

7700R Series

7700R16x16/7700R8x8 SD/HD/3G Modular Router

User Manual



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IMPORTANT SAFETY INSTRUCTIONS

	The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “Dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.

- Read these instructions
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC – SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE

WARNING

DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS ARE PLACED ON THE EQUIPMENT

WARNING

TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE

WARNING

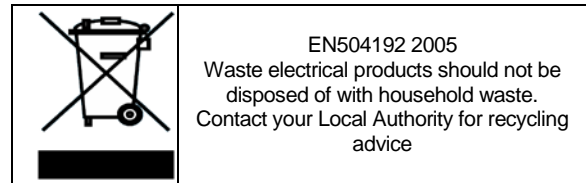
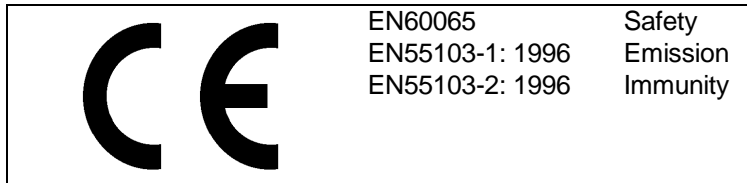
THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE

INFORMATION TO USERS IN EUROPE

NOTE

CISPR 22 CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to the European Union EMC directive. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



INFORMATION TO USERS IN THE U.S.A.

NOTE

FCC CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING

Changes or Modifications not expressly approved by Evertz Microsystems Ltd. could void the user's authority to operate the equipment.

Use of unshielded plugs or cables may cause radiation interference. Properly shielded interface cables with the shield connected to the chassis ground of the device must be used.

TABLE OF CONTENTS

1. OVERVIEW	1
2. INSTALLATION.....	3
2.1. VIDEO CONNECTIONS.....	4
2.2. GENLOCK REFERENCE	4
2.3. Q-LINK CONNECTION (FOR 7700R16X16 ONLY).....	4
2.3.1. Manual Remote Control - Using Q-Link (For 7700R16X16 only).....	4
2.4. SERIAL CONNECTIONS.....	5
2.5. ETHERNET CONNECTIONS.....	5
2.5.1. Connecting to an Ethernet Network	6
3. SPECIFICATIONS.....	7
3.1. SERIAL VIDEO INPUTS.....	7
3.2. SERIAL VIDEO OUTPUTS	7
3.3. SWITCHING REFERENCE.....	7
3.4. CONTROL	7
3.5. ELECTRICAL	8
3.6. PHYSICAL.....	8
4. OPERATION – SYSTEM CONFIGURATION	9
4.1. SETTING COMMUNICATION SETTINGS FROM THE CARD EDGE.....	9
4.2. ACCESSING THE CONFIGURATION AND MONITORING MENU	10
4.2.1. Configuration and Monitoring Menu	11
4.2.2. Configuring Network Settings.....	11
4.2.3. SNMP Setup.....	12
4.2.4. Status Monitoring.....	12
4.2.5. Runtime Statistic.....	12
4.2.6. Engineering/Debug	12
4.2.7. View / Set Frame Configuration	13
4.2.8. View / Set Video Signal Configuration.....	13
4.2.9. View / Set Test Modes	14
4.2.10. Trace Information.....	14
4.2.11. FPGA.....	15
4.2.12. GPIO Status	15
4.2.13. Reboot.....	15
4.3. CONTROL SYSTEMS	15
4.3.1. Controlling the 7700R Series Using Ethernet.....	15
4.3.2. Controlling the 7700R Series Using Q-Link (7700R16X16 only)	16
4.3.3. Controlling the 7700R series Using Serial.....	16

5.	CONFIGURING THE SYSTEM USING WINSETUP.....	17
5.1.	COMMUNICATION PORT SETUP	20
5.2.	CONTROL PANEL ETHERNET INTERFACE.....	21
5.3.	CONTROL PANEL Q-LINK INTERFACE (7700R16X16 ONLY).....	22
5.4.	SERIAL INTERFACE	23
5.5.	ETHERNET INTERFACE	24
6.	UPGRADING THE FIRMWARE	25
6.1.	UPGRADING 7700R ROUTERS	25
6.2.	UPGRADING FROM OLDER VERSIONS OF FIRMWARE.....	28
7.	VISTALINK® REMOTE MONITORING/CONTROL.....	31
7.1.	WHAT IS VISTALINK®?	31
7.2.	VISTALINK® MONITORED PARAMETERS.....	32
7.2.1.	GENERAL Tab.....	32
7.2.2.	INPUT Tab	34
7.2.3.	OUTPUT Tab	35
7.2.4.	FAULTS Tab	36
8.	UPGRADING VLPRO SERVER JAR FILE	37
9.	UPGRADING 7700R16X16/8X8 USING VISTALINK®	39
10.	WEBEASY® WEB INTERFACE FOR 7700R8X8	41
10.1.	CONTROL.....	42
10.2.	MONITOR.....	43
10.3.	NOTIFY	44
11.	UPGRADING 7700R8X8 THROUGH WEBEASY®.....	45

Figures

Figure 1-1: 7700R16X16 Series Block Diagram.....	2
Figure 1-2: 7700R8X8 Series Block Diagram.....	2
Figure 2-1: 7700R16X16 Series Rear IO Module.....	3
Figure 2-2: 7700R8X8 Series Rear IO Module.....	3
Figure 4-1: Controlling the 7700R16X16 using Q-Link	16
Figure 5-1: WinSetup Configuration Editor	17
Figure 5-2: WinSetup Source Definition	18
Figure 5-3: WinSetup Panel Configuration	19
Figure 5-4: Port Setup.....	20
Figure 5-5: Ethernet Panels Port Settings	21
Figure 5-6: Q-Link Hosted Panels Port Settings.....	22
Figure 5-7: Serial Port Settings	23
Figure 5-8: Ethernet Port Settings.....	24
Figure 6-1: 7700R Upgrade Screen for Browse	25
Figure 6-2: 7700R Upgrade Screen for Upload	26
Figure 6-3: 7700R Upgrade Screen for Upgrade.....	26
Figure 6-4: 7700R Upgrade Screen for Success.....	27
Figure 6-5: Run Window for FTP Access	28
Figure 6-6: Run Window for Telnet Access	29
Figure 7-1: VistaLINK [®] - General Tab	32
Figure 7-2: VistaLINK [®] - Input Tab	34
Figure 7-3: VistaLINK [®] - Output Tab	35
Figure 7-4: VistaLINK [®] - Faults Tab	36
Figure 8-1: VistaLink [®] PRO Server	37
Figure 8-2: VistaLink [®] - Applying JAR Updates.....	38
Figure 9-1: VistaLINK [®] - Hardware Tree	39
Figure 9-2: VistaLINK [®] - Upgrade Window.....	40
Figure 10-1: WebEASY [®] - Home Page	41
Figure 10-2: WebEASY [®] - Control	42
Figure 10-3: WebEASY [®] - Monitor	43
Figure 10-4: WebEASY [®] - Notify.....	44
Figure 11-1: WebEASY [®] - Home Page	45
Figure 11-2: WebEASY [®] - Upgrade Button on Top Menu Bar	46
Figure 11-3: WebEASY [®] - Firmware Upgrade Page	47
Figure 11-4: WebEASY [®] - Firmware Upgrade Menu.....	48



Tables

Table 2-1: RS-422 Pin out5

Table 2-2: RS-232 Pin out5

Table 2-3: Standard RJ-45 Wiring Colour Codes6

Table 7-1: VistaLINK® - General Tab Parameters.....33

Table 7-2: VistaLINK® - Input Tab Parameters.....34

Table 7-3: VistaLINK® - Output Tab Parameters.....35

Table 7-4: VistaLINK® - Faults Tab Parameters.....36

Table 10-1: WebEASY® - Control Parameters42

Table 10-2: WebEASY® - Monitor Parameters.....44

Table 10-3: WebEASY® - Notify Parameters44

REVISION HISTORY

<u>REVISION</u>	<u>DESCRIPTION</u>	<u>DATE</u>
0.1	Preliminary Version	Oct 2008
0.2	Updated menu items	Jan 2009
0.3	Updated product name	Feb 2009
0.4	Added panel configuration information	Jun 2009
1.0	First Release	Oct 2009
1.1	Added port configuration information	Jan 2011
1.2	Updated features & inputs in Overview section	May 2011
1.3	Updates throughout	Nov 2012
1.4	Corrected Table 2-1: RS-422 Pin Out	Jun 2015
1.5	Added info for 7700R8X8-3G	Jul 2015
1.6	Second Release	Jan 2016
1.7	Updated Web Control	Jan 2020

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1. OVERVIEW

The 7700R Evertz modular series is a small form factor router designed for critical applications where space is limited, whether for existing facilities that have run out of rack space or for trucks and vans. The 7700R16X16 series uses only 3 slots of a traditional Evertz 7700FR-C Multiframe and has its own integrated controller, while the 7700R8X8 series uses only 2 slots of a traditional Evertz 7700FR-C Multiframe. This means five 16x16 routers can fit in just 3RU or seven 8x8 routers.

The 7700R16X16 series consists of 16 equalized inputs and 16 reclocked outputs, while the 7700R8X8 series consists of 8 equalized inputs and 8 reclocked outputs. Each input and each output is interfaced through a common crosspoint that is controlled by the main processing unit.

The processing unit interfaces the various control options such as Q-Link, Ethernet and serial with the crosspoint, allowing full control of the routing resources. The processing unit also provides a video reference to the crosspoint to maintain clean switching on the switch line.

Features:

- Hot-swappable, front-loading modular 16x16 or 8x8 routing
- Full support for SMPTE 424M (2.97Gb/s), SMPTE 292M (1.5Gb/s), SMPTE 259M (270, 360, 143Mb/s), ASI with all outputs
- Features independent isolated outputs to ensure no cross channel loading effects (no need to terminate unused outputs)

Inputs:

- 8 or 16 Inputs
- SMPTE 424M (2.97Gb/s), SMPTE 292M (1.5Gb/s), SMPTE 259M (270, 360, 143Mb/s), ASI
- Return Loss > 15 dB up to 1.5 Gb/s
- Automatic cable equalization up to 100m at 1.5 Gb/s

Outputs:

- 8 or 16 re-clocked outputs
- Return loss > 15 dB up to 1.5 Gb/s
- Wideband jitter < 0.2 UI

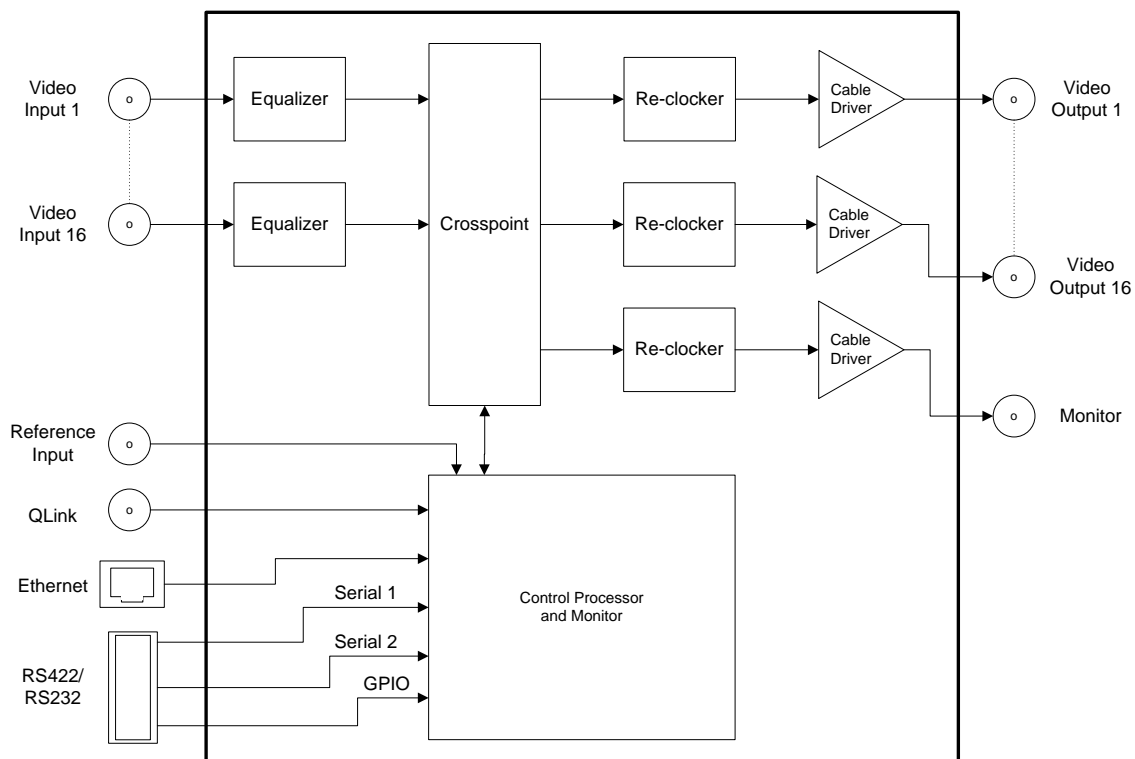


Figure 1-1: 7700R16X16 Series Block Diagram

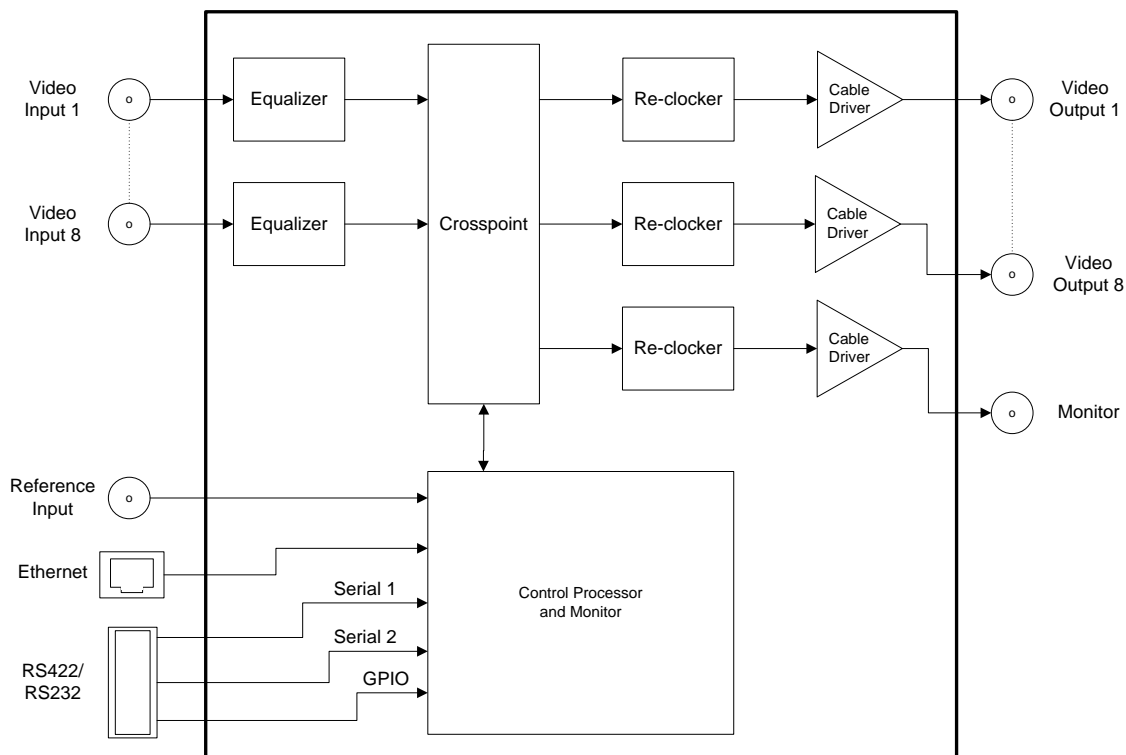


Figure 1-2: 7700R8X8 Series Block Diagram

2. INSTALLATION

The 7700R16X16 series comes with a companion rear plate that occupies three slots in the frame, while the 7700R8X8 series companion rear plate occupies two slots. The 7700R8X8 series comes with the option of either DIN or HD-BNC I/O ports on the rear plate. For information on inserting the module into the frame see section 3 of the 7700FR chapter.

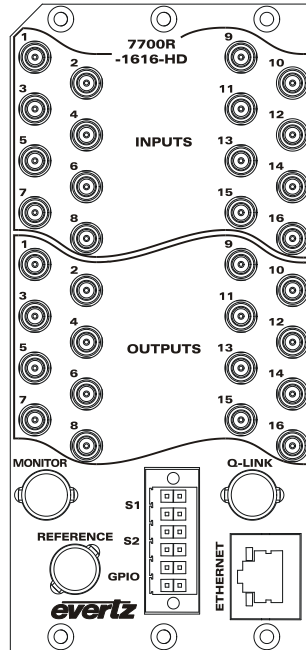


Figure 2-1: 7700R16X16 Series Rear IO Module

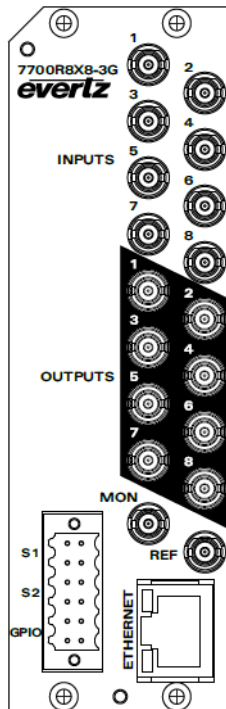


Figure 2-2: 7700R8X8 Series Rear IO Module

2.1. VIDEO CONNECTIONS

INPUTS: Input connectors will accept serial digital signals compatible with SMPTE 424M, SMPTE 292M, and SMPTE 259M standards.

OUTPUTS: The reclocked connectors are used to route the input video. Inputs can be routed via various control options detailed in section 4.2.

MONITOR OUTPUT: The connector provides a video output that is controlled by one of the control options.

2.2. GENLOCK REFERENCE

REFERENCE: The Reference signal may be NTSC or PAL colour black or tri-level sync. There must be a reference present to ensure the crosspoint changes occur during the field-blanking interval. If the reference is missing then the routing will occur asynchronously. If you experience problems with clean switching then refer to application note AN-0008.

Jumper J13 on the 7700R Series selects whether the selected reference input is terminated to 75 ohms (default) or to high impedance. The Genlock reference may also be supplied to the 7700R series card through the frame Genlock if the 7700FR-G frame or 7800FR is being utilized.

2.3. Q-LINK CONNECTION (FOR 7700R16X16 ONLY)

Q-LINK: The rear of the 7700R16X16 Series has a BNC connector to allow connection to an external Q-Link. Q-Link is a dedicated control system specific to Evertz brand of Quartz products.

2.3.1. Manual Remote Control - Using Q-Link (For 7700R16X16 only)

All 7700R16X16 series routers can be connected to other Evertz routers and remote control panels by a single coaxial link called Q-Link. This link uses standard 75Ω video cable daisy-chained from frame to frame and from panel to panel over a maximum cable length of 500m. Each end of the link must be terminated in 75Ω.



Note: The installer must fit a 75Ω terminator at each end of the cable.

This daisy-chain method ensures the best transmission quality of the control signals down the cable. Short cuts that might save cable (i.e. running stubs to some panels) are not recommended as this may, under certain circumstances, cause data errors.

The system can support up to 8 devices. Each unit being connected to the Q-Link has its own address switch, which is set up as part of the system configuration.

2.4. SERIAL CONNECTIONS

S1, S2: The 12-pin terminal strip has two serial ports, S1 and S2. The 7700R series supports Quartz (-1) protocol commands over the serial port. For information regarding the Quartz protocol, contact Evertz service.

The pin-out for the serial ports is shown in Table 2-1 below:

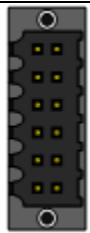
RS422 12-pin Terminal Strip				
PIN	SIGNAL	DIAGRAM	PIN	SIGNAL
1	S1 Tx-		2	S1 Rx+
3	S1 Tx+		4	S1 Rx-
5	S2 Tx-		6	S2 Rx+
7	S2 Tx+		8	S2 Rx-
9	GND		10	GND
11	GPI		12	GPO

Table 2-1: RS-422 Pin out

As an option it is possible to convert either of the two serial ports to RS-232 with the following pin-out, as shown in Table 2-2.

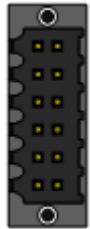
RS232 12-pin Terminal Strip				
PIN	SIGNAL	DIAGRAM	PIN	SIGNAL
1	S1 TXD		2	S1 RXD
3	NC		4	NC
5	S2 TXD		6	S2 RXD
7	NC		8	NC
9	GND		10	GND
11	GPI		12	GPO

Table 2-2: RS-232 Pin out

2.5. ETHERNET CONNECTIONS

ETHERNET: There is one RJ-45 network connector on the rear panel. The RJ-45 connector is an Ethernet port used for monitoring and control of the system, etc. See section 4.3.1 for information on connecting to an Ethernet network. See section 4.1.2 for information on configuring the network address for the router.

2.5.1. Connecting to an Ethernet Network

The 7700R series can be used with 10Base-T (10 Mbps), 100Base-TX (100 Mbps) or 1000BaseT (1Gbps) twisted pair Ethernet cabling systems. When connecting for 10Base-T systems, category 3, 4, or 5 UTP cable as well as EIA/TIA – 568 100 Ω STP cable may be used. When connecting for 100Base-TX systems, category 5 UTP cable is required. The cable must be “straight-through” with an 8-pin modular RJ-45 connector at each end. Establish the network connection by plugging one end of the cable into the RJ-45 receptacle of the 7700R Series and the other end into a port of a supporting Ethernet hub or switch.

The straight-through RJ-45 cable can be purchased or can be constructed using the pin-out information in Table 2-3. A colour coded wiring table is provided in Table 2-3 for the current RJ-45 standards (AT&T 258A or EIA/TIA 258B colour coding shown). Also, refer to the notes following the table for additional wiring guide information.

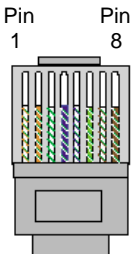
	Pin #	EIA/TIA 568A	AT&T 258A or EIA/TIA 568B	10BaseT or 100BaseT	1000Base T
	1	White/Green	White/Orange	Transmit +	TxRx A+
	2	Green/White or White	Orange/White or Orange	Transmit -	TxRx A-
	3	White/Orange	White/Green	Receive +	TxRx B+
	4	Blue/White or Blue	Blue/White or Blue	Not used (required)	TxRx C+
	5	White/Blue	White/Blue	Not used (required)	TxRx C-
	6	Orange/White or Orange	Green/White or Green	Receive -	TxRx B-
	7	White/Brown	White/Brown	Not used (required)	TxRx D+
	8	Brown/White or Brown	Brown/White or Brown	Not used (required)	TxRx D-

Table 2-3: Standard RJ-45 Wiring Colour Codes

Note the following cabling information for this wiring guide:

- 10BaseT and 100BaseT use the same pins (a crossover cable made for one will also work with the other).
- Pairs may be solid colours and not have a stripe.
- Category 5 cable must use Category 5 rated connectors.

The maximum cable run between the router and the supporting hub is 300 ft (90 m). The maximum combined cable run between any two end points (i.e. router and PC/laptop via network hub) is 675 feet (205 m).

Devices on the Ethernet network continually monitor the receive data path for activity as a means of checking that the link is working correctly. When the network is idle, the devices also send a link test signal to one another to verify link integrity.

The gigabit Ethernet port has a green and a yellow LED marked respectively “ACT” and “LNK”. The “ACT” LED will blink green with Ethernet activity. The “LNK” LED will illuminate yellow when the connection speed is 1000base-T and will be off for 100base-T. The Ethernet standard mandates auto-negotiation so crossover cables are no longer required. The initial TCP/IP settings of the unit can be set through the configuration serial port (Serial 1).

3. SPECIFICATIONS

3.1. SERIAL VIDEO INPUTS

Standard:	SMPTE424M, SMPTE 292M, SMPTE 259M
Signal Level:	800mV p-p nominal
Impedance:	75

Connector: RJ45

3.5. ELECTRICAL

Operating Voltage: +12VDC

Power Consumption:

7700R8X8: 20 Watts

7700R16X16: 30 Watts

EMI/RFI: Complies with FCC regulations for class A devices
Complies with EU EMC directive

3.6. PHYSICAL

7700/7800 Frame Mounting:

Number of Slots:

7700R8X8: 2

7700R16X16: 3

4. OPERATION – SYSTEM CONFIGURATION

4.1. SETTING COMMUNICATION SETTINGS FROM THE CARD EDGE

A shaft encoder and four digit dot-matrix display allows card edge navigation for a set of menus used to configure the 7700R series router. To enter the menu system, rotate the shaft encoder in either direction.

On all menus, there are three selectable items: *View*, *Set* and *End*. Selecting *View* will display the current value of the item, while *End* will return the display to the main menu. Selecting *Set* will allow the current setting to be changed.

To adjust any parameter, use the shaft encoder to move up or down to the desired parameter and press the shaft encoder. The item will be underlined and flashing indicating that you can now adjust the parameter. Using the shaft encoder, adjust the parameter to its desired value.

When you have stopped at the desired value, press the shaft encoder again. This will update the parameter to the selected value. Continue selecting and adjusting other parameters. Scroll to the *End* option when you have completed your selection.

The following chart provides a brief description of the menus that are accessible through the front panel.

<i>QLAD</i>	Sets the Q-Link address of the device.
<i>IPAD</i>	Sets the IP address of the device.
<i>NETM</i>	Sets the Netmask.
<i>DHCP</i>	Controls the Dynamic Host Configuration Protocol function.



Note: The router must be rebooted in order for network changes to take effect.

4.2. ACCESSING THE CONFIGURATION AND MONITORING MENU

The 7700R series router contains a configuration and monitoring menu that allows the user to change some internal settings of the device and also to monitor various components on the router. Before accessing the configuration and monitoring menu, the IP address of the device must be set.

The dot-matrix display on the front will show the default factory setting of the TCP/IP address of the router.

The configuration and monitoring menu can be accessed using the TELNET network protocol. As standard, the 7700R series uses port 4000 as its server port, which allows control and monitoring to be achieved from a PC using the Telnet function. Using any TELNET client, telnet into the configuration and monitoring menu of the device by typing *telnet* followed by the IP address, and then followed by *4000*. (For example, telnet 192.168.0.0 4000). Login as user **root** and Password **evertz**.



Note: Access to the configuration and monitoring menu is done through port 4000.

If there is a problem communicating over Ethernet, then the user should check that there is a network connection to the router from a PC command prompt by typing *ping* followed by the IP address. (For example, ping 192.168.0.0)

All menu items can be accessed using the number listed beside the menu item. Once in a menu, use the numbers beside the items to set the value. Follow the on screen instructions to set the value of the parameter, save and exit the configuration.

When all desired changes have been made, exit the telnet section by hitting Ctrl-D or closing the telnet session.

If network communication is not available, the menu can be accessed via serial connection as well. Serial cable has to be connected to the four pin header (J3) of the card with the Baud rate 115200, 8, none, 1, none.

Once the prompt for login appear enter **root** and for password enter **evertz**. At the # prompt type the following command:

```
#telnet localhost 4000
```

Enter **root/evertz** for login and password to enter to serial menu.



Note: To change the password, at the # prompt type “passwd” and then follow the on screen instruction.

4.2.1. Configuration and Monitoring Menu

The following chart provides a brief description of the menus that are accessible through the configuration and monitoring option.

<i>Network Configuration</i>	Configuration of network settings.
<i>SNMP Setup</i>	Configuration of Simple Network Management Protocol settings.
<i>Status Monitoring</i>	Monitoring of crosspoint and signal paths..
<i>Runtime Stat. Eng only</i>	Engineering use only.
<i>Engineering/Debug</i>	Configuration of video signal settings.

4.2.2. Configuring Network Settings

The *Network Configuration* menus are used to configure parameters associated with the Ethernet communications of the device. The following chart provides a brief description of the items available in the *Network Configuration* menu.

<i>Set IP Address</i>	Sets the IP Address for the device.
<i>Set Netmask</i>	Sets the Netmask for the device.
<i>Set Gateway</i>	Sets the Gateway for the device.
<i>Set Broadcast Address</i>	Sets the Broadcast Address for the device.
<i>Use DHCP</i>	Sets the Dynamic Host Configuration Protocol mode for the device.
<i>View Live Network Settings</i>	Displays the current network settings of the device.



Note: The router must be rebooted in order for network changes to take effect.

4.2.3. SNMP Setup

The *SNMP Setup* menus are used to configure parameters associated with the SNMP communications of the device. The following chart provides a brief description of the items available in the *SNMP Setup* menu.

<i>Set Trap IP Address</i>	Sets the IP addresses that will receive traps from the device.
<i>Remove Trap IP Address</i>	Removes IP addresses of devices receiving traps.
<i>Set Read only Commu.</i>	Sets the Read only community string.
<i>Set Read Write Commu.</i>	Sets the Read/Write community string.

4.2.4. Status Monitoring

The *Status Monitoring* menus are used to view parameters associated with the crosspoint and reclockers of the device. The following chart provides a brief description of the items available in the *Status Monitoring* menu.

<i>View Live XPT Status</i>	Displays the input that is currently mapped to each of the outputs through the crosspoint.
<i>View Video Signal Information</i>	Displays various information regarding both inputs and outputs, such as locked status, video standard, and reclocker status.

4.2.5. Runtime Statistic

This section is for engineering debug only

4.2.6. Engineering/Debug

The *Engineering/Debug* menus are used to view and set parameters associated with the frame and video configuration of the device. The following chart provides a brief description of the items available in the *Engineering/Debug* menu.

<i>View / Set Frame Configuration</i>	Configuration of the Q-Link address, inputs, outputs, level, and Q-Link port (applicable only to 7700R16X16).
<i>View / Set Video Signal Configuration</i>	Configuration of the video input standard, reclockers.
<i>View / Set Test Modes</i>	Displays, enables or disables Chop switch test
<i>Trace information</i>	Enables/disables trace for XPT, Serial ports and Quartz socket

<i>FPGA</i>	Allows read / write, from/to FPGA
<i>GPIO Status</i>	Reads GPIO status and enables/disables GPO
<i>Reboot</i>	Reboots the card



Note: The Engineering/Debug menu contains some controls that are intended for debug purposes. Any item not mentioned in this manual should not be modified under normal circumstances.

4.2.7. View / Set Frame Configuration

The *View / Set Frame Configuration* menus are used to view and set parameters associated with the frame. The following chart provides a brief description of the items available in the *View / Set Frame Configuration* menu.

<i>View Frame Configuration</i>	Displays Q-Link address, inputs, outputs, level, and Q-Link port.
<i>Set QLink Address</i>	Sets the Q-Link address of the device.
<i>Set Number of Inputs</i>	Sets the number of inputs of the device.
<i>Set Number of Outputs</i>	Sets the number of outputs of the device.
<i>Set Level Number</i>	Sets the level number of the device.
<i>Set Xpt Restore at bootup</i>	Restores the XPT at the bootup.

4.2.8. View / Set Video Signal Configuration

The *View / Set Video Signal Configuration* menus are used to view and set parameters associated with the video signals. The following chart provides a brief description of the items available in the *View / Set Video Signal Configuration* menu.

<i>View Video Signal Configuration</i>	Displays input video and reference standard, output cable driver and reclocker status.
<i>Set Video Input Standard</i>	Sets the input video standard of the device.
<i>Set Video Ref. Source</i>	Sets the reference source to be Rear panel, Frame Ref.1 or Ref.2

<i>Set Video Input Mute Status</i>	Sets the state of the Equalizers, whether to be Muted or Not Muted.
<i>Set Cable Driver Slew Rate Control</i>	Sets the Cable Driver Slew Rate to either Automatic or Manual.
<i>Set Cable Driver Slew Rate</i>	Sets the Cable Driver Slew Rate to either 3G/HD or SD when Control is set to Manual.
<i>Enable/Disable Cable Driver</i>	Enables or Disables Output Cable Driver.
<i>Set Output Reclocker Routing Mode</i>	Sets the Output Reclocker Mode to either Bypass or Through Reclocker.
<i>View Live Video Signal Configuration</i>	Views Video Signal Routing Status Through Reclocker.

4.2.9. View / Set Test Modes

The *View / Set Test Modes* menus are used to view and set Chop Switch test. The following chart provides a brief description of the items available in the *View / Set Test Modes* menu.

<i>View Test Mode Configuration</i>	Displays the test mode status.
<i>Enable Chop Switch Test</i>	Enables Chop Switch Test between two inputs.
<i>Disable Chop Switch Test</i>	Disables Chop Switch Test between two inputs.

4.2.10. Trace Information

The *Trace Information* menus are used to enable or disable Traces for serial ports, Ethernet port or XPT. The following chart provides a brief description of the items available in the *Trace Information* menu.

<i>Enable Set Crosspoint Trace</i>	Enables Trace on Crosspoint Takes.
<i>Enable Quartz Serial Port One Trace</i>	Enables Trace on Serial Port One.
<i>Enable Quartz Serial Port Two Trace</i>	Enables Trace on Serial Port Two.
<i>Enable Quartz Socket Port Trace</i>	Enables Trace on Ethernet Port.
<i>Disable All Tracing</i>	Disables All the Tracing.

4.2.11. FPGA

The *FPGA* menu should not be accessed under any normal circumstances.

4.2.12. GPIO Status

The GPIO Status menu is used to check the status of the GPIO and also enable or disable GPOs. The following chart provides a brief description of the items available in the GPIO Status menu.

<i>Read GPIO Register Status</i>	Displays the status of GPO and GPI.
<i>Write GPO Register</i>	Enables or Disables GPO.

4.2.13. Reboot

The *Reboot* menu will force the unit to reboot.

4.3. CONTROL SYSTEMS

The 7700R series router is fully compatible with all Quartz router control panels and interfaces, including connectivity to a comprehensive list of third-party control solutions.

The 7700R series router can be configured with the following control options: Q-Link (7700R16X16 only), Ethernet, or Serial interfaces. Sections 4.3.1 to 4.3.3 provide more details regarding these options.

4.3.1. Controlling the 7700R Series Using Ethernet

The 7700R series supports Evertz control panels that have an Ethernet connection. The 7700R series supports Quartz (-1) protocol commands over the Ethernet port (slave end); therefore, any control device that supports Quartz protocol can control the 7700R series via Ethernet.

The 7700R series router can also be controlled using direct router controls via the CP2200E or using Ethernet panels that contain their own WinSetup configurations.



Note: Ethernet control access to the 7700R series is done through port 2000.

The 7700R series router will support up to 4 Ethernet panels at once. Each panel must be added to the 7700R Winsetup Configuration so that the 7700R series is aware of which panels to communicate with. Section 5.2 describes the method used to setup the 7700R series for use with Ethernet control panels. Consult the instruction manual for the respective panels to setup their IP address and configuration.

4.3.2. Controlling the 7700R Series Using Q-Link (7700R16X16 only)

The 7700R16X16 Series router supports Evertz control panels that have a Q-Link connection.

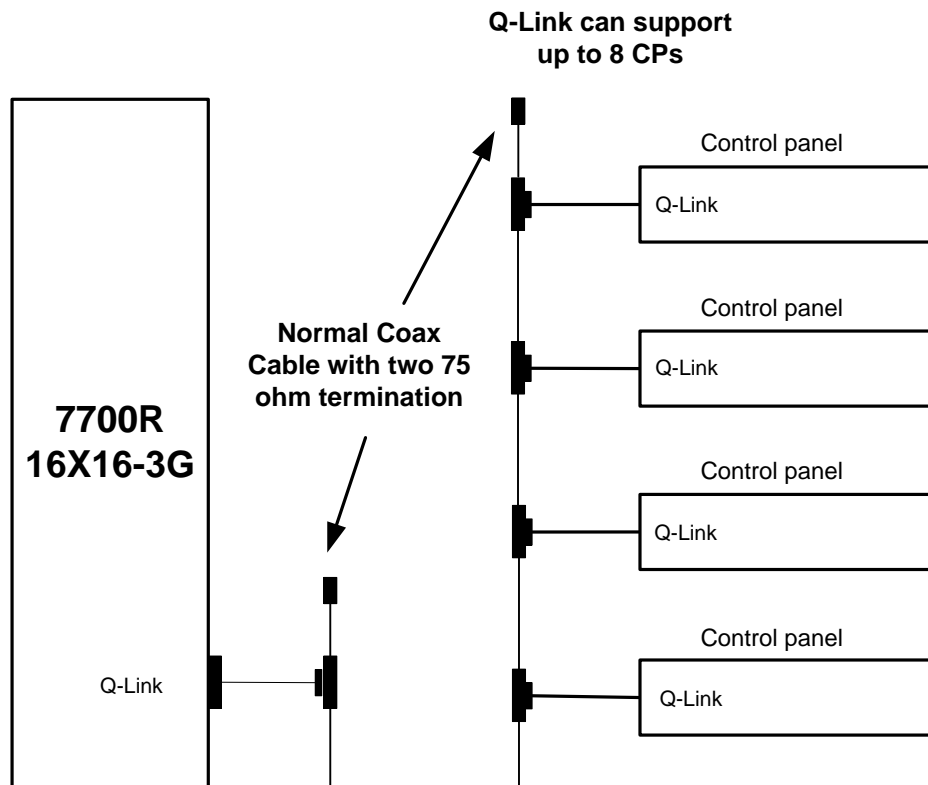


Figure 4-1: Controlling the 7700R16X16 using Q-Link

Section 5.3 describes the method used to setup the 7700R16X16 series router for use with Q-Link control panels. Consult the instruction manual for the respective panels to setup their Q-Link address and configuration.

When using Q-Link, it is important to ensure that each device within the Q-Link chain has a unique Q-Link address.

4.3.3. Controlling the 7700R series Using Serial

The rear panel of the 7700R series has two separate serial ports that connect through terminal block. The 7700R series supports Quartz (-1) protocol commands over the serial port (slave end). Any control device that supports Quartz protocol can control the 7700R series via the serial ports.

For information regarding the Quartz protocol, contact Evertz service. See section 2.4 for a description of the pin outs.

5. CONFIGURING THE SYSTEM USING WINSETUP

The WinSetup program is used to configure most of the routing functions, including control panel operation. It allows such things as the number of signal levels to be defined, which control panels are connected to the system and the names of the inputs and outputs.

The configuration of the 7700R series router uses version 4.70 of Winsetup or higher. To ensure that the correct version is used, first check the *Options, System Version* menu. The correct version has the SC-500E as the only system available inside the Routing System Controller box. Then check the *Help, About WinSetup* menu. On the window that pops up, it should say Version 4.70 or higher at the bottom.



Note: Configuration of the 7700R requires a specific version of WinSetup.

WinSetup is supplied with a comprehensive help system that can be accessed by pressing **F1** (function key F1) from any screen (dialog). The help system can also be entered from the *Help, Index* menu. The following notes are a very brief guide to WinSetup intended for getting started.

The following dialog is the WinSetup main screen. Any part of the system can be configured from the menu at the top of the screen. The grey bars above each main section and the lines items within these main sections can both be used for quick access to specific items.

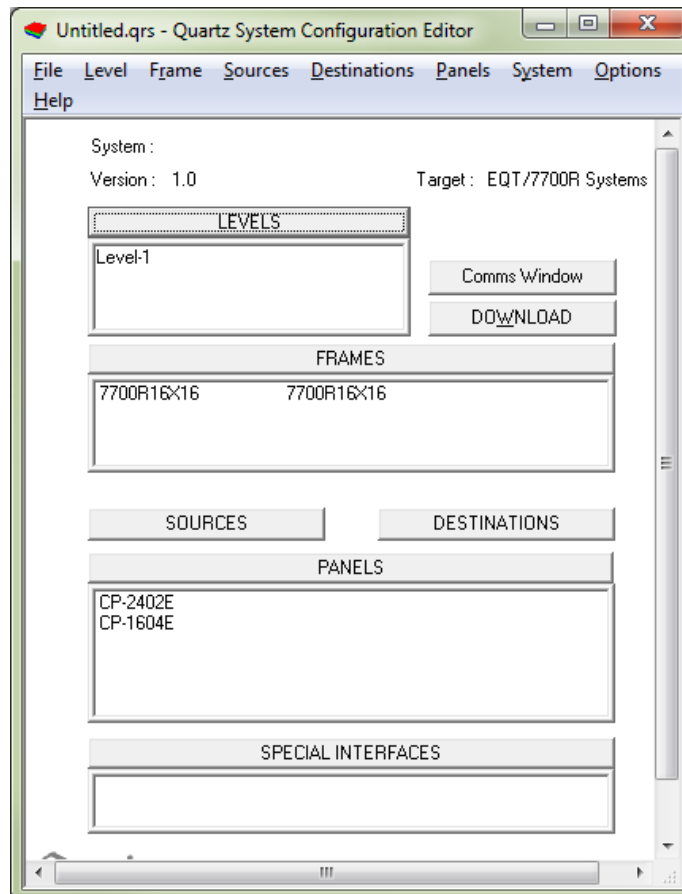


Figure 5-1: WinSetup Configuration Editor

When generating a new system configuration some of the menus and functions are greyed out (not available). This is deliberate to 'lead the user through' the functions that need to be set up. Carry out the following functions to configure the system.

- (1) **Levels:** Enter the level names for each of the signal levels you want to control. Do not tick the "Complex" box at this stage.
- (2) **Frames:** Enter the frames dialog and use the new button. Select the appropriate router from the list available. The only change that needs to be made in the Edit Frame dialog is the *Q-Link* address. This address must be unique among all devices in the system and it must match the one that has been set on the router from section 4.2.7.



Note: The QLink address in the 7700R8X8 configuration must match the QLink address on the card itself to activate the configuration.

- (3) **Sources:** Enter the sources dialog and use the add button to fill the name table with SRC-1 to SRC-X. The names can be edited later when a few panels are configured and working.

Name	Level-1
SRC-1	1
SRC-2	2
SRC-3	3
SRC-4	4
SRC-5	5
SRC-6	6
SRC-7	7
SRC-8	8
SRC-9	9
SRC-10	10
SRC-11	11
SRC-12	12
SRC-13	13
SRC-14	14
SRC-15	15
SRC-16	16

16 Next Previous 16 Sources defined Up Move Source Down

Current Source

Name: SRC-16 Description:

Level-1: ☒ 16 ☐ ☐ ☐ ☐

Legend

Printed

SRC 16

LCD button

SRC 16

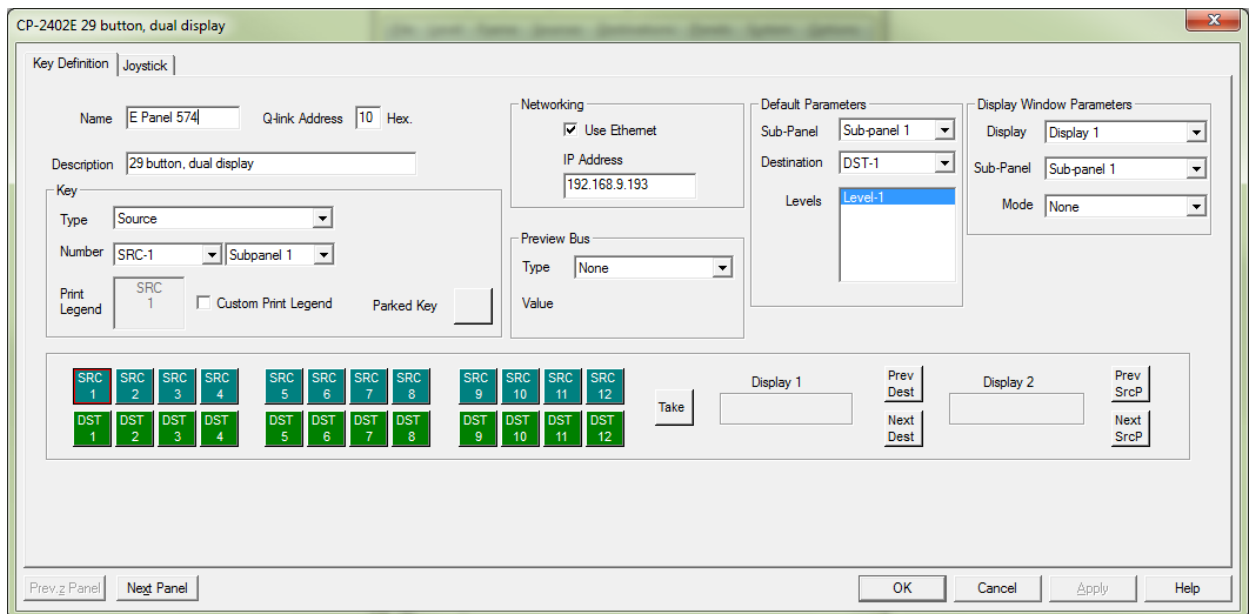
☒ Auto-assign

Add Insert Delete Delete All Cancel OK

Figure 5-2: WinSetup Source Definition

If you want to edit a name now, select one row from the list of names in the upper part of the screen, the details appear in the lower part of the screen. From here you can edit the name and decide which signal levels that name will control when selected on a control panel.

- (4) **Destinations:** Enter the destination dialog and set up the destination names in the same way as used for the source names.
- (5) **RLink Panels:** Enter the panel's dialog and use the new button. This will show all Evertz panels listed by part number. Select the part number that matches the part number on the panel's serial number label. Ignore the A/E designation as the connection method for the panel will be defined in the panel configuration dialog. Once a part number is selected, a new dialog will appear showing a graphic of the panel.



The image shows the 'WinSetup Panel Configuration' dialog box for a 'CP-2402E 29 button, dual display'. The dialog is divided into several sections:

- Key Definition:** Includes fields for 'Name' (E Panel 574), 'Q-link Address' (10 Hex), 'Description' (29 button, dual display), 'Key' (Type: Source, Number: SRC-1, Subpanel: 1), 'Print Legend' (SRC 1), and 'Parked Key'.
- Networking:** Includes a checked 'Use Ethernet' box, an 'IP Address' field (192.168.9.193), and a 'Preview Bus' section (Type: None, Value:).
- Default Parameters:** Includes 'Sub-Panel' (Sub-panel 1), 'Destination' (DST-1), and 'Levels' (Level-1).
- Display Window Parameters:** Includes 'Display' (Display 1), 'Sub-Panel' (Sub-panel 1), and 'Mode' (None).
- Buttons:** A grid of 24 buttons labeled SRC 1 through SRC 12 and DST 1 through DST 12. SRC buttons are red and DST buttons are green. Below the grid are 'Take', 'Display 1', 'Display 2', 'Prev Dest', 'Next Dest', 'Prev SrcP', and 'Next SrcP' buttons.
- Navigation:** 'Prev. z Panel' and 'Next Panel' buttons at the bottom left, and 'OK', 'Cancel', 'Apply', and 'Help' buttons at the bottom right.

Figure 5-3: WinSetup Panel Configuration

Each button can be programmed by selecting the button and then editing the functions in the Key section of the dialog. Each panel should also be given a name for later identification, "E Panel 54" in this example. The Q-Link address has to match the physical Q-Link address of the panel. In the above example the panel is set to have 12 sources and 12 destinations with scroll up and down buttons for sources and destinations.



Note: An indication for the connection method used (Q-Link or Ethernet) must be made in the panel configuration of each panel. Q-Link connection is valid for 7700R16x16 router only.

To differentiate between a panel that is connected via Q-Link and a panel that is connected via Ethernet, check the *Use Ethernet* box when appropriate. When checked, an IP address is required to be entered. This is the IP address of the control panel.

- (6) **Download:** Using the System menu, select Download-to-Router to transfer the setup data to the router. Remember to save the setup, as it **CANNOT** be retrieved from the router.



Note: The configuration for the 7700R can only be downloaded over Ethernet and not serially and port 2500 must be used.

5.1. COMMUNICATION PORT SETUP

The 7700R series router has several communications ports that require additional setup. This section is used to define all of the interfaces that will be connected to the 7700R Series router. Enter the Edit Frame dialog and select the Port Setup tab. From this dialog, ports can be added for Ethernet or serial control, Ethernet panel hosting, and Q-Link panel hosting (only on 7700R16X16).

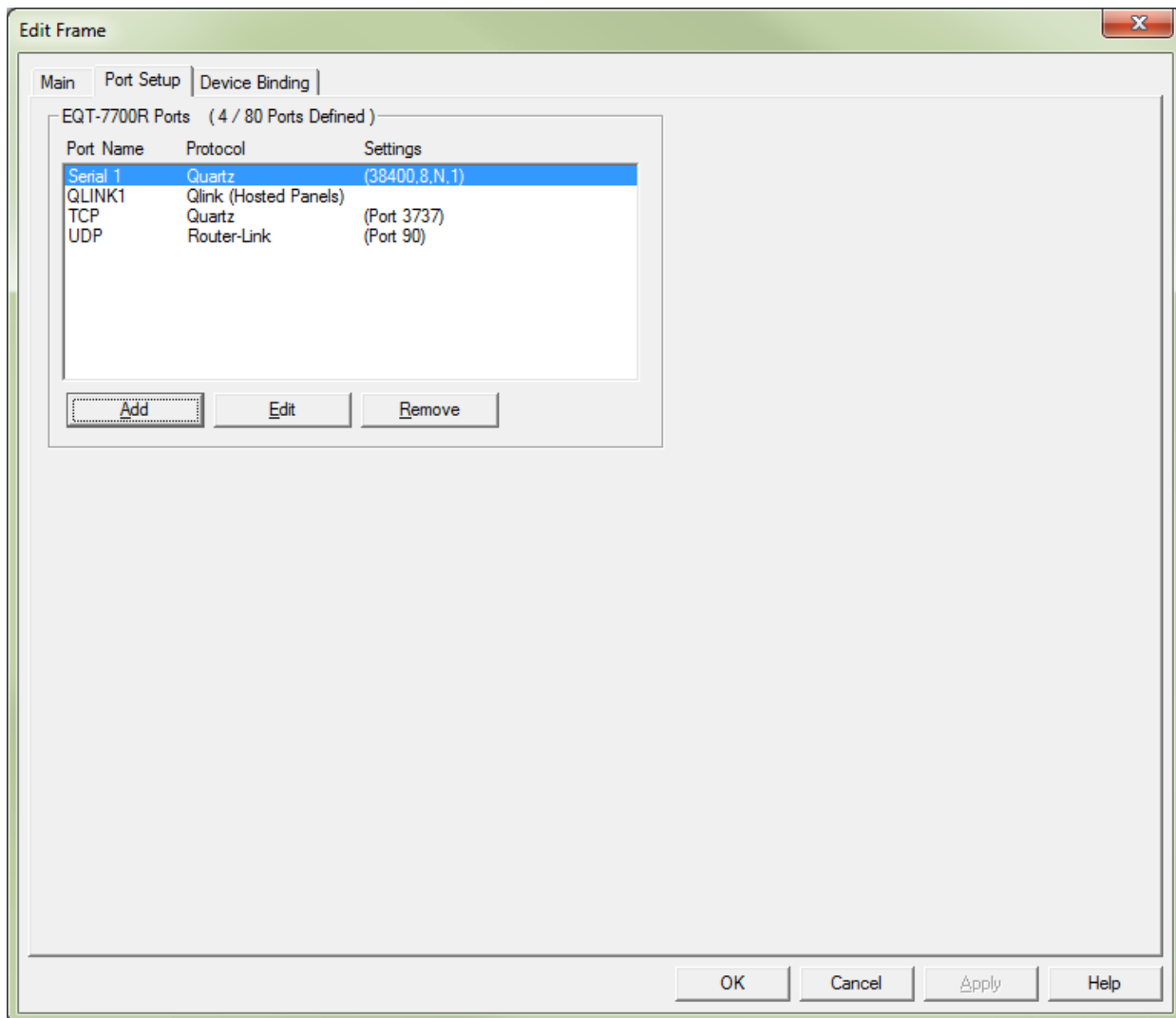
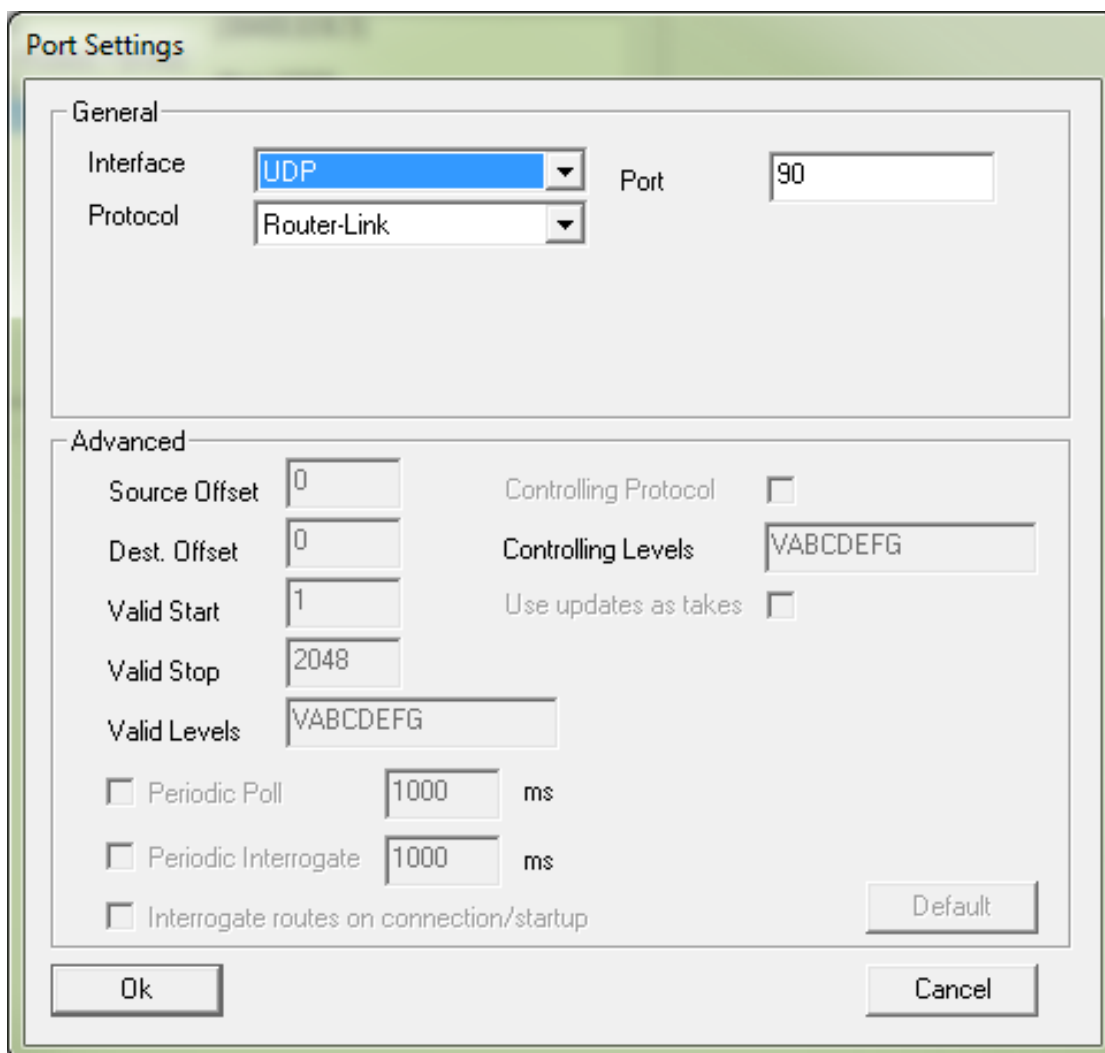


Figure 5-4: Port Setup

5.2. CONTROL PANEL ETHERNET INTERFACE

The control panel Ethernet port is a single interface that is defined to allow all properly equipped control panels to connect to the 7700R Series router via Ethernet. The interface is defined as a *UDP* interface using the *RouterLink* protocol. The port is always defined as 90. A proper Ethernet panel port settings configuration is shown in Figure 5-5.



The screenshot shows a 'Port Settings' dialog box with two tabs: 'General' and 'Advanced'.

General Tab:

- Interface:** A dropdown menu with 'UDP' selected.
- Port:** A text field containing '90'.
- Protocol:** A dropdown menu with 'Router-Link' selected.

Advanced Tab:

- Source Offset:** A text field containing '0'.
- Dest. Offset:** A text field containing '0'.
- Valid Start:** A text field containing '1'.
- Valid Stop:** A text field containing '2048'.
- Valid Levels:** A text field containing 'VABCDEFGG'.
- Controlling Protocol:** An unchecked checkbox.
- Controlling Levels:** A text field containing 'VABCDEFGG'.
- Use updates as takes:** An unchecked checkbox.
- Periodic Poll:** An unchecked checkbox, followed by a text field containing '1000' and the unit 'ms'.
- Periodic Interrogate:** An unchecked checkbox, followed by a text field containing '1000' and the unit 'ms'.
- Interrogate routes on connection/startup:** An unchecked checkbox.
- Buttons:** 'Ok', 'Cancel', and 'Default'.

Figure 5-5: Ethernet Panels Port Settings

5.3. CONTROL PANEL Q-LINK INTERFACE (7700R16X16 ONLY)

The control panel Q-Link port is an interface that is defined to allow all properly equipped control panels to connect to the 7700R series router via Q-Link. The Q-Link port can be defined as a port to host panels using Q-Link. The interface is defined as a *QLINK1* interface using the *Qlink (Hosted Panels)* protocol. A properly configured setting is shown in Figure 5-6. In this configuration, control panels can be connected to the physical port that is labeled Q-Link 1 on the rear of the device.

Port Settings

General

Interface: **QLINK1**

Protocol: **Qlink (Hosted Panels)**

Advanced

Source Offset: **0**

Dest. Offset: **0**

Valid Start: **1**

Valid Stop: **2048**

Valid Levels: **VABCDEFG**

Controlling Protocol: ☐

Controlling Levels: **VABCDEFG**

Use updates as takes: ☐

☐ Periodic Poll: **1000** ms

☐ Periodic Interrogate: **1000** ms

☐ Interrogate routes on connection/startup

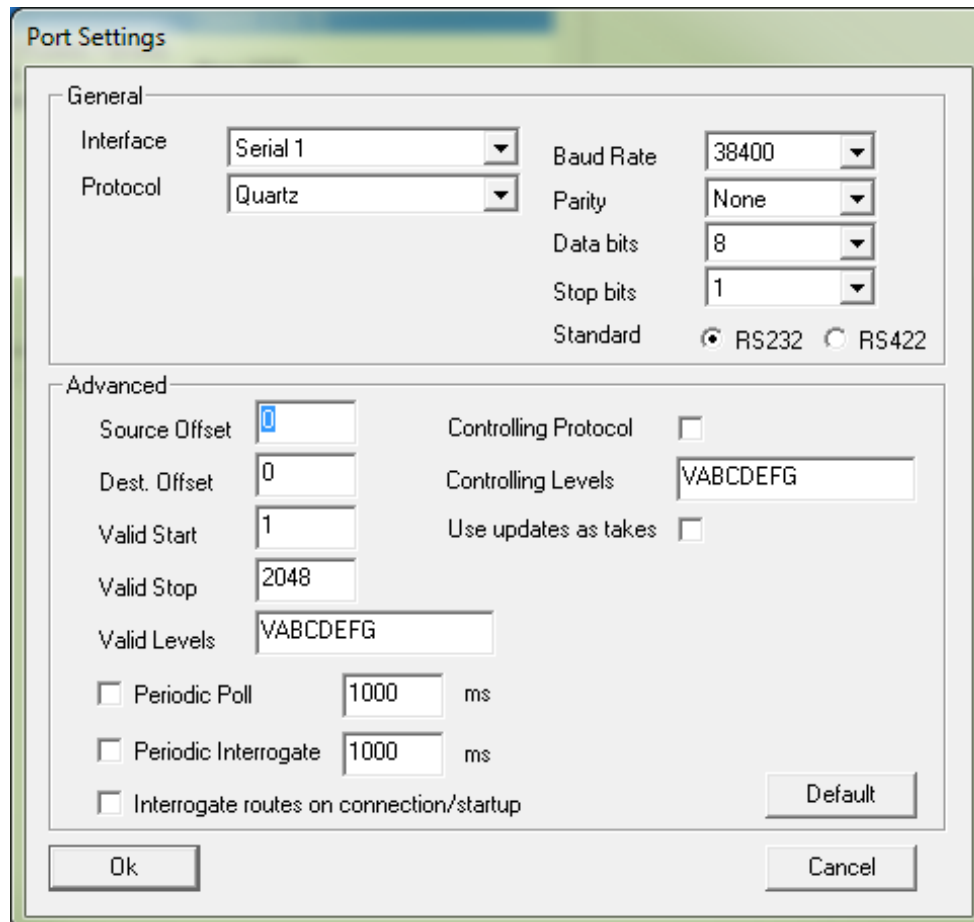
Default

Ok **Cancel**

Figure 5-6: Q-Link Hosted Panels Port Settings

5.4. SERIAL INTERFACE

The serial port is an interface that is defined to provide external automation control of the 7700R series router. The interface is defined as a *COM1* interface using the *Quartz* protocol. The format of the serial protocol is also defined in this dialog using the options that are provided for *Baud Rate*, *Parity*, *Data bits*, *Stop bits* and *Standard (RS232 or RS422)*. A properly configured serial port is shown in Figure 5-7.



Port Settings

General

Interface: Serial 1
Protocol: Quartz
Baud Rate: 38400
Parity: None
Data bits: 8
Stop bits: 1
Standard: ☒ RS232 ☐ RS422

Advanced

Source Offset: 0
Dest. Offset: 0
Valid Start: 1
Valid Stop: 2048
Valid Levels: VABCDEFGF
Controlling Protocol: ☐
Controlling Levels: VABCDEFGF
Use updates as takes: ☐
☐ Periodic Poll: 1000 ms
☐ Periodic Interrogate: 1000 ms
☐ Interrogate routes on connection/startup
Default
Ok Cancel

Figure 5-7: Serial Port Settings

5.5. ETHERNET INTERFACE

The Ethernet interface is defined to provide access to the 7700R series router so that it can be controlled via Ethernet using Quartz protocol. Port 2000 is defined as the default port for control. In addition, four more ports can be added: 3737, 3738, 3739, and 3740. An example of a properly configured Ethernet port for external control is shown in Figure 5-8. Once everything is configured the configuration has to be downloaded to the router using port 2500.

The screenshot shows a 'Port Settings' dialog box with two tabs: 'General' and 'Advanced'. The 'General' tab is active, showing 'Interface' set to 'TCP', 'Protocol' set to 'Quartz', and 'Port' set to '3737'. There is an unchecked checkbox for 'Is client'. The 'Advanced' tab contains several settings: 'Source Offset' (0), 'Dest. Offset' (0), 'Valid Start' (1), 'Valid Stop' (2048), 'Valid Levels' (VABCDEFGG), 'Controlling Protocol' (unchecked), 'Controlling Levels' (VABCDEFGG), 'Use updates as takes' (unchecked), 'Periodic Poll' (unchecked, 1000 ms), 'Periodic Interrogate' (unchecked, 1000 ms), and 'Interrogate routes on connection/startup' (unchecked). There are 'Ok', 'Cancel', and 'Default' buttons at the bottom.

Section	Parameter	Value
General	Interface	TCP
	Protocol	Quartz
	Port	3737
	Is client	<input type="checkbox"/>
Advanced	Source Offset	0
	Dest. Offset	0
	Valid Start	1
	Valid Stop	2048
	Valid Levels	VABCDEFGG
	Controlling Protocol	<input type="checkbox"/>
	Controlling Levels	VABCDEFGG
	Use updates as takes	<input type="checkbox"/>
	Periodic Poll	<input type="checkbox"/> 1000 ms
	Periodic Interrogate	<input type="checkbox"/> 1000 ms
Interrogate routes on connection/startup	<input type="checkbox"/>	

Figure 5-8: Ethernet Port Settings

6. UPGRADING THE FIRMWARE

Upgrading the 7700R is done using a standard web browser on any computer that is connected to the same network. The following sections are the detailed methods for upgrading the firmware on the standard 7700R, the clean switch versions of the 7700R, as well as 7700R with firmware versions before 1.0 build 001.



Note: When upgrading from a firmware version prior to 1.0 build 001, the steps in section 6.2 must be followed.

6.1. UPGRADING 7700R ROUTERS

The following steps are used to upgrade any of the standard 7700R routers:

1. Using a standard web browser, type the IP address of the 7700R in the address bar. This should direct you to the web page similar to Figure 6-1 below. This screen will also show the current firmware version. In the case of this example, the version is 1.0 build 100.

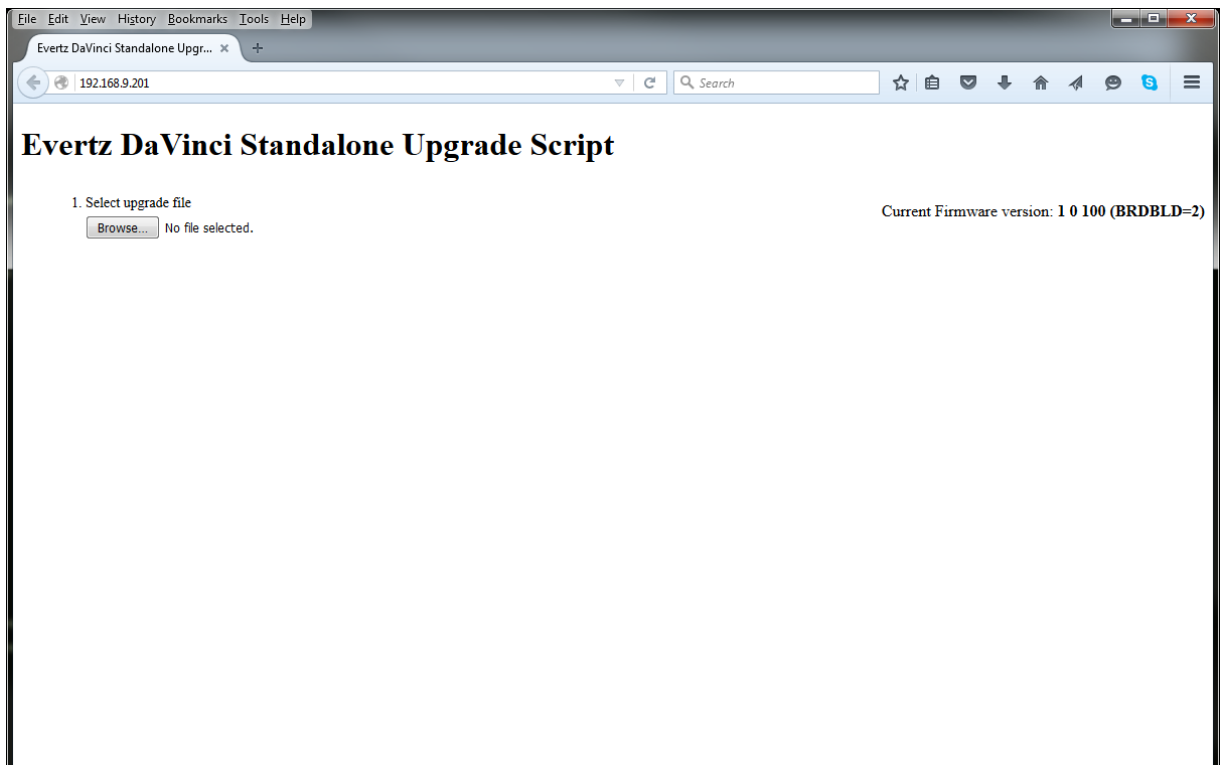


Figure 6-1: 7700R Upgrade Screen for Browse

2. If BRDBL = 1 then the image without "new" e.g. "7700r.img" has to be loaded. If the BRDBLD = 2 the image with "new" e.g. "7700r_new_r.img" has to be used. In this example BRDBLD is 2.
3. Using the *Browse...* button, select the new file that should be saved on your computer. This file will have an extension of .img. Once a file has been selected, a button "Upload to 7700r" will appear below as shown in Figure 6-2.

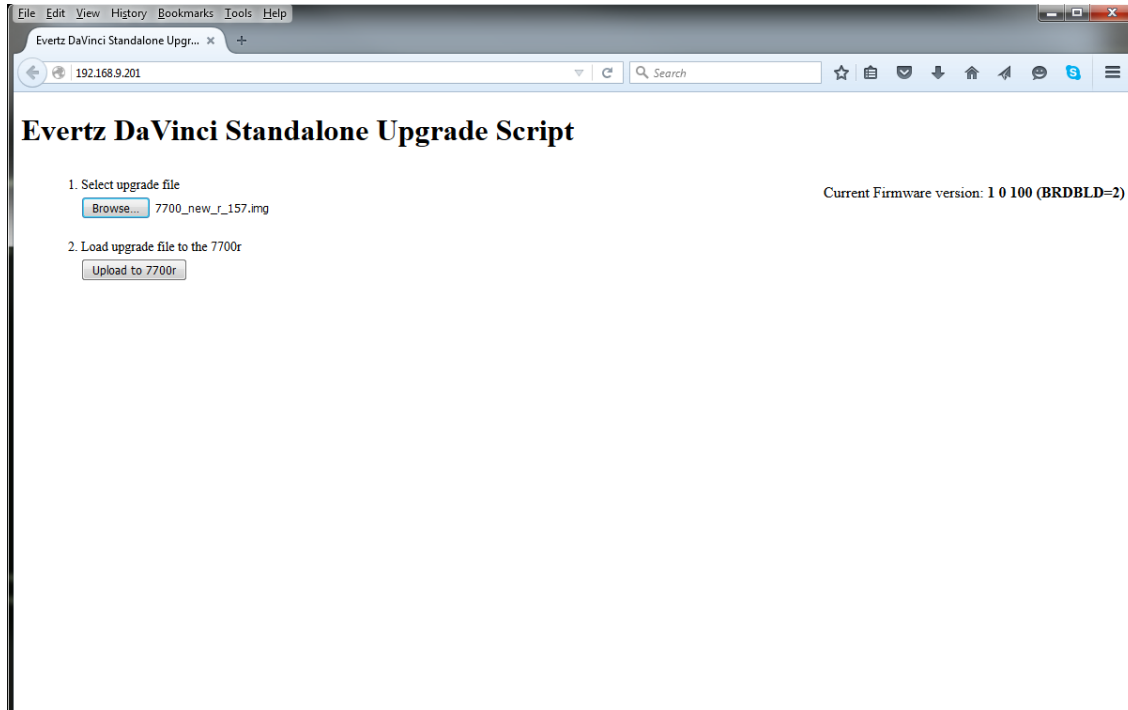


Figure 6-2: 7700R Upgrade Screen for Upload

4. Click on the upload button and once the file is uploaded, it will be verified by the system to ensure it is valid. If the file is valid, an *Upgrade* button will appear, as shown in Figure 6-3.

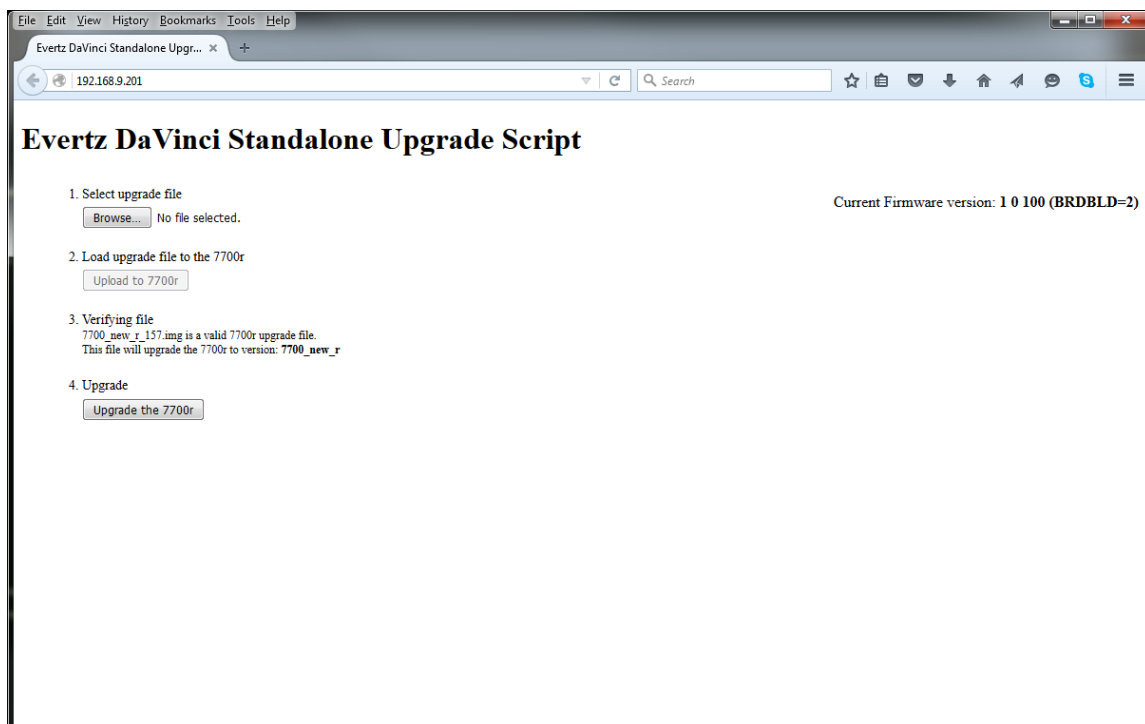


Figure 6-3: 7700R Upgrade Screen for Upgrade

5. After pressing the *Upgrade* button, the 7700R will be upgraded. Once it is completed, a message indicating that the upgrade was successful as shown in Figure 6-4. Once this message appears, restart the 7700R as instructed.

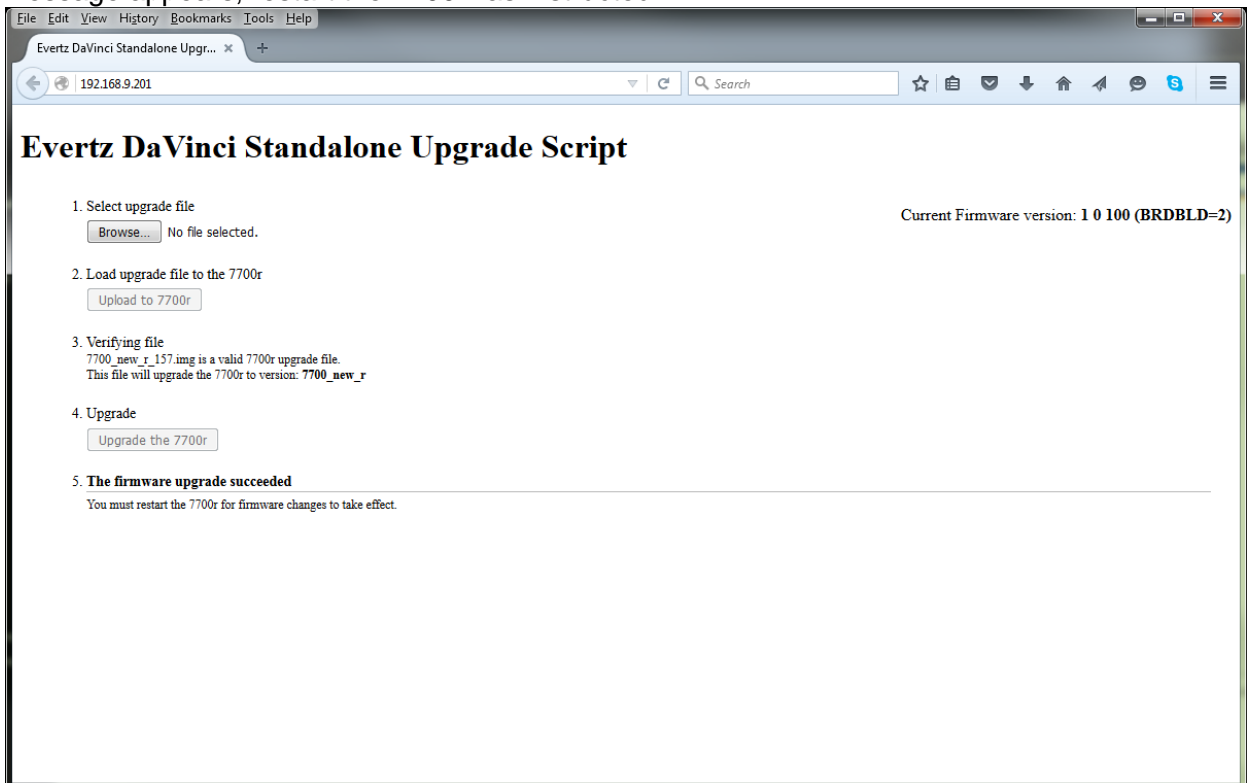


Figure 6-4: 7700R Upgrade Screen for Success

6.2. UPGRADING FROM OLDER VERSIONS OF FIRMWARE

The following steps are used to upgrade 7700R routers that have a firmware version prior to 1.0 build 001. This firmware was released before the standalone web server was implemented to allow easier upgrades. Once the system is upgraded to latest firmware version, future upgrades can be done from a standard web browser.

1. Copy the latest IMG file to any directory on your computer. (C:\temp)
2. FTP into the card using the following command. Replace 192.168.8.9 with the unique IP of your device as shown in Figure 6-5. Login as user **root** and Password **evertz**.

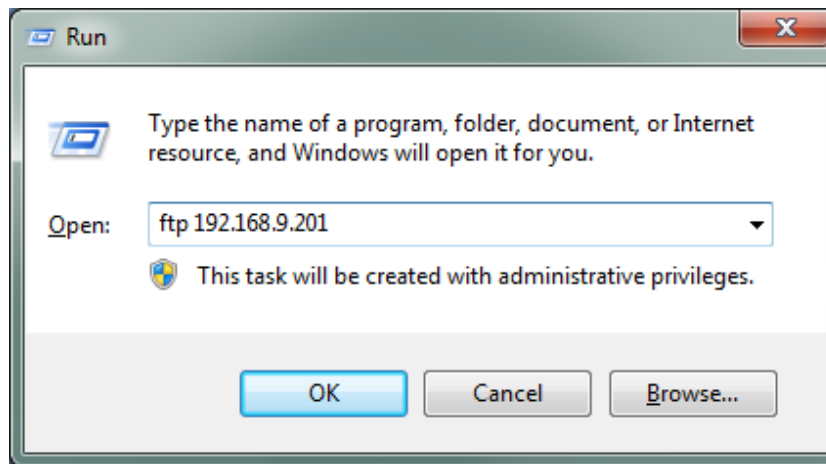


Figure 6-5: Run Window for FTP Access

3. Enter the commands below in the FTP window. If all goes well you will see the file transfer via Ethernet to the card and a Transfer Complete message will display.

ftp> type binary

ftp>cd /tmp

ftp>put C:\temp\LATEST_IMAGE.img
(Drag and drop the image file from C:\temp to here)

ftp>bye

4. Without powering down, login to Linux using a Telnet session. Replace 192.168.8.9 with the unique IP address of your router. Login as user **root** and Password **evertz**.

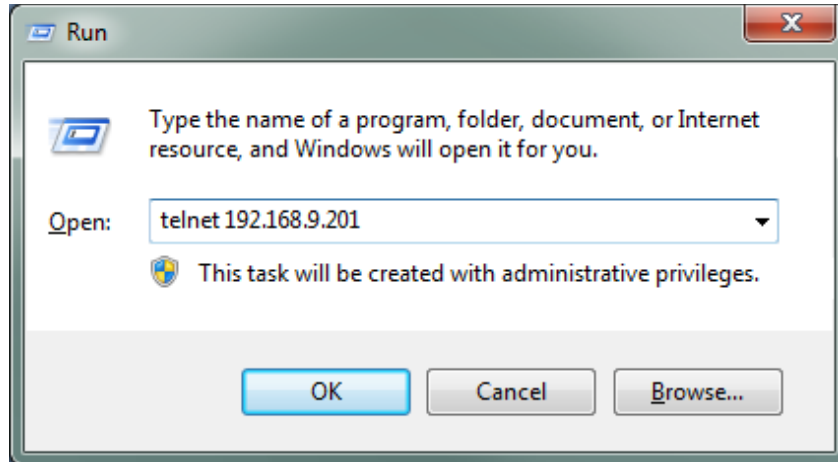


Figure 6-6: Run Window for Telnet Access

4. At the Linux prompt enter the following commands.

>cd /tmp

>ls (this displays the contents on the tmp directory on the card. The file sent should display)

>upgrade LATEST_IMAGE.img (replace the LATEST_IMAGE.img with the file you are using)



Please Note: If the upgrade went well a success message will print at the Linux prompt. If wrong image was loaded then an error message will print at the prompt

5. Power cycle the card and verify that the latest code is loaded and booting.

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7. VISTALINK® REMOTE MONITORING/CONTROL

7.1. WHAT IS VISTALINK®?

VistaLINK® is Evertz's remote monitoring and configuration platform which operates over an Ethernet network using Simple Network Management Protocol (SNMP). SNMP is a standard computer network protocol that enables different devices sharing the same network to communicate with each other. *VistaLINK®* provides centralized alarm management, which monitors, reports, and logs all incoming alarm events and dispatches alerts to all the VLPro Clients connected to the server. Card configuration through *VistaLINK®* PRO can be performed on an individual or multi-card basis using simple copy and paste routines, which reduces the time to configure each module separately. Finally, *VistaLINK®* enables the user to configure devices in the network from a central station and receive feedback that the configuration has been carried out.

There are 3 components of SNMP:

1. A SNMP manager, also known as a Network Management System (NMS), is a computer running special software that communicates with the devices in the network. Evertz *VistaLINK®* Pro Manager graphical user interface (GUI), third party or custom manager software may be used to monitor and control Evertz *VistaLINK®* enabled fiber optic products.
2. Managed devices (such as 7700R Series), each with a unique address (OID), communicate with the NMS through an SNMP Agent.
3. A virtual database, known as the Management Information Base (MIB) lists all the variables being monitored, which both the Manager and Agent understand. Please contact Evertz for further information about obtaining a copy of the MIB for interfacing to a third party Manager/NMS.

7.2. VISTALINK® MONITORED PARAMETERS

There are two ways to monitor 7700R16X16/8X8 parameters in VLPRO, one is direct SNMP connection to the back of the card and second one is via 7800FC. Both ways have identical UI however via FC it makes it easier to monitor multiple cards with single connection.

7.2.1. GENERAL Tab

General tab allows the users to monitor and control the following parameters.

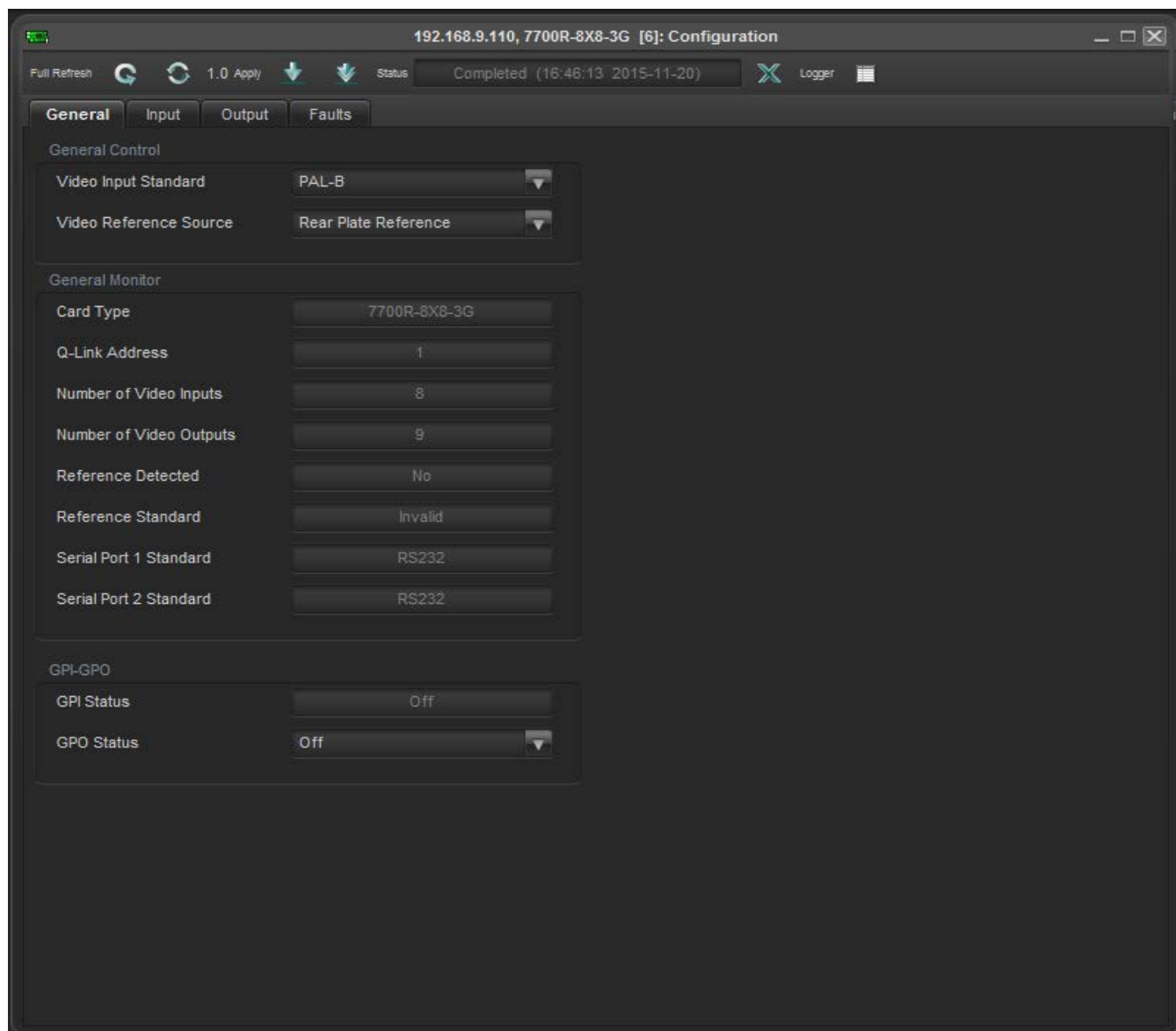


Figure 7-1: VistaLINK® - General Tab

Table below has the description of each parameter inside General tab:

Parameter	Description
Video Input Standard	Sets the incoming video standard
Video Reference Source	Sets the reference source to be rear plate, frame ref.1 or 2
Card Type	Indicates the model of the device.
Q-Link Address	Indicates the Q-Link address of the device
Number of Video Inputs	Indicates the number of video inputs of the device.
Number of Video Outputs	Indicates the number of video outputs of the device.
Reference Detected	Indicates the presence of a valid video reference signal.
Reference Standard	Indicates the video standard of the reference signal.
Serial Port 1 Standard	Indicates the configuration of serial port 1.
Serial Port 2 Standard	Indicates the configuration of serial port 2.
GPI Status	Indicates whether GPI is triggered or not
GPO Status	Indicates and changes the status of GPO

Table 7-1: VistaLINK[®] - General Tab Parameters

7.2.2. INPUT Tab

Input tab allows the users to monitor the status of the inputs.

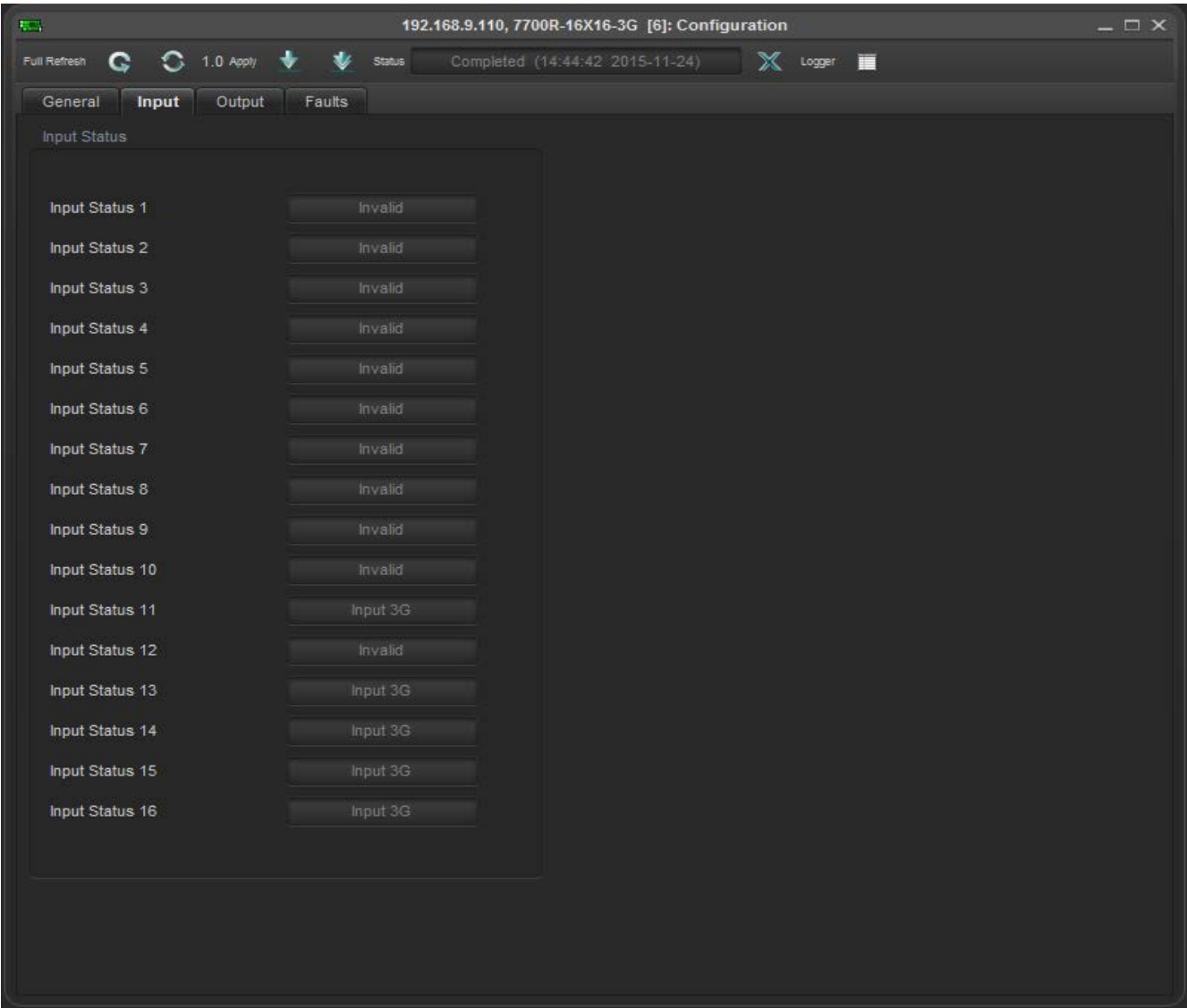


Figure 7-2: VistaLINK® - Input Tab

Table below has the description of parameter inside Input tab:

Parameter	Description
Input Status	Indicates the presence and standard of the input

Table 7-2: VistaLINK® - Input Tab Parameters

7.2.3. OUTPUT Tab

Output tab allows the users to enable/disable or mute/unmute each output.

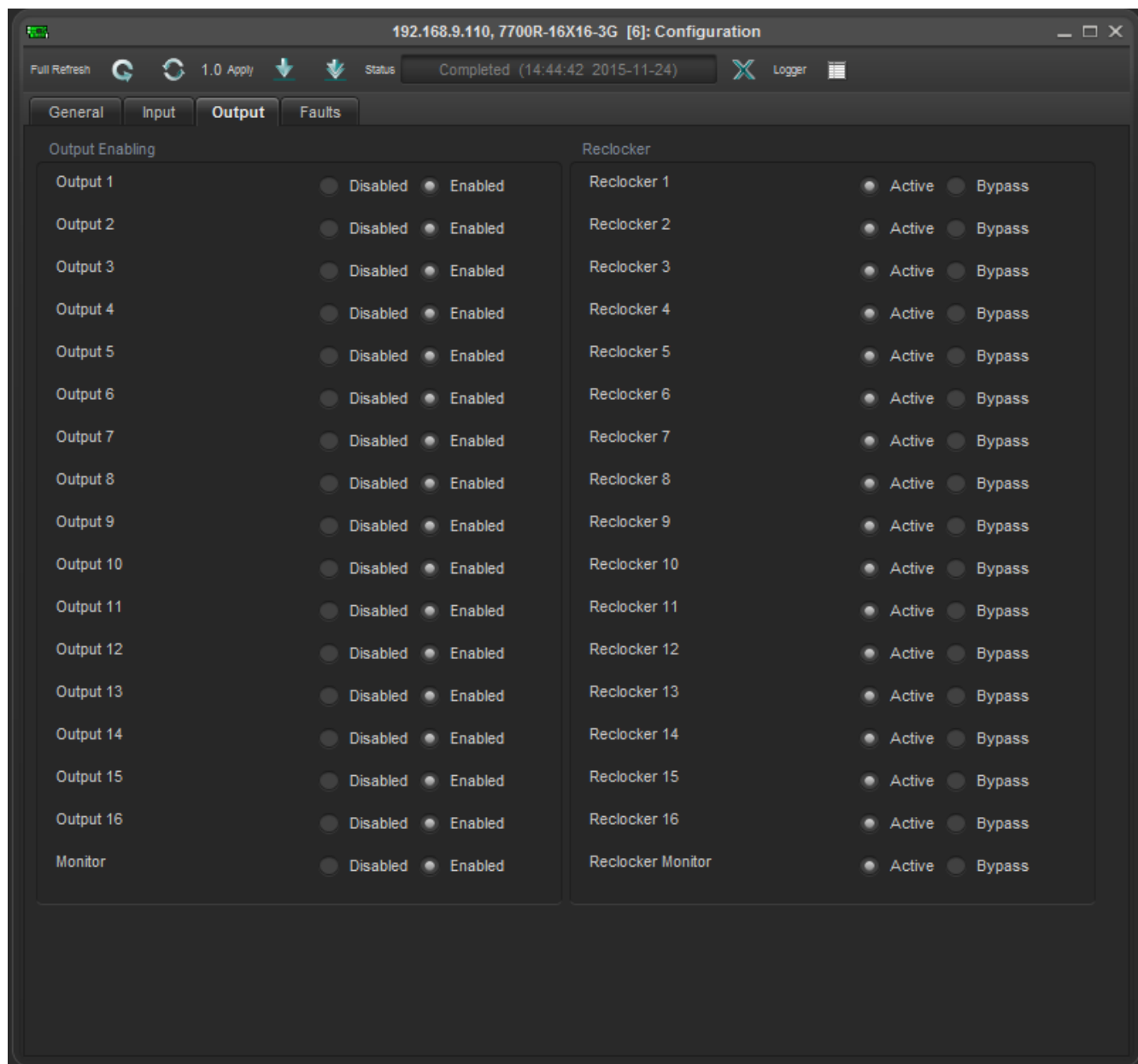


Figure 7-3: VistaLINK® - Output Tab

Table below has the description of each parameter inside Output tab:

Parameter	Description
Output Enabling	Sets the outputs to mute or un-mute
Reclocker	Sets the output reclockers to Active or Bypass

Table 7-3: VistaLINK® - Output Tab Parameters

7.2.4. FAULTS Tab

Fault tab allows the users to enable or disable trap for each input.

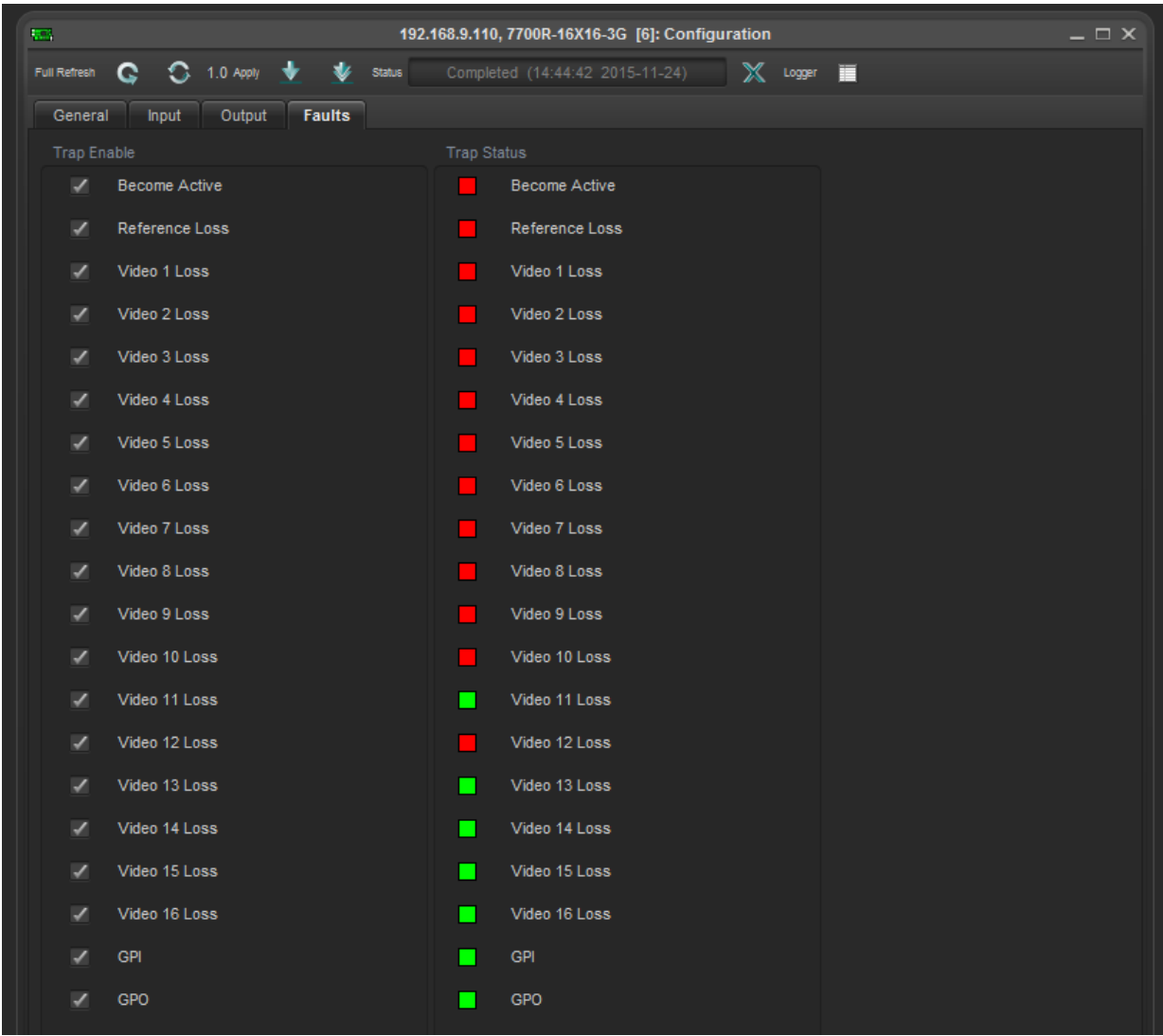


Figure 7-4: VistaLINK® - Faults Tab

Table below has the description of each parameter inside Faults tab:

Parameter	Description
Trap Enable	Enables or disables the traps for each input, reference and GPIO
Trap Status	Indicates the loss of the input, reference and status of GPIO.

Table 7-4: VistaLINK® - Faults Tab Parameters



Note: Manage routes option is available in VLPRO version 12 or higher.

8. UPGRADING VLPRO SERVER JAR FILE

Products from Evertz are constantly evolving and new features are often added. It is therefore important to update the JAR files in use to provide access to all the latest features or enhancements. It will also necessary to add JAR files for new products. If your new product has not appeared even after waiting a few minutes for the Ethernet switch negotiation to complete then it is possible that your JAR file may be old or missing.

To perform a JAR update, ensure that all VLPro clients are closed (those clients which are not closed will automatically be disconnected as soon as the VLPro server is restarted). Maximize the VLPro Server window from the Windows task bar, select **Help → Apply Update → Product** from the menu

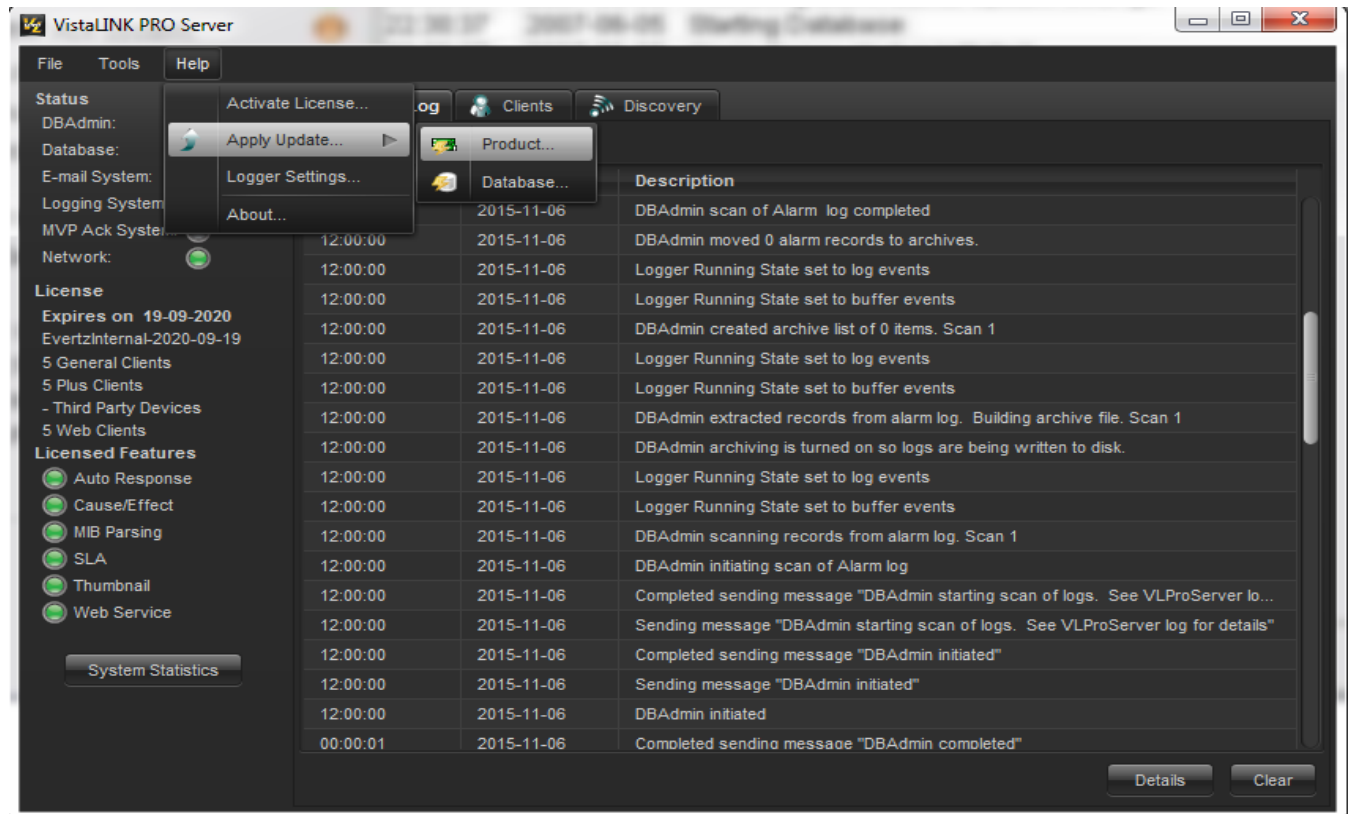


Figure 8-1: VistaLink® PRO Server

A window will appear, as shown in Figure 8-2, simply navigate to the location of the new JAR file and select the file by double clicking. The window will automatically close and the update will be applied in the background.

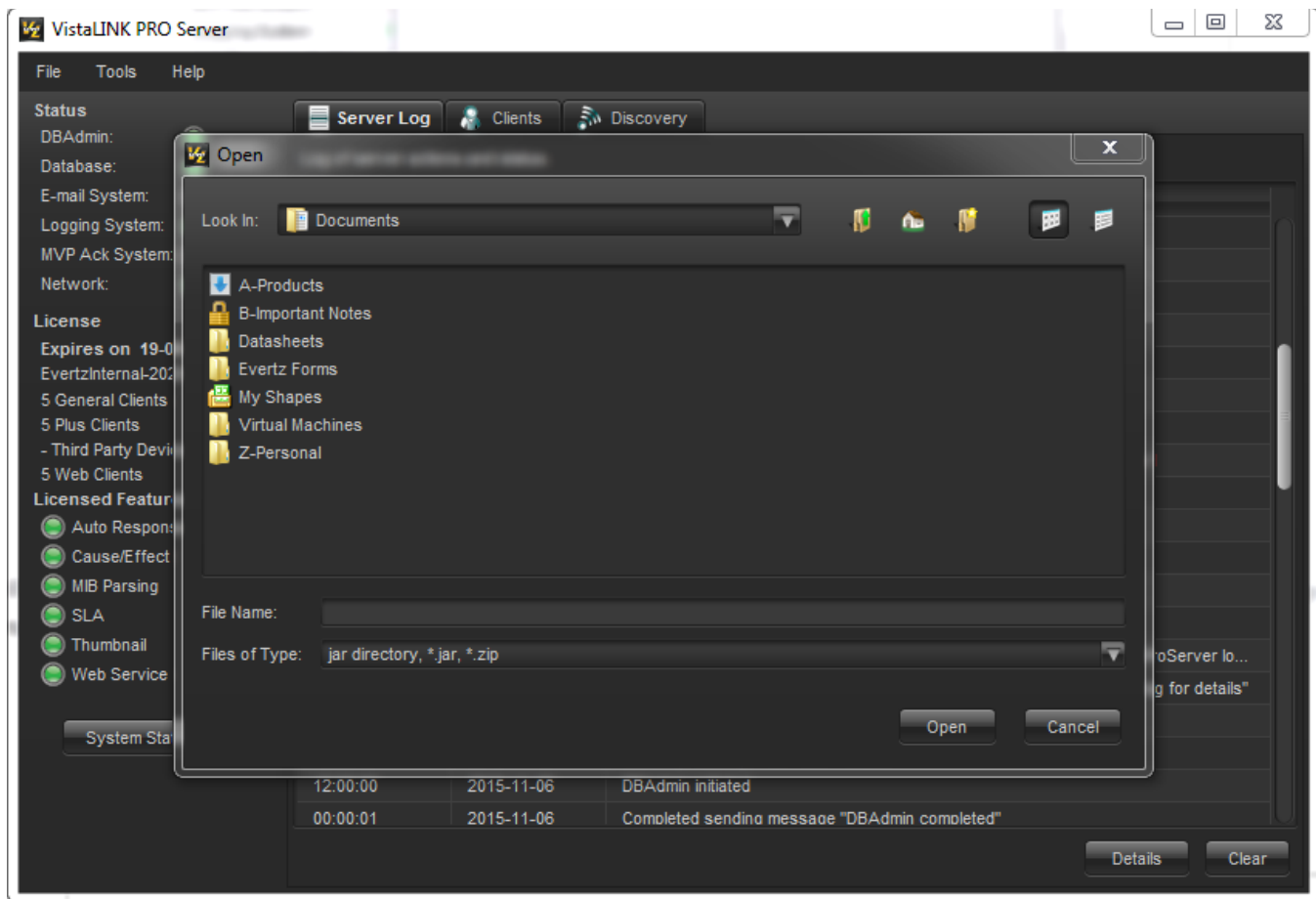
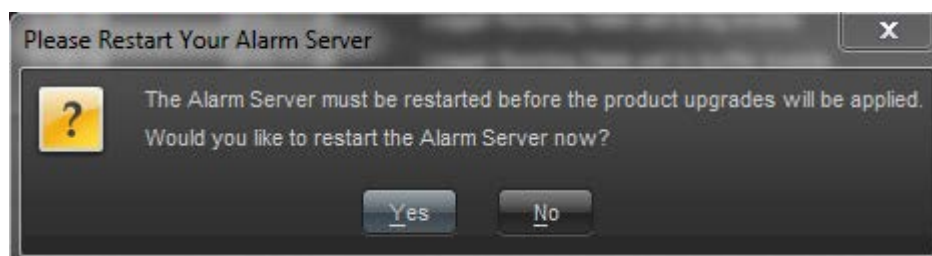


Figure 8-2: VistaLink[®] - Applying JAR Updates

You will be prompted to restart the server to enable the change to take effect. Apply as many JAR updates as required before restarting the server.



By clicking Yes, server will automatically restart, but it is normal for the startup to take marginally longer while each individual update is being applied. Once complete, you may restart the VLPro Clients. As the clients restarts you will experience a short delay while the update is applied. A prompt will appear confirming that the updates have been applied.

9. UPGRADING 7700R16X16/8X8 USING VISTALINK[®]

This option is available only through 7800FC and cannot be done when the card is connected to VLPRO directly.

- 1) Start VistaLINK Server/Client and log in as administrator.
- 2) Locate the frame under the hardware tree in which the 7700R is located.
- 3) Expand the hardware tree and right click on 7700R and select version information.

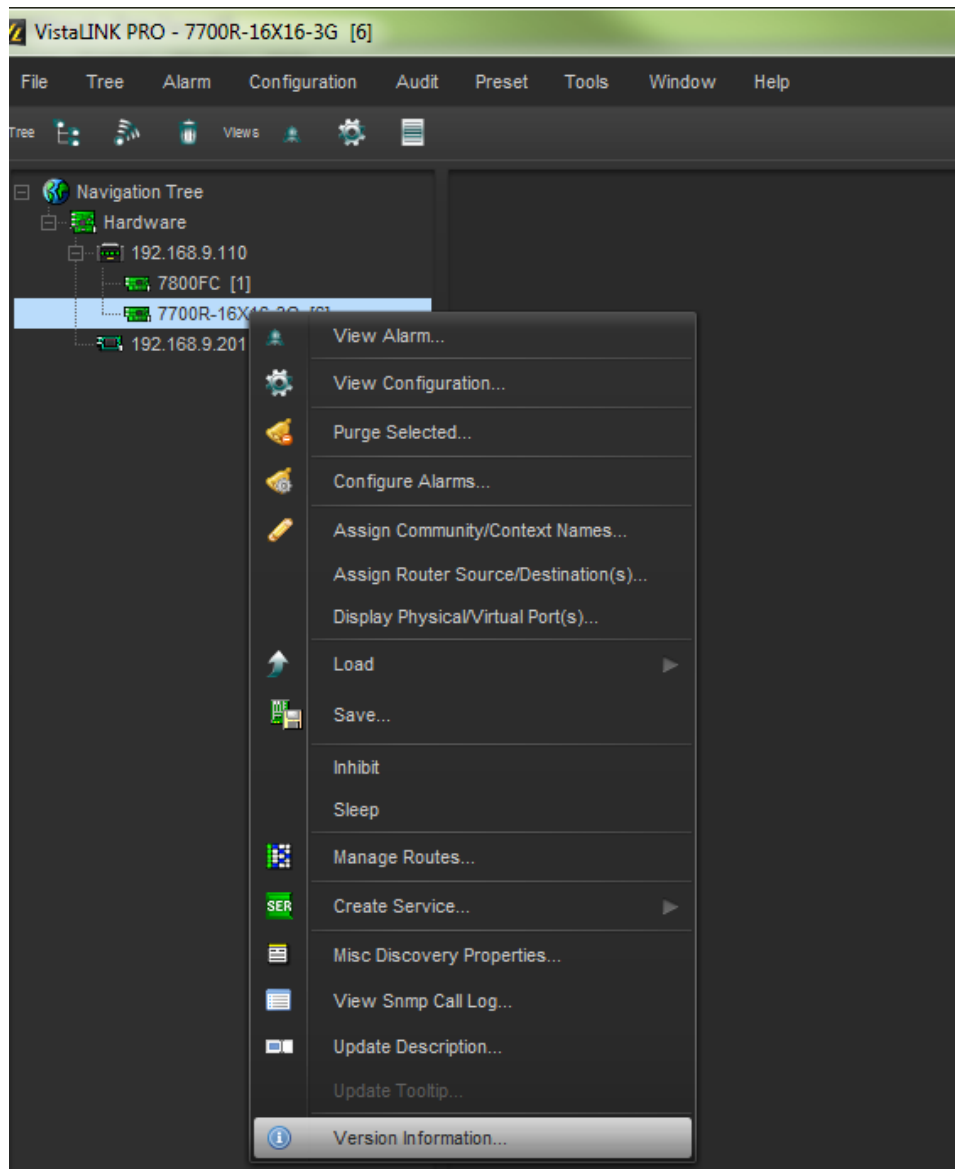


Figure 9-1: VistaLINK[®] - Hardware Tree

- 4) Once the version information window is opened, expand the hardware tree and select the 7700R module.

- 5) Under the upgrade tab make sure the check box beside this module is selected.
- 6) Click on upgrade button and brows for the xxxx.img file.
- 7) Once the image is selected click on start button.
- 8) The module will restart automatically once the upgrade is successfully done.

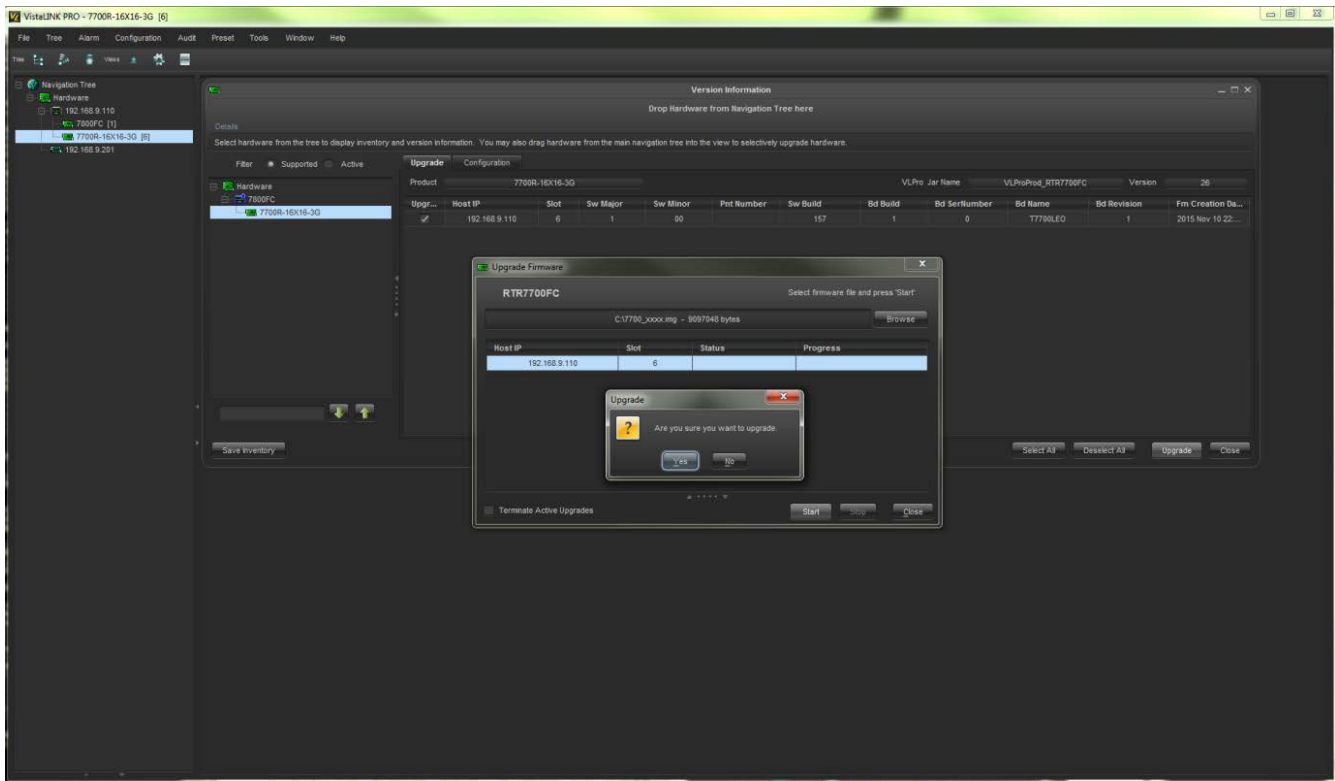


Figure 9-2: VistaLINK® - Upgrade Window

10. WEBEASY® WEB INTERFACE

7700R8X8 provides a built-in web interface via FC that allows the user to interact with module (note: the 7700R16x16 does not have web interface support). The 7700R web interface can be accessed by entering the IP address of the 7800 FC into the address bar of an internet browser, once the connection is established the user will be asked to enter a Login and password. The default Login and Password are set to “root” and “evertz”.

Home page of the FC provides a list of all products that are currently connected to FC. Locate the 7700R from the list and click on the name of product.



Slot	Name	Family	Alias	Version
1	FC	Frame Controller		
2				
3				
4				
5				
6				
7	7700R16X16-3G	RTR7700FC		1.1.65536
8				
9				
10				
11				
12				
13				
14				
15				

Figure 10-1: WebEASY® - Home Page

Once the WebEasy page of the 7700R is opened, the same parameters that could be monitored and control from VLPRO can be monitored and controlled from here. The functions of the card have been divided into three categories and each one will be introduced and explained in the following sections.

10.1. CONTROL

Any parameter that can be controlled or modified in the module is located under this section. The “Referesh”, “Apply” and “Dynamic Apply” buttons at the top of the page function in the same manner as the buttons in VLPRO to apply or refresh changes.

The screenshot displays the 'Control' section of the Evertz WebEASY interface. At the top, there are navigation buttons: 'Refresh', 'Apply', 'Dynamic Apply', and 'Upgrade', along with a 'Logout' link. The left sidebar contains a menu with 'Frame', 'Control' (highlighted), 'Monitor', and 'Notify'. The main content area is titled 'Control' and includes the following settings:

- Video Input Standard:** A dropdown menu set to 'PAL'.
- Select Reference Source:** A dropdown menu set to 'Rear Plate Reference'.
- Enable GPO:** A dropdown menu set to 'GPO Off'.
- Control Section:** A row of 17 numbered buttons (1-17), with button '1' highlighted.
- Enable output:** A dropdown menu set to 'Enabled'.
- Activate Reclocker:** A dropdown menu set to 'Reclocker Active'.
- Route Input:** A dropdown menu set to '1', with a note '(0 to 16)'.

At the bottom of the interface, it states 'Evertz Microsystems (powered by ewb v.1.4)' and 'Contact Evertz for service.' There are also icons for 'Users' and a help icon.

Figure 10-2: WebEASY[®] - Control

Table below has the description of each parameter inside Control category:

Parameter	Description
Video Input Standard	Sets the incoming video standard
Video Reference Source	Sets the reference source to be rear plate, frame ref.1 or 2
Enable GPO	Sets the GPO to On or Off
Output Enabling	Sets the outputs to mute or un-mute
Active Reclocker	Sets the output reclockers to Active or Bypass
Route Input	Routes inputs 1-16 to outputs 1-17

Table 10-1: WebEASY[®] - Control Parameters

10.2. MONITOR

Displays the current status of the card.

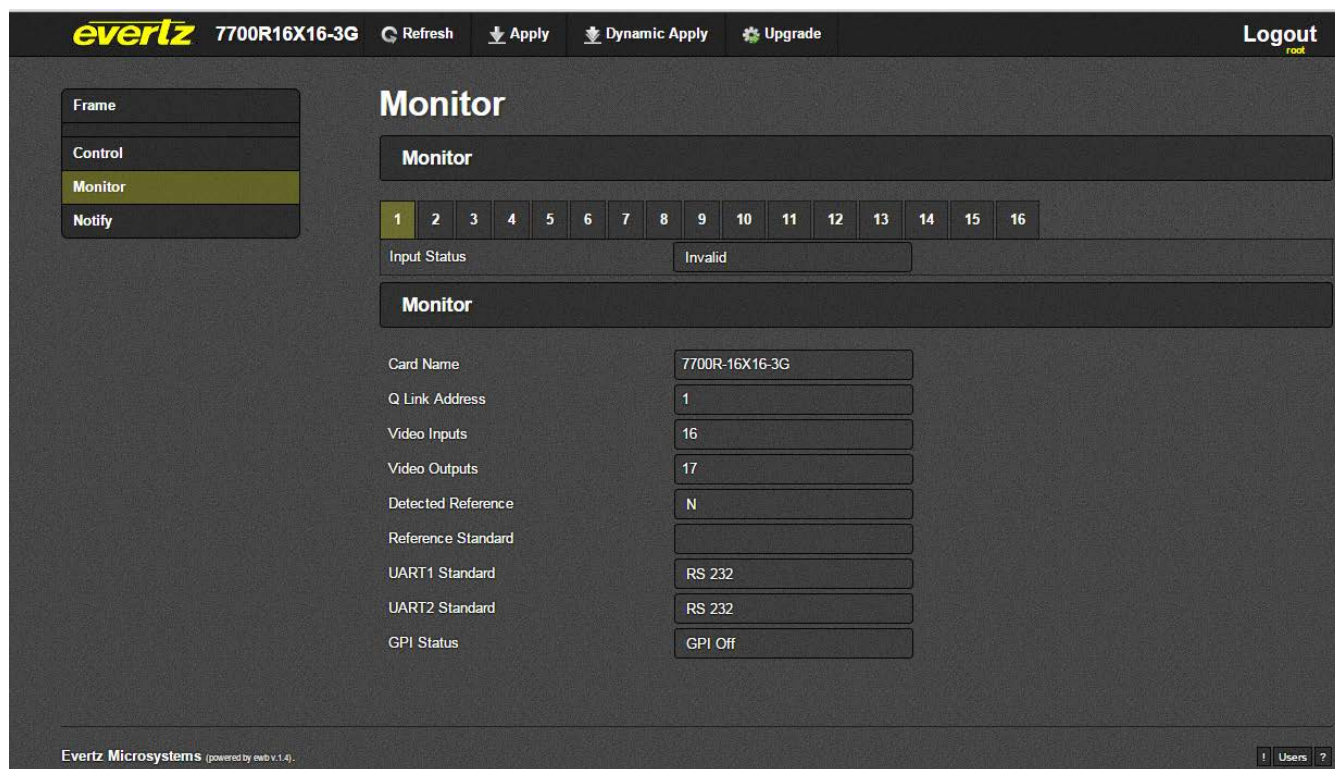


Figure 10-3: WebEASY® - Monitor

Table below has the description of each parameter inside Monitor category:

Parameter	Description
Video Input Satuts	Displays the whether there is a valid input with its standard
Card Name	Indicates the model of the device.
Q-Link Address	Indicates the Q-Link address of the device
Video Inputs	Indicates the number of video inputs of the device.
Video Outputs	Indicates the number of video outputs of the device.
Detected Reference	Indicates the presence of a valid video reference signal.
Reference Standard	Indicates the video standard of the reference signal.
UART 1 Standard	Indicates the configuration of serial port 1.
UART 2 Standard	Indicates the configuration of serial port 2.
GPI Status	Indicates whether GPI is triggered or not

Table 10-2: WebEASY[®] - Monitor Parameters

10.3. NOTIFY

Displays the status of the inputs.

evertz

7700R16X16-3G

Refresh

Apply

Dynamic Apply

Upgrade

Logout

root

Frame

Control

Monitor

Notify

Notify

Notify

	Send Trap	Fault Present
Become Active	True	
TRAP Ref Loss	False	
TRAP Vid 1 Loss	False	
TRAP Vid 2 Loss	False	
TRAP Vid 3 Loss	False	
TRAP Vid 4 Loss	False	
TRAP Vid 5 Loss	False	
TRAP Vid 6 Loss	False	
TRAP Vid 7 Loss	False	
TRAP Vid 8 Loss	False	
TRAP Vid 9 Loss	False	
TRAP Vid 10 Loss	False	
TRAP Vid 11 Loss	False	
TRAP Vid 12 Loss	False	
TRAP Vid 13 Loss	False	
TRAP Vid 14 Loss	False	
TRAP Vid 15 Loss	False	
TRAP Vid 16 Loss	False	
TRAP GPI	False	
TRAP GPO	False	

Evertz Microsystems (powered by ewb v.1.4)
Contact Evertz for service.

Users ?

Figure 10-4: WebEASY[®] - Notify

Table below has the description of each parameter inside Notify category:

Parameter	Description
Send Trap	N/A
Fault Present	Indicates the loss of the input, reference and status of GPIO.

Table 10-3: WebEASY[®] - Notify Parameters

11. UPGRADING 7700R16X16/8X8 THROUGH WEBEASY®

Using the Webeasy interface is the fastest and recommended procedure to load the firmware onto the 7700R8x8. The 7700R8x8 web interface can be accessed by entering the IP address of the 7800 FC into the address bar of an internet browser, once the connection is established the user will be asked to enter a Login and password. The default Login and Password are set to “**root**” and “**evertz**”.

Home page of the FC provides a list of all products that are currently connected to FC.



The screenshot shows the WebEASY interface for a 7800FC. The top navigation bar includes the evertz logo, the device name '7800FC', and buttons for 'Refresh', 'Apply', 'Dynamic Apply', 'Upgrade', and 'Logout root'. On the left is a sidebar menu with options: Frame, Product Location, Hardware, Software, Time Management, SNMPV 1 Community, SNMPV 1 Trap, and TRAP Mgmt Fault. The main area is titled 'FC Menu' and contains a 'Products' table.

Slot	Name	Family	Alias	Version
1	FC	Frame Controller		
2				
3				
4				
5				
6				
7	7700R16X16-3G	RTR7700FC		1.1.65536
8				
9				
10				
11				
12				
13				
14				
15				

At the bottom left, it says 'Evertz Microsystems (powered by eab v.1.4)'.

Figure 11-1: WebEASY® - Home Page

On the top of the webpage, there is a tab labelled “**Upgrade**”. The **Upgrade** tab is used to check the current firmware version and upload the latest firmware.

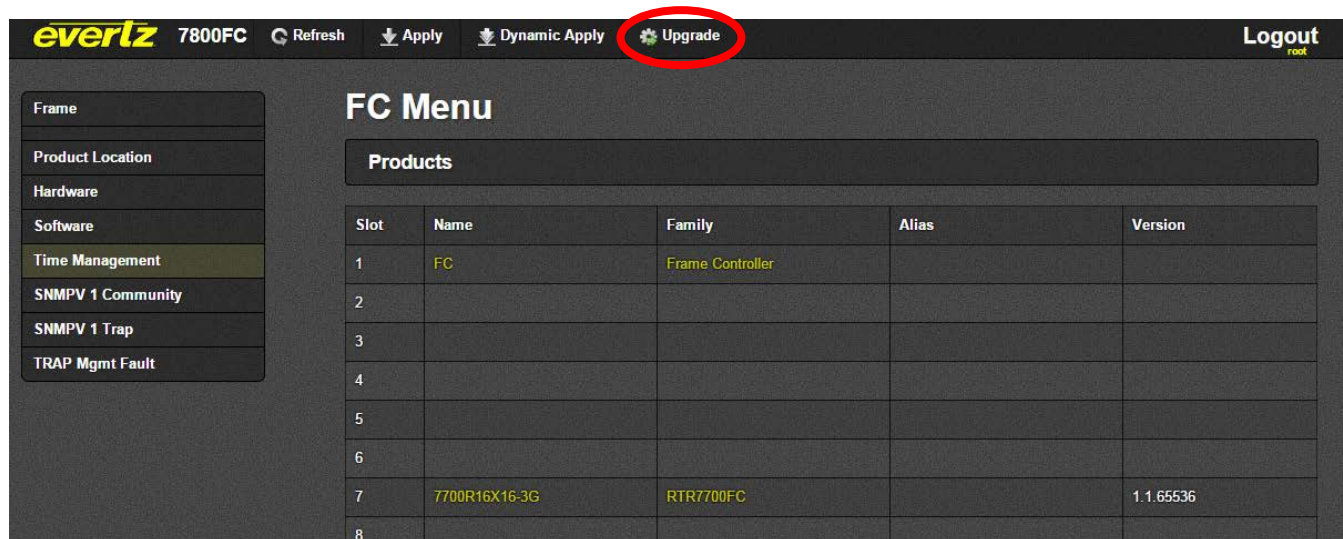


Figure 11-2: WebEASY[®] - Upgrade Button on Top Menu Bar

Selecting the upgrade button, will bring the user to the **Firmware Upgrade** page as shown below where the current firmware version is shown.



Note: Contact Evertz to get the latest firmware image file.

evertz 7800FC

Logout root

Frame

Product Location

Hardware

Software

Time Management

SNMPV 1 Community

SNMPV 1 Trap

TRAP Mgmt Fault

Firmware Upgrade

Upgrade

Firmware Upgrade

Slot	Upgrade	Name	Alias	Current Version	Progress
1	Upgrade			Frame Controller	
2		Not Available		0.0.0	
3		Not Available		0.0.0	
4		Not Available		0.0.0	
5		Not Available		0.0.0	
6		Not Available		0.0.0	
7		7700R16X16-3G		1.1.65536	
8		Not Available		0.0.0	
9		Not Available		0.0.0	
10		Not Available		0.0.0	
11		Not Available		0.0.0	
12		Not Available		0.0.0	
13		Not Available		0.0.0	
14		Not Available		0.0.0	
15		Not Available		0.0.0	

Firmware

Choose File

No file chosen

Upgrade

Figure 11-3: WebEASY® - Firmware Upgrade Page

Select the “**Checkbox**” of 7700R8x8-3G and click “**Choose File**” to select the image file. Once selected, click “**Open**” to advance to next step. Click “**Upgrade**” and watch the progress bar for status. Once completed, the device will automatically restart.

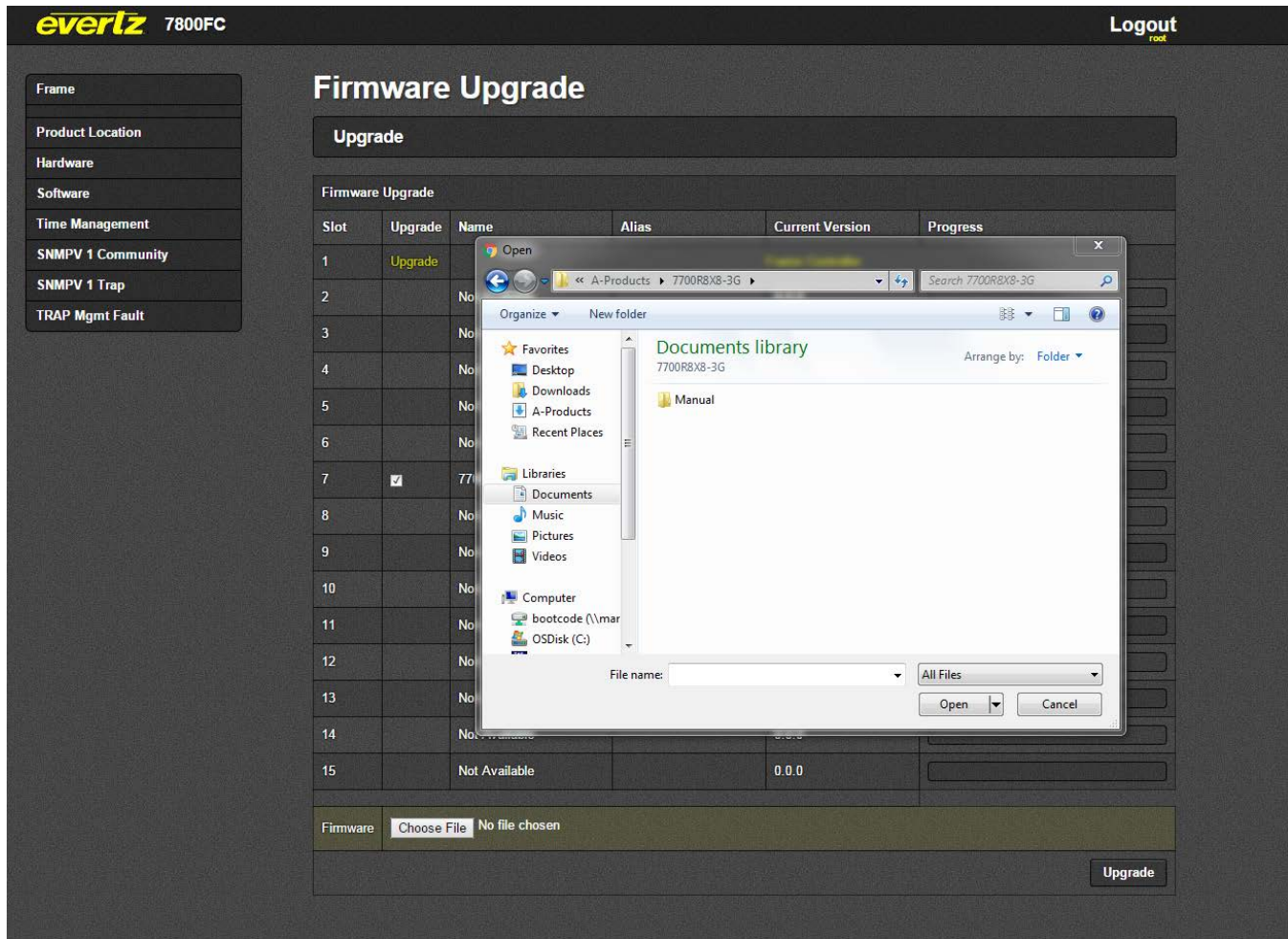


Figure 11-4: WebEASY® - Firmware Upgrade Menu