following prese			
Connect				> Delete following prese			

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).

						Language	e: English 🔻
Muxlab Network	Controller (50081	11)					<u>Logout</u>
Products	Settings	Softwa	re Update	Help			
	PRODUCT hi Over IP 4K (-	/luxlab Matriz	x Virtual			
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware		
Connect your disp bottom to make th		sources below. One	ce you've selected	the displays you wa	nt to change, use the	"Connect" button at the	
DISPLAY		SOURCE		PRESETS	3		
RX-1		DVD-1 V SUC	CESS > Current ad				
			no preser a	ent connections in follo	V ID: 0		
			> Save curr	ent connections as new	/ preset: Create		
			> Delete foil	owing preset:	•		
Connect							
			© 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 follo	owing preset:				
[1] Old Preset					
	Create				
> Delete following preset:	T				

Figure 250: Change Current Active Preset

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

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

Figure 251: Confirmation of Changed Preset Name

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

3. Products Screen - Video Wall Tab

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

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

Figure 252: Video Wall Tab

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

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

Muxlab MNC Home Setup site	Video Wall Devices +	Logout
Video Wall Set-up		Settings
Saved V-Wall + V-Wall Selected: ID:: Save Apply Save as: new Configuration Create 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: ID:: Save Apply Save as: new Configuration			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 Custom Size						

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).

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

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).

Muxlab MNC Home Setup site Video	Wall Devices -	Logou
Video Wall Set-up		Settings
Saved V-Wall + V-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 Delete	RX-1 Sh H.0,V0 Sc H:0,V0	RX-4 Sh H.0,V.0 Sc H:0,V/0
Selec	ct all 📄 — Drag n drop a video wall template	
2x2 3x3 4x4 Custom Siz		
RX-1 RX-2	- Select and place Displays	
	- Select Source to connect	
DVD TX-00-0B-78-00-7D-0B		

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 Wall	Set-up										Settings
Unit	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.

Network C	Lab Controller (50081	11)				Language: E
Products	Settings	Softwa	re Update	Help		
SELECTED Setup 1 : Hdmi		: 500758/759) M	/luxlab Matr	ix Virtual		
Set-up	Matrix	Video Wall	RS-232	HDMI-CEC	Firmware	
Select a device		vits: 8 Parity bits	: None Stop b	its: 1]		
	HEX (ex: A013	B155C5)				
			© 2016 MuxLab I	on unmino: 1.4.0		

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	ii Over IP 4K (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	•				
David rates	(15000 - 1 Data)	oits: 8 Parity bits	u blene i Sten k	iter d 1		 1
	115200 • [[Data t	ons. o pranty bits	. None Stop i	nts. Tj		
Save]
Data to send i	n HEX (ex: A013	B155C5)				

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).

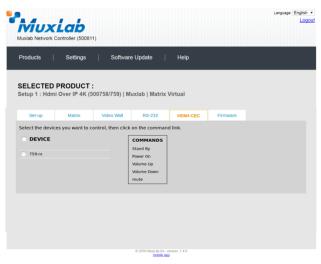


Figure 264: HDMI CEC Tab

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.

MuxLab Muxlab Network Controller (500811)	Language: [English Logo
Products Settings Software Update Help	,
Network Administration	
Network Use the form below if you'd like to set manual network settings.	
Use DHCP: Yes INO	
IP address:	
192 . 168 . 168 . 50	
Network mask:	
255 . 255 . 255 . 0	
Router:	
192 . 168 . 168 . 1	
Save	
© 2016 MuxLab Inc. version: 1.4.8. mobile app	

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).

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 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).

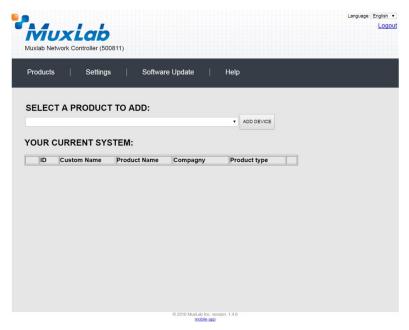


Figure 270: Products Screen – Initial View

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).

Muxlab Network Controller (500811)	Language: English ▼ Loqout
Products Settings Software Upda	ate Help
SELECT A PRODUCT TO ADD:	ADD DEVICE
Hdm: Over ID (500752/752/754/755/756)	ADD DEVICE
Hdmi Over IP (500752/753/754/755/756) Hdmi Over IP 4K (500758/759)	
Hdmi Over IP H264 (500757) Matrix 16x16 (500480)	oduct type
© 2016	3 MuxLab Inc. version: 1.4.8

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

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	1010111 (00	01021001104	100/100/1 Mu	Alaw Matrix	· · · · · ·				
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).

Matrix Software Update Help Setup Setup Setup Matrix Video Wall 85-232 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. PRESETS DispLAY SOURCE R Firmware Rt Image: Source selected the displays you want to change, use the "Connect" button at the bottom to make the connections. DispLAY SOURCE Source selected Image: Im							Langua	ige:
SELECTED PRODUCT : Setup 1 : Hdmi Over IP (500752/753/754/755/756) Muxlab Matrix Virtual Set-up Matrix Video Walt 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 Rx1 • Save current connections in following preset: • Save current connections as new preset: • Delete following preset:	MUX Iuxlab Network	Controller (50081	11)					
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. PRESETS DISPLAY SOURCE PRESETS Current active Preset: No preset selected III 1 JID 1 Save current connections in following preset: Save current connections as new preset: Preset	Products	Settings	Softwar	e Update	Help			
Connect your displays to the desired sources below. Once you've selected the displays you want to change, use the "Connect" button at the bottom to make the connections. DISPLAY SOURCE PRESETS Current active Preset: No preset selected ID: 1 Save current connections in following preset: Save current connections as new preset: Cireate Delete following preset: Delete fol				5/756) Muxla	ıb Matrix Virl	ual		
bottom to make the connections. DISPLAY SOURCE PRESETS > Current active Preset: No preset selected IID. 1 > Save current connections in following preset: > Save current connections as new preset: Create > Delete following preset: .	Set-up	Matrix	Video Wall	RS-232	IR	Firmware		
RX1 No preset selected ID: 1 > Save current connections in following preset: > Save current connections as new preset: Create > Delete following preset:				e you've selected			e "Connect" button at the	
Save current connections in following preset: Save current connections as new preset: Create Delete following preset:	RX1							
· · · · · · · · · · · · · · · · · · ·				> Save cum	ent connections in folio	wing preset:		
	Connect			> Delete fol	owing preset:	•		

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).

uxlab Network roducts	Controller (5008 Settings	11) Software	e Update	Help		
	PRODUCT ni Over IP (500	: 752/753/754/755	i/756) Mux	lab Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
connect your disp ottom to make th	plays to the desired ne connections.	sources below. Once	you've selecte	d the displays you wa	ant to change, use the	'Connect'' button at the
DISPLAY		SOURCE		F	PRESETS	
IX1		Audio 1 🔻 Can	cel	> Current active Preset: No preset selected	▼ ID	1
				> Save current connecti		
				> Save current connecti	ons as new preset: Create	
				> Delete following prese	et:	

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 Loge
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 SUC	CESS > Current ac		▼ ID: 0		
				ent connections in folle			
			> Save curre	ent connections as ne	w preset: Create		
Connect			> Delete foli	owing preset:	٣		
			© 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	TS
> Current active Preset:	
[1] Preset 1	▼ ID: 1
> Save current connections in fo	llowing preset: ▼
[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	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 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			re Update	Help		
	octango					
SELECTED P	RODUCT :					
Setup 1 : Hdmi C			55/756) Muxl	ab Matrix Virt	ual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Update your device's	RS-232 connection	on settings here.				
Select a device:	Audio 1 🔻					
- Baud rate:	9600 🔻	[Data bite:	9 Stop bite: 11	Parity : NONE *		
- IP header in dat		[Data bits.	0100000000	runy. None -		
- Feedback ON:						
- IP Feedback:	192.168.168.56	5				
Save						
Data to send in H	EX (ex: A013B	3155C5)				
Data feedback re						
Data reedback re	ceived in HEX					

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.

Muxlab Network (Lab Controller (5008	11)				Language: E
Products	Settings	Softwa	ire Update	Help		
SELECTED Setup 1 : Hdm			55/756) Muxl	ab Matrix Virt	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
Select a device - IR Mode: - IP Feedback:	· · · · · ·					
- IR Mode:	• • • • • • • • • • • • • • • • • • •	3B155C5)				
- IR Mode: - IP Feedback: Save	• • • • • • • • • • • • • • • • • • •	 3B155C5)				
- IR Mode: - IP Feedback: Save	n HEX (ex: A013	38155C5)				

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).

Products	Settings	Softwa	re Update	Help		
	ni Over IP (500		55/756) Muxia	ab Matrix Vir	tual	
Set-up	Matrix	Video Wall	RS-232	IR	Firmware	
	ice's IR settings her	e.				
Select a devic	e: Audio 1 🔻					
- IR Mode:	Emitter *	_				
Save						
Data to send	in HEX (ex: A013	3815505)				
a dia to seriu	III IIEA (EA. AUTA					

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.

Muxiab Network Controller (500811)	Language:	English Logo
Products Settings Software Update Hel	lp	
Network Administration		
Network Use the form below if you'd like to set manual network settings.		
Use DHCP: Yes INo		
IP address:		
192 . 168 . 168 . 50		
Network mask:		
255 . 255 . 255 . 0		
Router:		
192 . 168 . 168 . 1		
Save		
© 2016 MuxLab Inc. version: 1.4. mobile app	0	

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.

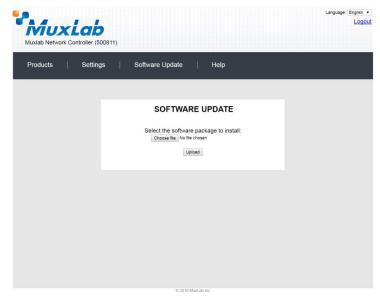


Figure 298: Software Update Screen

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).

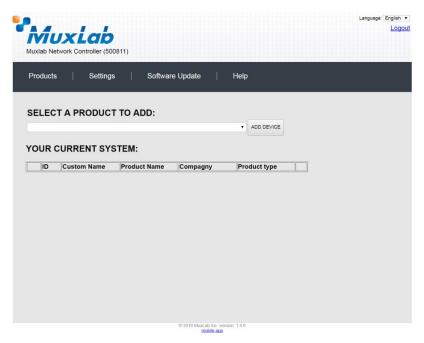


Figure 300: Products Screen – Initial View

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).

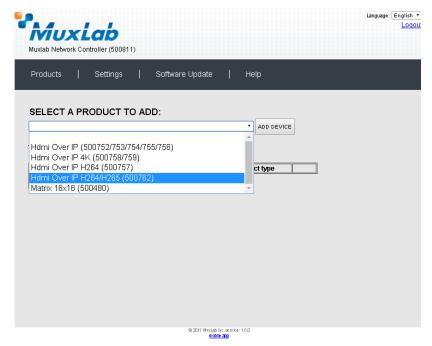


Figure 301: Products Screen – Selecting a Product

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 on **OK**. Note that if the user decides to click on **CANCEL**, the previous screen appears (Figure 301), without a product being added.

Reversion Reverse Controller (500811)	Language: English * Loqout
Products Settings Software Update Help	
SELECT A PR Muxlab: Hdmi Over IP H264/H265 (500762) Hdmi Over IP H2 Custom Name: YOUR CURRE Final_762 ID Custom ID Custom	
© 2011 (Histado ko, entri tor: 1.5.0 <u>Boble asp</u>	

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).

Mux	192	. 168. 168. 50 saγ	/s:			×	Language: Eng
Muxiab Network		ou want to load prev	rious stored device	e list ?			
Products	s			OK	Cancel		
	PRODUCT	. .					
SELECTED Final_762 : H		F : H264/H265 (50	0762) Muxl	ab Matrix Vir	tual		
_							
Set-up	Matrix	RS-232	IR	Firmware			
 Automatic 	O Manual	click Save to apply y	<u>j.</u> .				
			© 2017 M (xLab h)				

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.

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

- 1. Set-up
- 2. Matrix
- 3. RS-232
- 4. IR
- 5. 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).

Muxlab Network	Controller (5008	11)				Languag	e: English • Loqoui
Products	Settings	Softwar	e Update	Help			
	PRODUCT	: 1264/H265 (500	762) Muxla	ab Matrix Vii	rtual		
Set-up	Matrix	RS-232	IR	Firmware			
Set-up Modify any availa Automatic Launch discove	O Manual	ck Save to apply you ADD	r changes Remote Source				
			© 2017 III valab ho mobile a				

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).

								Language:	
	luxLab								Lo
ΙVΙ	UXLAR	7							
	Network Controller (5								
MUAIab	Network Controller (C	00011)							
Produ	ucts Settir	ngs Sof	tware Update	e He	lp				
SELE	ECTED PRODU	CT ·							
			500700) B4	uulah I Mahui	a Mindu and				
Final_	_762 : Hdmi Over	IP H264/H265 (500762) 100	uxiap Watri	x virtual				
Se	et-up Matrix	RS-232	IR	Firmwa	re				
Auto Launo	omatic Manual	[ADD Remote Sou	ILOS					
P1	y (3 RX)								
uispia;									
	Jama	MAC address	ID addrage	MASK	GATBA/AV				
Port# N		MAC address	IP address	MASK 255 255 0	GATEWAY	DHCP DIP	Reheat	Detail	
Port# N	RX-36-88-5A-4C-A7-47	36-88-5A-4C-A7-47	192.168.168.98	255.255.255.0	192.168.168.1		Reboot	Detail	
Port# N 0 0	RX-36-88-5A-4C-A7-47 RX-C2-19-3F-70-9D-A3	36-88-5A-4C-A7-47 C2-19-3F-70-9D-A3	192.168.168.98 192.168.168.96	255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1		Reboot	Detail	
Port# N	RX-36-88-5A-4C-A7-47	36-88-5A-4C-A7-47	192.168.168.98	255.255.255.0	192.168.168.1				
Port# N 0 0	RX-36-88-5A-4C-A7-47 RX-C2-19-3F-70-9D-A3	36-88-5A-4C-A7-47 C2-19-3F-70-9D-A3	192.168.168.98 192.168.168.96	255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1		Reboot	Detail	
Port# N 0 0	RX-36-88-5A-4C-A7-47 RX-C2-19-3F-70-9D-A3 RX-42-61-90-7D-88-4C	36-88-5A-4C-A7-47 C2-19-3F-70-9D-A3	192.168.168.98 192.168.168.96	255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1		Reboot	Detail	
Port# N 0 0	RX-36-88-5A-4C-A7-47 RX-C2-19-3F-70-9D-A3	36-88-5A-4C-A7-47 C2-19-3F-70-9D-A3	192.168.168.98 192.168.168.96	255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1		Reboot	Detail	
Port# N 0 0	RX-36-88-5A-4C-A7-47 RX-C2-19-3F-70-9D-A3 RX-42-61-90-7D-88-4C e (2 TX)	36-88-5A-4C-A7-47 C2-19-3F-70-9D-A3	192.168.168.98 192.168.168.96	255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1		Reboot	Detail	
Port# N 0 0 0 Source Port# N	RX-36-88-5A-4C-A7-47 RX-C2-19-3F-70-9D-A3 RX-42-61-90-7D-88-4C e (2 TX)	38-88-5A-4C-A7-47 C2-19-3F-70-9D-A3 42-61-90-7D-88-4C	192.168.168.98 192.168.168.96 192.168.168.97	255.255.255.0 255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1		Reboot Reboot	Detail	
Port# N 0 0 Source Port# N 1	RX36885A-4C-A7-47 RX-C2-19-3F-70-9D-A3 RX-42-61-90-7D-88-4C e (2 TX) Vame TX1	38-88-5A-4C-A7-47 C2-19-3F-70-9D-A3 42-61-90-7D-88-4C MAC address 00-22-33-48-56-69	192.168.168.98 192.168.168.96 192.168.168.97 IP address 192.168.168.94	265.255.255.0 265.255.255.0 265.255.255.0 265.255.255.0 MASK 265.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1 GATEWAY 192.168.188.1	DHCP DIP	Reboot Reboot Reboot	Detail Detail Detail	
Port# N 0 0 Source Port# N 1	RX36-88-5A-4C-A7-47 RX-C2-19-3F-70-9D-A3 RX-42-61-90-7D-88-4C e (2 TX) Name	38-88-5A-4C-A7-47 C2-19-3F-70-9D-A3 42-61-90-7D-88-4C MAC address	192.168.168.98 192.168.168.96 192.168.168.97	255.255.255.0 255.255.255.0 255.255.265.0 255.255.265.0	192.168.168.1 192.168.168.1 192.168.168.1 GATEWAY	DHCP DIP	Reboot Reboot	Detail Detail	
Port# N 0 0 Source Port# N 1	RX36885A-4C-A7-47 RX-C2-19-3F-70-9D-A3 RX-42-61-90-7D-88-4C e (2 TX) Vame TX1	38-88-5A-4C-A7-47 C2-19-3F-70-9D-A3 42-61-90-7D-88-4C MAC address 00-22-33-48-56-69	192.168.168.98 192.168.168.96 192.168.168.97 IP address 192.168.168.94	265.255.255.0 265.255.255.0 265.255.255.0 265.255.255.0 MASK 265.255.255.0	192.168.168.1 192.168.168.1 192.168.168.1 GATEWAY 192.168.188.1	DHCP DIP	Reboot Reboot Reboot	Detail Detail Detail	

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Figure 306: Products Screen – Set-up Tab

		Lak								1
Muxial	b Network	Controller (6	00811)							
Proc	iucts	Settir	igs Sot	ftware Update	e He	lp				
		PRODU		(500300) 14						
Fina	1_762 : 1	ldmi Over	IP H264/H265 ((500762) 141	uxiab Matri	x virtual				
	Set-up	Matrix	RS-232	IR	Firmwa	re				
	y any avai	_	nd click Save to appl	ly your changes						
Modif A		ं Manual		ly your changes ADD Remote Sou	1106					
Modif A Laur Displ	y any avai utomatic nch discove lay (3 RX)	ं Manual	l	ADD Remote Sou		GATEMAY	DHCP D	IP		
Modif A Laur Displ	ý any avai utomatic nch discove	ं Manual			MASK 255.255.0	GATEWAY 192.168.168.1	DHCP D	IP Reboot	Detail	
Modif A Laur Displ Port#	y any avai utomatic nch discove lay (3 RX) Name	ं Manual	MAC address	ADD Remote Sou IP address 192.108.168.98	MASK				Detail Detail	
Modif a A Laur Displ Port# 0	y any avai utomatic noh discove lay (3 RX) Name RX-1	ं Manual	MAC address 36-88-5A-4C-A7-47	ADD Remote Sou IP address 192.168.168.98 192.168.168.96	MASK 255.255.255.0	192.168.168.1		Reboot		
Modif a A Laur Displ Port# 0 0 0	y any avai utomatic hoh discove lay (3 RX) Name RX-1 RX-2 RX-3	ं Manual	MAC address 36-88-5A-4C-A7-47 C2-19-3F-70-9D-A3	ADD Remote Sou IP address 192.168.168.98 192.168.168.96	MASK 265.255.265.0 265.265.265.0	192.168.168.1 192.168.168.1		Reboot Reboot	Detail	
Modif a A Laur Displ Port# 0 0 0	y any avai utomatic noh discove lay (3 RX) Name RX-1 RX-2	ं Manual	MAC address 36-88-5A-4C-A7-47 C2-19-3F-70-9D-A3	ADD Remote Sou IP address 192.168.168.98 192.168.168.96	MASK 265.255.265.0 265.265.265.0	192.168.168.1 192.168.168.1		Reboot Reboot	Detail	
Modif • A Laur Displ Port# 0 0 0 Sour	y any avai utomatic hoh discove lay (3 RX) Name RX-1 RX-2 RX-3	ं Manual	MAC address 36-88-5A-4C-A7-47 C2-19-3F-70-9D-A3	ADD Remote Sou IP address 192.168.168.98 192.168.168.96	MASK 265.255.265.0 265.265.265.0	192.168.168.1 192.168.168.1		Reboot Reboot Reboot	Detail	
Modif • A Laur Displ Port# 0 0 0 Sour	y any avai utomatic nch discove lay (3 RX) Name RX-1 RX-2 RX-3 Ce (2 TX)	ं Manual	MAC address 38-88-5A4C-87-47 C2-19-37-70-9D-40 42-61-90-7D-88-4C	ADD Remote Sou IP address 192.168.168.98 192.168.168.96 192.168.168.97	MASK 265.255.255.0 265.255.255.0 265.255.255.0 265.255.265.0	192.168.168.1 192.168.168.1 192.168.168.1	DHCP D	Reboot Reboot Reboot	Detail	
Modif • A Laur Displ Port# 0 0 0 Sour Port#	y any avai utomatic hoh discove lay (3 RX) Name RX-1 RX-2 RX-3 ce (2 TX) Name	ं Manual	MAC address 9888-644C-78-97 C2199-77-088-4C 42-61-90-7D-88-4C MAC address	ADD Remote Sou IP address 192.168.168.98 192.168.168.97 192.168.168.97 IP address	MASK 265.265.265.0 265.265.265.0 265.265.265.0 MASK	192.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1	DHCP D	Reboot Reboot Reboot	Detail Detail	
Modif A Laur Displ Port# 0 0 0 Sour Port# 1	y any avai utomatic hoh discove lay (3 RX) Name RX-1 RX-2 RX-3 Ce (2 TX) Name TX1 TX2	ं Manual	MAC address 30:88-6:44-C-47-47 C2:19:3F-70-8D-40 42:61-90-7D:88-4C MAC address 10:22:33:48-58:69	ADD Remote Sou 192.168.168.98 192.168.168.99 192.168.168.97	MASK 265 265 265 0 265 265 265 0 265 265 265 0 265 265 265 0 MASK 265 265 265 0	192.168.168.1 192.168.168.1 192.168.168.1 192.168.168.1 GATEWAY 192.168.168.1	DHCP D	Reboot Reboot Reboot P Reboot	Detail Detail 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).

	i UX ab Network Co	ntroller (500811)					Langua	ige: English Logo
Pro	ducts	Settings Sc	oftware Update	e He	lp			
		RODUCT : ni Over IP H264/H265	(500762) Mi	uxlab Matri	x Virtual			
	Set-up	Matrix RS-232	IR	Firmwa	re			
	inch discovery		ADD Remote Sou	urce				
	# hla	MAC address	ID a status a s	MACK	ONTRAVAL			
	#Name BX1	MAC address 36.88-5 e.4C.47.47	IP address	MASK 255 255 0	GATEWAY	DHCP DIP	Reboot Detail	
0	RX1	36-88-5A-4C-A7-47	7 192.168.168.98	255.255.255.0	192.168.168.1		Reboot Detail	
		36-88-5A-4C-A7-47	7 192.168.168.98 3 192.168.168.96				Reboot Detail Reboot Detail Reboot Detail	UPDATE
0 0 0 Sou	RX1 RX2	36-88-5A-4C-A7-47 C2-19-3F-7D-9D-A	7 192.168.168.98 3 192.168.168.96	255.255.255.0 255.255.255.0	192.168.168.1 192.168.168.1		Reboot Detail	UPDATE
0 0 0 Sou	RX1 RX2 RX3 rce (2 TX)	36-88-5A-4C-A7-47 C2-19-3F-70-9D-A 42-61-90-7D-88-4C	 192.168.168.98 192.168.168.96 192.168.168.97 IP address 	265.255.265.0 265.265.265.0 265.265.265.0	192.168.168.1 192.168.168.1 192.168.168.1	DHCP DIP	Reboot Detail	UPDATE
0 0 Sour	RX1 RX2 RX3 rce (2 TX) # Name	36-88-5A4C-A7-47 C2-19-3F-70-0D-A 42-61-90-7D-88-4C MAC address	 192.168.168.98 192.168.168.96 192.168.168.97 192.168.168.97 IP address 192.168.168.94 	265.265.265.0 265.265.265.0 265.265.265.0 MASK	192.168.168.1 192.168.168.1 192.168.168.1 GATEWAY	DHCP DIP	Reboot Detail Reboot Detail	UPDATE

Figure 308: Saving Name Changes

To view and modify component parameters, click on the **Detail** button next to the given component. A dialog appears (Figure 309).

Device Detail		
Custom Name:	TX1	
	TX-500762	
	00-22-33-48-56	-69
		+ (DHCP: OFF)
	1.1.2	
Video Resolution:	1920x1080	
CPU Usage (%):	22	
Memory Usage (bytes):	357548/383824	•
Video Codec:	H 264-High Prot	fle T
Video Output Resolution	: 1920x1080	•
Video Bitrate control:	CBR	
Video Bit Rate (kbps):	16000	[32-32000]
Video Frame per sec:	60	[5-60]
Group of Picture:	60	[5-300]
Audio Input:	HDUL	•
Audio Codec:	AAC	
Audio Bit Rate (bps):	320000	[48000-320000]
Audio frequency (Hz):	(am)	······
-	VOLES	
		TIGAGE
RTMP RTSP HLS 1	IS FLV MU	INCAST
Multicast : Enat	bled 🔹	
Multicast IP : 239	100.0.17	
Multicast Port : 3700	U	
Save Cancel		
Carte Cantoer		

Figure 309a: TX Device Detail Dialog

Custom Name:	BX1
Model:	RX-500762
MAC Address:	36-88-5A-4C-A7-47
MAC Address: IP Address:	
FW/ Version:	192.168.168.98 (DHCP: OFF)
Hou version: Mdeo Resolution:	1.2.3 1920 x 1072
	1920 X 1072
CPU Usage (%):	
Memory Usage (byte	25):
Set output Video For	mat: AUTO 🔹
•	
RTSP HLS TS F	FLV MULTICAST
Multicast : Multicast IP : 23 Multicast Port : 33	39.100.0.17
Save Cancel	
oave cancer	
oave cancer	
Care Cancer	
Care Carrer	
Carte Cartoer	

Figure 309b: 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)
- 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)
- 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 310).

Muxlab Network	Controller (500811	,					Language:	English • Loqout
Products	Settings	Softwar	e Update	Help				
	PRODUCT : dmi Over IP H2	64/H265 (500	762) Mux	tlab Matrix Vii	tual			
Set-up	Matrix	RS-232	IR	Firmware				
	plays to the desired s ake the connections. SOURCE	ources below. One		ected the displays yo	u want to change, u PRESETS	ise the "Co	nnect" button	
RX1	TX1 *	AUTO	•	> Current active Pre		ID: 0		
RX2	TX1 •	AUTO	•	No preset selecte				
RXG	TX1 •	AUTO	•	> Save current conn	ections in following pre:	set:		
				> Save current conn > Delete following pr	ections as new preset: Create eset:			
Connect								
			© 2017 III ottab	Inc.uersion: 1.5.0				

Figure 310: 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 311).

Muxlab Network	Controller (500811)				Languag	e: En
Products	Settings	Softwar	re Update	Help		
	PRODUCT : dmi Over IP H264	/H265 (500	762) Muxia	ıb Matrix \	/irtual	
Set-up	Matrix	RS-232	IR	Firmware		
DISPLAY	SOURCE		PROTOCOL		PRESETS	
RX1	TX2 •	Cancel		No pi	reset selected TD: 0	
RX2	TX1 •					
RX3	TX1 •		AUTO		current connections in following preset:	
				> Delet	e following preset: •	
Connect						
			© 2017 MuxLab Inc mobile a			

Figure 311: 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 312).

		Controller (50081	11)					Language:	English • Loqout
Produ	icts	Settings	Softw	are Update	Help				
		PRODUCT	•	0762) Mux	lab Matrix Vi	rtual			
Se	t-up	Matrix	RS-232	IR	Firmware				
	ottom to m	plays to the desired nake the connection SOURCE	s.	Once you've sele	cted the displays yo	u want to change, use	the "Connect	" button	
RX1		TX2 • SU	CCESS AUT	· ·	> Current active Pre				
RX2		TX1 •	AUT		No preset selecte	d •	D: 0		
RX3		TX1 •	AUT	• 0	> Save current conr	ections in following preset	:		
Conne	ect				> Save current conr > Delete following p	ections as new preset: Create eset:			
					hic.uersion: 1.5.0				

Figure 312: Change Successful

To create a new preset, the user clicks the > **Save current connections as new preset** field (Figure 313) 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 313: 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 314).

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 314: 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 315).

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 315: Delete Preset

Once selected, a dialog will appear asking the user to confirm the deletion request (Figure 316).

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

Figure 316: 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 317).

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 317: 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 318).

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 318: 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 319).

PRESETS			
> Current active Preset:			
[1] Old Preset	ID:	1	
> Save current connections in following prese	et:		
· · · · · · · · · · · · · · · · · · ·	<u>s</u>	UCCES	SS
> Save current connections as new preset:			
Create			
> Delete following preset:			
· · · · · · · · · · · · · · · · · · ·	7		

Figure 319: 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 from the Network Controller to a MuxLab 500762 transmitter or receiver (Figure 320).

Products 5							Lo
uxlab Network Contro	oller (500811)						
Products S	Settings						
Products S	Settings						
		Software	Undate	Help			
SELECTED PRO	DDUCT :						
inal_762 : Hdmi C	Over IP H264/	1265 (50076	32) Muxla	ab Matrix V	irtual		
Set-up M	Aatrix 🛛 🦷	\$-232	IR	Firmware			
- Baud rate:	<u> </u>	Data bits: 🛛 🔻	Stop bits:	1 * Parity : no	ne *		
- IP Feedback:							
Save							
Data to send in HEX ((ex: A013B155C	0					
Data feedback receiv	ved in HEX						
Send							
			© 2017 Ill extabilities	and and a set of the			

Figure 320: 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 321).

MUX 1uxlab Network (Lab)				Langua	ge: En
Products	Settings	Softwar	e Update	Help			
	PRODUCT : Imi Over IP H2	264/H265 (500	762) Muxla	ıb Matrix Vi	tual		
Set-up	Matrix	RS-232	IR	Firmware			
Update your devic Select a device:	e's RS-232 connect	ion settings here.					_
- Baud rate: - IP Feedback: Save	9600 • 192.168.168.6		 Stop bits: 	1 ▼ Parity∶non	• •		
Data to send in	HEX (ex: A013B1	55C5)					
Data feedback	received in HEX						
Send							
			© 2017 Mixtab ho				

Figure 321: RS-232 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 322).

						Language:	English •
Mux	lab						Logout
		43					
Muxlab Network (vouroner (2008)	0					
Products	Settings	Softwa	re Update	Help			
	PROPUST						
SELECTED Final 762 : He			(762) Muxiz	ıb Matrix Vir	tual		
			,				
Set-up	Matrix	RS-232	IR	Firmware			
Undeka unum deude	e's IR settings here						
Select a device:							
- IR Mode:							
- IP Feedback:							
Save							
							1
Data to send in	HEX (ex: A013B [*]	155C5)					
Send							
							1
IR code receive	d in HEX						
Get IR code							
			© 2017 MixLab ho	mention: 150			
			mobile a				

Figure 322: 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 323).

						Language:	English Logo
Mux	Lab						LUQU
luxlab Network (Controller (50081	1)					
Products	Settings	Softwar	re Update	Help			
SELECTED	PRODUCT	:					
inal_762 : H	dmi Over IP H	264/H265 (500	762) Muxl	ab Matrix Vii	rtual		
Set-up	Matrix	RS-232	IR	Firmware			
Update your devic	e's IR settings here	ə.					
Select a device	TX2 *						
- IR Mode:	Disable 🔻						
- IP Feedback:	192.168.168	.61					
Save							
Data to send in	HEX (ex: A013B	155C5)					
Send							
IR code receive	ed in HEX						
Get IR code							

Figure 323: 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 324).

Muxlab Network		11)					Language: E	English • Loqou
Products	Settings	Softwa	are Update	Help				
SELECTED Final_762 : H		-	10762) Muxia	ab Matrix Vi	rtual			
Set-up	Matrix	RS-232	IR	Firmware				
DISPLAY		your ch	olays (RX) O e File No file cho Apply	Source (TR)	ve to apply			
RX1 (RX-500762) RX2 (RX-500762) RX3 (RX-500762)	r	v1.2.3 U v1.2.3 U v1.2.3 U		(TX-500762) (TX-500762)		1.1.2 O		
			© 2017 III utab ho mobile a					

Figure 324: 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 325) 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 Metwork Administration Execute Settings Variant Settings Use the form below if you'd like to set manual network settings. Settings Variant Settings Use the form below if you'd like to set manual network settings. Settings Settings Use the form below if you'd like to set manual network settings. Settings Settings Use the form below if you'd like to set manual network settings. Settings Settings Use the form below if you'd like to set manual network settings. Settings Settings Use the form below if you'd like to set manual network settings. Settings Settings Settings Settings Settings Settings Settings Settings	Muxiab Network Co				Language: Eng	glish <u>Loqc</u>
Network Use the form below if you'd like to set manual network settings. Use DHCP: Yes * No IP address: 192. 100. 100. 00 Network mask: 255. 256. 256. 0 Roater: 192. 100. 100. 1 Save	Products	Settings	Software Update	Help		
Use the form below if you'd like to set manual network settings. Ure DHCP: ○ Yes ● No IP address: 172. 100. 100 . 00 Network mark: 255. 255. 255. 0 Roder: 192. 100. 100 . 1 Save	Network A	dministration				
IF address: 192 108 168 50 Memork mark: 2552552550 Roader: 192 1081031 Save	Use the form below i		ual network settings.			
	IP address: 192 . 168 . 168 . 5 Network mask: 255 . 255 . 255 . 0 Router:	D				
	Save					
			〇 2117 Havins	no mention: 150		

Figure 325: 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 326).

		L	anguage: English
MuxLat			
Auxlab Network Controller (5	00811)		
Products Setting	s Software Update	Help	
Network Administra	ion		
User Accounts			
Create a new User Account O	select a User to edit:	•	
User Name			
new password:			
Confirm new password:			
User Type:	*		
Create Update Delete			
Restore data Restore the unit with the selecte	d data file		
Specify file: Choose file No file c	losen		
WARNING ! You MUST FIRST	set the IP address of this controller using	g the same as the controller this backup file come from	
Restore			
Backup data			
Backup the data and save it in a	file		
Berlin			
Backup			
Get Logs			

Figure 326: Settings Screen: Administration Tab

Software Update Screen

The **Software Update** enables the user to update MuxLab Network Controller software (Figure 327). This software is available on MuxLab's website (<u>www.muxlab.com</u>). Download the software to the local PC before performing the update.

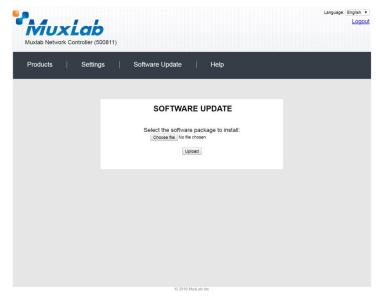


Figure 327: Software Update Screen

Help Screen

The **Help** screen offers quick contact information for customer support and all other inquiries (Figure 328).



Figure 328: Help Screen

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

5.1 IP Command API: definition and format

5.1.1 Definition

The IP command API use HTTP POST witch JSON data. Each IP command must sent to the following URL: <u>http://aaa.bbb.ccc.ddd/mnc/secure_api.php</u> Each IP command must contain the MNC username and password **aaa.bbb.ccc.ddd:** the MNCIP address (default static IP: **192.168.168.50**) **p_userName:** the MNC user name (default value: **admin**) **p_password:** the MNC user password (default value: **admin**)

5.1.2 General Format

The IP command (JSON data) has the following format.
Command without data parameters:
{"p_targetId":<target id>,"p_cmd":"<command
name>","p_userName:"<MNC User Name >","p_password":"<MNC password
>"}

Response format without additional data:
{"p_targetId":<target id>,"p_cmd":"<command
name>","p rspStatus:"<command status>","p msg":"<a message>"}

```
Command with data parameters:
{"p_targetId":<target id>,"p_cmd":"<command
name>","p_userName:"<MNC User Name >","p_password":"<MNC password
>", "p_data":[{"key1":"value1","key2":"value2",... }]}
```

```
Response format with additional data:
{"p_targetId":<target id>,"p_cmd":"<command
name>","p_rspStatus:"<command status>","p_msg":"<a
message>","p_data":[{"key1":"value1","key2":"value2",... }]}
```

- ⇒ "p_data" field will depend on the associated command.
- ⇒ "p_targetId" value is:
 - "0" to send a command for the MNC
 - Use the system **ID** displayed in the "Product" web page.
 - This is not a constant value, it depend on the client system

EX: To set-up an HDMI Over IP Virtual matrix (must be done only once)

- Login to MNC

- On "products" web page, select "Hdmi Over IP (500752/753) and click "Add Device"
- Enter a name (ex: myHdmiOverIpMatrix) then click OK
- Your Hdmi Over IP virtual Matrix is now added in your system, its system **ID** is now displayed:

You must use this ID in the IP commands.

 To auto-configure all 500752/753, click on "select " then "Launch automatic discovery"

5.2 IP Command API for 500752\753\754\755\756: command/response list

5.2.1 Automatic discovery

Description:

The system will retrieve all the devices in the network and automatically send all the necessary updates to the devices to configure them properly (duplicate IP address will not be solved by the system; it will let the user resolve this kind of issue). Then it will return the list of devices found with their attributes.

Command:

{"p_targetId":<systemID>,"p_cmd":"launch_discovery_auto","p_userName:"<MNC User Name>","p_password":"<MNC password>"}

Response:

{"p_targetId": <systemID>, "p_cmd": "launch_discovery_auto", "p_rspStatus: "SUCSESS
", "p_msg": "<a_message>", "p_data": [{"productName":"<value>", "modelName":"<value>", "cust
omName":"<value>", "mac":"<value>", "ip":"<value>", "mask":"<value>", "isDhcp":<0/1>, "multicastGroupIp
":"<value>", "videoResolution":"<value>", "videoFrameRate":"<value>", "audioFormat":"<value>", "isVideoS
ignalDetected":<0/1>, "isIrOn":<0/1>, "isDipSwitchEnabled":<0/1>, "fwVer":"<value>", "uartBaudRate":"<value>", "irFeedbackIP":"<value>", "irFeedbackIP":"<value>", "isAutoCompressionOn":<0/1>, "is6
Ofps":<0/1>, "isDisplayConnected":<0/1>, "isScreenImageOn":<0/1>, "isScreenTextOn":<0/1>, "connectedMa
c":"<value>", "isAutoResolutionOn":<0/1> { ... }, ...]}

In Red, these are the additional attributes for RX device In Green, these are the additional attributes for TX device

5.2.2 Manual discovery

Description:

The system will retrieve all the devices in the network and it will return the list of devices found with their attributes. (No other actions will be performed)

Command:

{"p_targetId":<systemID>,"p_cmd":"launch_discovery","p_userName":"<MNC User Name>","p_password":"<MNC password>"}

Response:

{"p_targetId":<systemID>,"p_cmd":"launch_discovery_auto","p_rspStatus:"SUCSESS
","p_msg":"<a_message>","p_data":[{"productName":"<value>","modelName":"<value>","cust
omName":"<value>","mac":"<value>","isP_msg":"<0/1>,"multicastGroupIp
":"<value>","videoResolution":"<value>","videoFrameRate":"<value>","audioFormat":"<value>","isVideoS
ignalDetected":<0/1>,"isIrOn":<0/1>,"isDipSwitchEnabled":<0/1>,"fwVer":"<value>","uartBaudRate":"<val
ue>","irMode":"<emitter/sensor>","rs232FeedbackIP":"<value>","irFeedbackIP":"<value>","isRs232IpHeader":<0/1>,"compressionRate":"<value>","isAutoCompressionOn":<0/1>,"isOf
ps":<0/1>,"isDisplayConnected":<0/1>,"isScreenImageOn":<0/1>,"isScreenTextOn":<0/1>,"connectedMac"
:"<value>","isAutoResolutionOn":<0/1> { ... }, ...]}

In Red, these are the additional attributes for RX device In Green, these are the additional attributes for TX device

5.2.3 Get devices from the database

Description:

The system will retrieve all the devices currently stored in the database

Command:

{"p_targetId":<systemID>,"p_cmd":"get_devices","p_userName":"<MNC User Name>","p_password":"<MNC password>"}

Response:

{"p_targetId":<systemID>,"p_cmd":"launch_discovery_auto","p_rspStatus:"SUCSESS
","p_msg":"<a_message>","p_data":[{"productName":"<value>","modelName":"<value>","cust
omName":"<value>","mac":"<value>","ip":"<value>","mask":"<value>","isDhcp":<0/1>,"multicastGroupIp
":"<value>","videoResolution":"<value>","isDipSwitchEnabled":<0/1>,"fwVer":"<value>","uartBaudRate":"<value>","irMode":"<emitter/sensor>","rs232FeedbackIP":"<value>","irFeedbackIP":"<value>","isRs232Feedba
ckOn":<0/1>,"isDisplayConnected":<0/1>,"isCreenImageOn":<0/1>,"isScreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>,"isCreenTextOn":<0/1>, isCreenTextOn":<0/1>, isCreenTextOn":<0/1>, isCreenTextOn":<0/1>, isCreenTextOn":<0/1>, isCreenTextOn":<0/1>, isCreenTextOn":<0/1>, isCreenTextOn":<0/1>, isCreenTextOn":<0/1>, isCreenTextOn":<0/1>, isCreenTex

5.2.4 Update some devices attributes

Description:

The system will update the devices specified with the new attributes provided. Note that to update a device parameter, the device MUST already exist in the MNC database.

Command:

{"p_targetId":<systemID>,"p_cmd":"update_devices", "p_userName":"<MNC User Name>","p_password":"<MNC password>","p_data":[{"mac":"<device mac address>", <attribute name>:<attribute value>,..."}, {"mac":"<device mac address>", <attribute name>:<attribute value>,...}]}

<u>NOTE:</u> You have the option to use a port ID (to be defined in web server) instead of the mac address

- o "portIn":"<input port number >"
- o "portOut":"<output port number >"

List of attribute names that can be modified:

For TX and RX:

"customName" : set the custom name to give to this device "ip" : set the device ip address (EX: "192.168.1.80") "mask" : set the device mask (EX: "255.255.255.0") "isDhcp" : set the dhcp on(1) or off(0) (EX: 1) "isIrOn" : set the IR on(1) or off(0) (EX: 1) "isDipSwitchEnabled" : set the dip switch on(1) or off(0) (EX: 0) "uartBaudRate" : set the RS232 baud rate (9600,19200,38400,57600,115200) "rs232FeedbackIP" : set IP address where RS232 data feedback should be sent "isRs232FeedbackOn" : To enable or disable data feedback "irMode" (500756 ONLY): set IR direction mode <sensor> OR

```
<emitter>
```

For RX only:

"isScreenImageOn" :	: 1 => to display loaded image when no video signal
	0 => to display a plain black screen when no video
signal	
"isScreenTextOn" :	: 1 => to display some debug text information
	0 => to not display any debug text information
"videoResolution" :	: set the desire output video resolution
	value="0051" to set video resolution to: 720X480 60Hz
	value="2011" to set video resolution to: 480P 60Hz
	value="2021" to set video resolution to:576P 50Hz
	value="2034" to set video resolution to:720P 50Hz
	value="2035" to set video resolution to:720P 60Hz
	value="2041" to set video resolution to:1080P 24Hz
	value="2042" to set video resolution to:1080P 25Hz
	value="2044" to set video resolution to:1080P 50Hz
	value="2045" to set video resolution to:1080P 60Hz
	value="3041" to set video resolution to: 1080I 50Hz
	value="3042" to set video resolution to: 1080I 60Hz
"isAutoResolutionOr	n" : 1 => to let the device auto-set video resolution
	<pre>0 => to allow setting video resolution manually</pre>
"irFeedbackIP" : se	et IP address where IR data feedback should be sent

For TX only:

Response:

{"p_targetId": <systemID>, "p_cmd": "update_devices", "p_rspStatus": "SUCSESS", "p _msg": "<amessage>", "p_data": [{"productName": "<value>", "modelName": "<value>", "customNa me": "<value>", "mac": "<value>", "ip: "<value>", "mask": "<value>", "isDhcp": <0/1>, "multicastGroupIp": "<va lue>", "videoResolution": "<value>", "videoFrameRate": "<value>", "audioFormat": "<value>", "isVideoSignalD etected": <0/1>, "isIrOn": <0/1>, "isDipSwitchEnabled": <0/1>, "isDisplayConnected": <0/1>, "isScreenImageOn ":<0/1>, "isScreenTextOn": <0/1>, "connectedMac": "<value>", { ... }, ... }]}

	500752	500753/754	500755	500756	500758/759	
customName	Х	Х	Х	Х	Х	
ір	Х	Х	Х	Х	Х	

	P	X	Х	X	X	X	
	mask						
	isDhcp	X	X	X	X	X	
	isIrOn	Х	Х	Х	Х		
	isDipSwitchEnabled	Х	Х	Х	Х	X	
RX &	uartBaudRate	n/a	Х	Х	Х	Х	
TX	rs232FeedbackIP	n/a	Х	X	Х	n/a	
	isRs232FeedbackOn	n/a	Х	X	Х	n/a	
	irMode	n/a	n/a	X	Х	n/a	
	isScreenImageOn	Х	Х				
	Ū.			n/a	Х	n/a	
	isScreenTextOn	Х	Х				
RX				n/a	Х	n/a	
	videoResolution	Х	Х			Х	
				n/a	Х		
	isAutoResolutionOn	Х	Х				
				n/a	Х	Х	
	irFeedbackIP	Х	Х	X	Х		
						n/a	
	hdcpFormat						
	_	n/a	n/a	n/a	n/a	Х	
	isAutoCompressionOn	Х	Х	X	Х		
	_					n/a	
TX	irFeedbackIP						
		n/a	n/a	n/a	Х	n/a	
	is60fps	Х	Х				
	_			n/a	Х	n/a	

5.2.5 Reboot device

Description:

The system will reboot the devices

Command:

```
{"p_targetId":<systemID>,"p_cmd":"reboot_devices","p_userName":"<MNC User
Name>","p_password":"<MNC password>","p_data":[{"mac":"<device mac address>"}, {...}]]
```

<u>NOTE:</u> You have the option to use a port ID (to be defined in web server) instead of the mac address

- o "portIn":"<input port number >"
- o "portOut":"<output port number >"

Response:

```
{"p_targetId":<systemID>,"p_cmd":"update_devices","p_rspStatus":"SUCSESS","p_msg":"<a message>","p_data":[{"mac":"<device mac address>","rspStatus":"SUCCESS or
FAILED","msg":""},...}]}
```

5.2.6 Connect/disconnect device

Description:

Perform a connect/disconnect between devices

Command:

```
{"p_targetId":<systemID>, "p_cmd":"connection", "p_userName":"<MNC User
Name>", "p_password":"<MNC password>","p_data":[{"macRx":"<Rx device mac
address>","macTx":"<Tx device mac address>"}, {...}, ...}]}
"macRx": the RX mac address to connect/disconnect
"macTx": - To disconnect, use "00-00-00-00-00"
```

- To connect, use the TX device mac address to connect to

<u>NOTE:</u> You have the option to use a port ID (to be defined in web server) instead of the mac address

- "portIn":"<input port number >" (use "0" to disconnect the output port)
- o "portOut":"<output port number >"

Response:

{"p_targetId":<systemID>,"p_cmd":"connection","p_rspStatus":"SUCCSESS","p_m
sg":"<a message>","p_data":[{"macRx":"<Rx device mac address>","macTx":"<Tx device mac
address>","rspStatus ":"SUCCESS or FAILED","msg":""}, ...}]}

5.2.7 Select and apply a preset

Description:

Apply a (existent) preset

Command:

```
{"p_targetId":<systemID>,"p_cmd":"select_preset","p_userName":"<MNC User
Name>","p_password":"<MNC password>","p_data":[{"presetId":"<preset id number>"}]}
```

Response:

```
{"p_targetId":<systemID>,"p_cmd":"
select_preset","p_rspStatus":"SUCCSESS","p_msg":"<amessage>","p_data":[{"macRx
":"<Rx device mac address>","macTx":"<Tx device mac address>","rspStatus ":"SUCCESS or
FAILED","msg":""}, ...}]}
Note:
"p data" will return all the connections result that took place
```

5.2.8 Save current matrix connections in a specific preset

Description:

Save the current matrix connections in a specific (existent) preset

Command:

```
{"p_targetId":<systemID>,"p_cmd":"save_preset","p_userName":"<MNC User
Name>","p_password":"<MNC password>","p_data":[{"presetId":"<preset id number>"}]}
```

Response:

```
{"p_targetId":<systemID>,"p_cmd":"Save_preset","p_rspStatus":"SUCCS
ESS","p_msg":"<a message>","p_data":[{"presetId":"<preset ID number
>"}]]
```

5.2.9 Save current matrix connections in a NEW preset name

Description:

Save the current matrix connections in a NEW preset name

Command:

```
{"p_targetId":<systemID>,"p_cmd":"create_preset","p_userName":"<MNC User
Name>","p_password":"<MNC password>","p_data":[{"presetName":"<a new preset
name>"}]}
```

Response:

{"p_targetId":<systemID>, "p_cmd":"create_preset", "p_rspStatus":"SUCCSESS", "p _msg":"<a message>", "p_data":[{"prestName": "<name of the preset>", presetId":"<preset ID number >"}]}

5.2.10 Delete a preset

Description: Delete a preset

Command:

```
{"p_targetId":<systemID>,"p_cmd":"delete_preset","p_userName":"<MNC User
Name>","p_password":"<MNC password>","p_data":[{"presetId":"<preset id number>"}]}
```

Response:

```
{"p_targetId":<systemID>,"p_cmd":"delete_preset","p_rspStatus":"SUCCSESS","p
_msg":"<a message>","p_data":[{"presetId":"<preset ID number >"}]}
```

5.2.11 Send data to RS-232 (For 500753/754/755/756/757/758/759)

Description:

Send data (in hexadecimal) to RS232 port of a device

Command:

{"p_targetId":<systemID>, "p_cmd":"send_data_to_rs232 ", "p_userName":"<MNC User Name>", "p_password":"<MNC password>","p_data":[{"mac":"<Tx/Rx device mac address>","hexdata":"<hex data>">","ack":<0/1>,"feedback":<0/1>}]}

<hex data> maximum length = 390 characters (i.e: 195 bytes) <feedback> 1 : to wait for a feedback data to be returned from the RS-232 port <ack> 1 : to wait to wait for a command acknowledge

NOTE: You have the option to use a port ID (to be defined in web server) instead of the mac address

- o "portIn":"<input port number >"
- o "portOut":"<output port number >"

Response:

{"p_targetId":<systemID>,"p_cmd":"send_data_to_rs232","p_rspStatus":"SUCCSESS
","p_msg":"<a message>","p_data":[{"mac":"<device mac address>","rspStatus":"SUCCESS
or FAILED","msg":""},...}]}

5.2.12 Send data to IR (For 500752/753/754 (TX) and 500755/756 (TX & RX)

Description:

Send data (in hexadecimal) to IR port of a device

Command:

```
{"p_targetId":<systemID>,"p_cmd":"send_data_to_ir","p_userName":"<MNC User
Name>","p_password":"<MNC password>","p_data":[{"mac":"<Tx/Rx device mac
address>","hexdata":"<hex data>"}]}
```

<hex data> maximum length = 390 characters (i.e: 195 bytes)

NOTE: You have the option to use a port ID (to be defined in web server) instead of the mac address

- o "portIn":"<input port number >"
- o "portOut":"<output port number >"

Response:

{"p_targetId":<systemID>, "p_cmd":"send_data_to_ir", "p_rspStatus":"SUCCSESS",
"p_msg":"<a message>", "p_data":[{"mac":"<device mac address>", "rspStatus":"SUCCESS or
FAILED", "msg":""}, ...}]}

5.2.13 Modify network setting OF THE MNC

Description:

Modify any network settings of the MNC (ip/mask/gateway/dhcp)

Command:

{"p_targetId":0,"p_cmd":"modifyNetSettings","p_userName":"<MNC User Name>","p_password":"<MNC password>","p_data":[{"dhcp":"<0/1>"}, {"ip":"<ip address>"},{"mask":"<mask address>"},{"gateway":"<gateway address>"}]}

Response:

```
{"p_targetId":0,"p_cmd":"modifyNetSettings","p_rspStatus":"SUCSESS/
FAILED","p_msg":"<a message>"}
```

5.2.14 Modify Administrator password OF THE MNC

Description:

Modify the administrator password of the MNC

Command:

```
{"p_targetId":0,"p_cmd":"changeAdminPswd","p_userName":"<MNC User
Name >","p_password":"<MNC password>","p_data":[{"usrname":"<the
user name>"}, {"currpswd":"<current passsword>"},{"newpswd":"<new
password>"}]}
```

Response:

{"p_targetId":0,"p_cmd":"modifyNetSettings","p_rspStatus":"SUCSESS/ FAILED","p msg":"<a message>"}

5.2.15 VIDEO WALL: Connection command (For 500754/759)

[0, 0]		1 .	2	×
1	RX_1 [0, 0]	RX_2 [1, 0]	RX_3 [2, 0]	
2	RX_4 [0, 1]	RX_5 [1, 1]	RX_6 [2, 1]	
2	RX_7 [0, 2]	RX_8 [1, 2]	RX_9 [2, 2]	
Y	,			

Description:

Set RX as video wall and connect it to a source (TX)

Command:

{"p_targetId":<systemID>,"p_cmd":"vwconnection","p_userName":"<MNC User Name>","p_password":"<MNC password>","p_data":[{"macRx":"<Rx device mac address>","macTx":"<Tx device mac address to connect to>","isVideoWallMode":true, "vwGlobalSize":"<Global nb of TV on x axis>x<global nb of TV on y axis>","vwSizeX":<nb of TV of current video wall on x axis>,"vwSizeY":<nb of TV of current video wall on y axis>,"xCoordonate":<x coordinate of this RX>,"yCoordonate":":<x coordinate of this RX>,"measureUnit":"<inch or cm>","screenWidth":<screen width>,"screenHeight":<screen Heigth>,"bezelTop":<measure of top Tv bezel>,"bezelBottom":<measure of bottom Tv bezel>,"bezelLeft":<measure of left Tv bezel>,"scaleDownH":<0 to 255>,"scaleUpV":<0 to 255>,"scaleDownV":<0 to 255>,"shiftRight":<0 to 255>,"shiftLeft":<0 to 255>,"shiftUp":<0 to 255>,"shiftDown":<0 to 255>, ...]}

<u>NOTE</u>: You have the option to use a port ID (to be defined in web server) instead of the mac address

- o "portIn":"<input port number >"
- "portOut":"<output port number >"

EX: Create a 2x1 video wall inside a global video wall of 2x2

```
{"p_targetId":1,"p_cmd":"vwconnection","p_userName":"admin","p_pa
ssword":"admin","p_data":[{"macRx00-0B-78-00-74-14","macTx":"00-
0B-78-00-74-15","isVideoWallMode":true,
"vwGlobalSize":"2x2","vwSizeX":2,"vwSizeY":1,
"xCoordonate":0,"yCoordonate":0,"measureUnit":"inch","screenWidth
":34.8,"screenHeight":19.6,"bezelTop":0.1,"bezelBottom":0.1,"beze
lLeft":0.1,"bezelRight":0.1,"scaleUpH":0,"scaleDownH":0,"scaleUpV
":0,"scaleDownV":0,"shiftRight":0,"shiftLeft":0,"shiftUp":0,"shift
tDown":0}, ...]}
```

Response:

{"p_targetId":<systemID>,"p_cmd":"vwconnection","p_rspStatus":"SU
CCSESS","p_msg":"<a message>","p_data":[{"macRx":"<Rx device mac
address>","macTx":"<Tx device mac address>","rspStatus ":"SUCCESS or
FAILED","msg":""}, ...]}

5.2.16 VIDEO WALL: Select and apply a configuration (For 500754/500759)

Description:

Apply a (existent) video wall configuration

Command:

{"p_targetId":<systemID>,"p_cmd":"vwApplyConfig","p_userName":"<MNC User Name>","p_password":"<MNC password>","p_data":[{"vwConfigId ":"<vwConfig id number>"}]}

Response:

```
{"p_targetId":<systemID>,"p_cmd":"vwApplyConfig","p_rspStatus":"SUCCSESS","
p_msg":"<a message>","p_data":[{"macRx":"<Rx device mac address>","macTx":"<Tx device
mac address>","rspStatus ":"SUCCESS or FAILED","msg":""}, ...}]}
Note:
"p_data" will return all the connections result that took place
```

5.2.17 VIDEO WALL: Changing source to a configuration (For 500754/500759)

Description:

Apply another source (TX) to an existent video wall configuration (But the original configuration parameters is not changed)

Command:

{"p_targetId":<systemID>,"p_cmd":"vwApplyConfig","p_userName":"<MNC User Name>","p_password":"<MNC password>","p_data":[{"vwConfigId ":"<vwConfig id number>","macTx":"Tx device mac address"}]}

<u>NOTE:</u> You have the option to use a port ID (to be defined in web server) instead of the mac address

o "portIn":"<input port number >"

Response:

```
{"p_targetId":<systemID>,"p_cmd":"vwApplyConfig","p_rspStatus":"SUCCSESS","
p_msg":"<a message>","p_data":[{"macRx":"<Rx device mac address>","macTx":"<Tx device
mac address>","rspStatus ":"SUCCESS or FAILED","msg":""}, ...]}
Note:
"p_data" will return all the connections result that took place
```

5.3 IP Command API for 500480: command/response list

5.3.1 Get all port status from the database

Description:

The system will retrieve all the current port status

Command:

```
{"p_targetId":<systemID>,"p_cmd":"get_devices","p_userName":"<MNC
User Name >","p_password":"<MNC password>"}
```

Response:

```
{"p_targetId":<systemID>, "p_cmd":"get_devices", "p_rspStatus:"SUCSESS
","p_msg":"<a_message>", "p_data":[{"customName":"<value>","portId":"<
value>","connectedPortId":"<value>","typeId":<value>,"typeName":"<value>","
purposeId":"<value>","isPresent":<0/1>,"cardNb":"<value>"},{ ... }, ...]}
```

```
<u>Notes:</u>
connectedPortId: "0" => disconnected
typeId:
1 => HDMI
2 => HDBT
3 => RS232
4 => VGA
5 => LAN
6 => IR
```

```
7 \Rightarrow USB
```

```
purposeId:
```

```
1 => INPUT_VIDEO
4 => OUTPUT_VIDEO
```

5.3.2 Get all presets

Description:

The system will retrieve all the preset ID and name

Command:

```
{"p_targetId":<systemID>,"p_cmd":"get_presets","p_userName":"<MNC
User Name >","p_password":"<MNC password>"}
```

Response:

```
{"p_targetId":<systemID>,"p_cmd":"get_presets","p_rspStatus:"SUCSES
S","p_msg":"<a_message>","p_data":[{"presetId":"<value>","presetIdv":"<v
alue>","presetName":"<value>"},{ ... }, ...]}
```

5.3.3 Connect/disconnect device

Description: Perform a connect/disconnect

Command:

```
{"p_targetId":<systemID>, "p_cmd":"connection", "p_userName":"<MNC
User Name>", "p_password":"<MNC password>","p_data":[{"portOut":"<output
#>","portIn":"<input #>"}, {...}, ...]}
```

- To disconnect, set input # = "0"

Response:

```
{"p_targetId":<systemID>,"p_cmd":"connection","p_rspStatus":"SUCCS
ESS","p_msg":"<a message>","p_data":[{"portOut":"<output #>","portIn":"<input
#>","rspStatus ":"SUCCESS or FAILED","msg":""}, ...]}
```

5.3.4 Update some ports attributes

Description:

The system will update the ports specified with the new attributes provided.

Command:

```
{"p_targetId":<systemID>, "p_cmd":"update_devices", "p_userName":"<M
NC User Name>", "p_password":"<MNC password>","p_data":[{"<port to
update>":"<port #>", <attribute name>:<attribute value>,..."}, {"<port to
update>":"<port #>", <attribute name>:<attribute value>,...]}
```

Values of <port to update>: "portIn" or "portOut "

List of attribute names that can be modified:

For TX and RX:

"customName" : set the custom name to give to this port

Response:

{"p_targetId":<systemID>, "p_cmd":"update_devices", "p_rspStatus":"S UCSESS", "p_msg":"<amessage>", "p_data":[{"customName":"<value>","portI d":"<value>","connectedPortId":"<value>","typeId":<value>,"typeName":"<valu e>","purposeId":"<value>","isPresent":<0/1>,"cardNb":"<value>"}, { ... }, ...]}

5.3.5 Select and apply a preset

Description:

Apply a preset

Command:

{"p_targetId":<systemID>,"p_cmd":"select_preset","p_userName":"<MNC
User Name>","p_password":"<MNC
password>","p_data":[{"presetId":"<preset id number>"]}

Response:

```
{"p_targetId":<systemID>,"p_cmd":"
select_preset","p_rspStatus":"SUCCSESS","p_msg":"<amessage>","p_data
":[{"portOut":"5-<output #>","portIn":"1-<input #>","rspStatus ":"SUCCESS or
FAILED","msg":""},...]}
Note:
"p data" will return all the connections result that took place
```

5.4 Examples of commands

Muxlab MNC controller :

<u>IP address:</u> 192.168.168.50

Login: admin

Password: admin

Target ID: 1 (Click on "Product" menu in the 500811 web server to know the target ID to use)

Transmitter #1 Mac address: 00-0B-78-00-70-19 (assigned to port# 1 via 500811 web server)

Receiver #1 Mac address: 00-0B-78-00-75-38 (assigned to port# 1 via 500811 web server)

Receiver #2 Mac address: 00-0B-78-00-74-14 (assigned to port# 2 via 500811 web server)

All commands must be HTTP POST and sent to the following URL:

http://192.168.168.50/mnc/secure_api.php

The data must be formatted in JSON, here are some command data examples:

- a) {"p_targetId":1,"p_cmd":"connection","p_userName":"admin","p_password":"admin","p_data":[{"macRx" :"00-0B-78-00-75-38","macTx":"00-0B-78-00-70-19"}]}
- b) {"p_targetId":1,"p_cmd":"connection","p_userName":"admin","p_password":"admin","p_data":[{"portOut ":"2","portIn":"1"}]}
- c) {"p_targetId":1,"p_cmd":"send_data_to_rs232","p_userName":"admin","p_password":"admin","p_data":[{ "portOut":"2","hexdata":"5F45Ac9B","ack":1,"feedback":1}]}
- d) {"p_targetId":1,"p_cmd":"send_data_to_ir","p_userName":"admin","p_password":"admin","p_data":[{"por tIn":"1","hexdata":"AABBCC01020355FF"}]}
- e) {"p_targetId":1,"p_cmd":"select_preset","p_userName":"admin","p_password":"admin","p_data":[{"preset Id":"6"}]}
- f) {"p_targetId":1,"p_cmd":"update_devices","p_userName":"admin","p_password":"admin","p_data":[{"irF eedbackIP":"192.168.168.50","portOut":"1"}]}
- g) {"p_targetId":1,"p_cmd":"vwApplyConfig","p_userName":"admin","p_password":"admin","p_data":[{"vw ConfigId":"3"}]}
- h) {"p_targetId":1,"p_cmd":"vwApplyConfig","p_userName":"admin","p_password":"admin","p_data":[{"vw ConfigId":"3","portIn":"1"}]}

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.

MuxLab

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