

7890MG Series Universal Media over IP Gateway for 10 x ASI/SD/HD/3G/GE 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

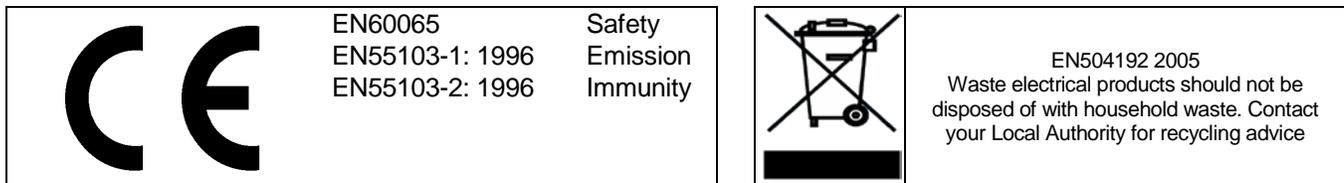
THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE

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.

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REVISION HISTORY

<u>REVISION</u>	<u>DESCRIPTION</u>	<u>DATE</u>
0.1	Preliminary Release	Jan 2015
0.2	Addition of 7890MG-8-10GE to Overview and Getting Started	Feb 2016

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1. OVERVIEW

The 7890MG-10GE2 is part of the Evertz family of IP Gateway products, which utilize GE and 10GE networks for video and data transport.

The proliferation of carrier-grade IP networks and their associated capacity, flexibility and cost make them an attractive solution for modern video and data transport networks. Evertz gateway products facilitate the bridge between video and IP worlds, providing the extensive capability, control & monitoring, resilience and low latency.

The 7890MG-10GE2 has a dual trunk interface which allows for a full 1+1 redundant link.

The 7890MG-10GE2 provides up to 10 input and output interfaces which can be auto sensed as ASI/SD/HD/3G/GE. To meet SLA requirements, each interface port can also provide automatic, hitless switching between the dual links. In the event of failure or errors of one link, continuity of service remains uninterrupted.

The 7890MG-10GE2 is available in a compact easy to deploy 1RU chassis and a 3RU modular card that can be installed in a 7800 frame to provide high density Video/Audio/Data transport in addition to up/down stream signal processing.

Features & Benefits:

Video/GE Interface Ports

- The 7890MG-10GE2 provides up to 10x bi-directional Access Interfaces, 8x auto sensed ASI/SD/HD/3G/GE + 2x GE/10GE data ports.
- Auto-Sensing of ASI/SDI/HD-SDI/3G/GE Input/Output Ports
- Hitless Switching (independent per video port) capability between main and backup network paths provides for un-interrupted signal reception when network fault occur
- Up to 2 access ports can be used to interface with existing Evertz ATP products, allowing transport of a wide variety of other signals including AES Audio, MADI, GPIO, RS232/422

Trunk Ports

- Dual trunk interface, which allow for full 1+1 redundant link, both 10G or 1G
- Supports 10GE fiber, 1GE Fiber, and 1GE copper for each interface. Available with optional 1310nm, 1550nm, and CWDM SFP/SFP+ modules

Product

- Fully hot-swappable from front of frame for low MTTR
- Comprehensive signal and card status monitoring via four digit card display or remotely through SNMP and VistaLINK[®]
- Fully integratable with ATP Platform using MAGNUM
- Standalone web page for configuration is also available

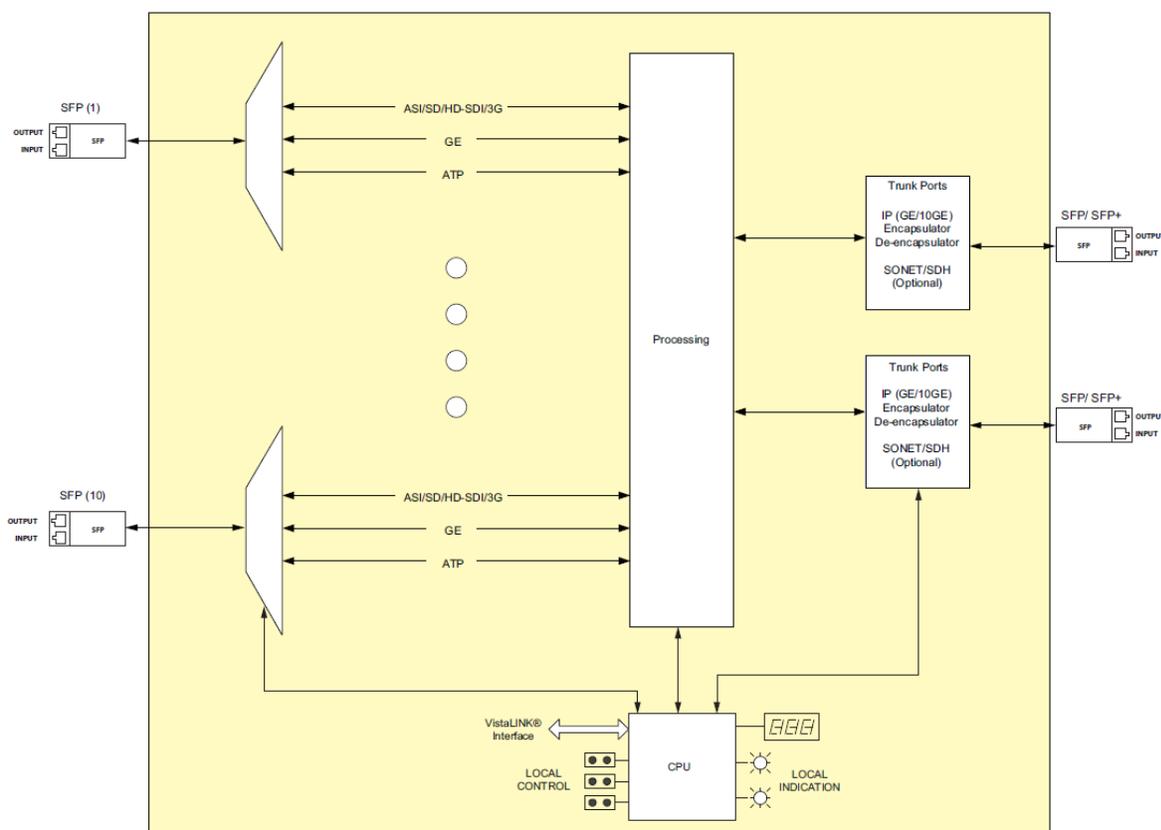


Figure 1-1: 7890MG Block Diagram

1.1. 7890MG-8-10GE2

The 7890MG-8-10GE2 provides up to 8 input and output DIN interfaces, and 2x GE/10GE data ports.

Features & Benefits

Video Interface Ports

- The 7890MG-8-10GE2 provides up to 10x bi-directional Access Interfaces
- Up to 8 access ports can be used to interface with existing Evertz ATP products.
- Auto-Sensing of ASI/SDI/HD-SDI Input/Output Ports
- Ports 9 and 10 support 10GE fiber, 1GE Fiber, and 1GE copper allowing transport of a wide variety of other signals including AES Audio, MADI, GPIO, RS232/422

Trunk Ports

- Dual trunk interface, which allow for full 1+1 redundant link, both 10G or 1G
- Supports 10GE fiber, 1GE Fiber, and 1GE copper for each interface. Available with optional 1310nm, 1550nm, and CWDM SFP/SFP+ modules

Product

- Fully hot-swappable from front of frame for low MTTR
- Comprehensive signal and card status monitoring via four digit card display or remotely through SNMP and VistaLINK®
- Fully integratable with ATP Platform using MAGNUM
- Standalone web page for configuration is also available

2. GETTING STARTED

2.1. REAR PLATE DESCRIPTION

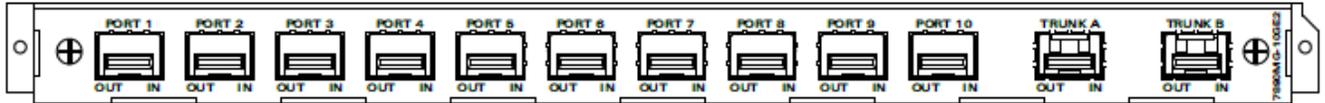


Figure 2-1: 7890MG 1RU Rear Plate

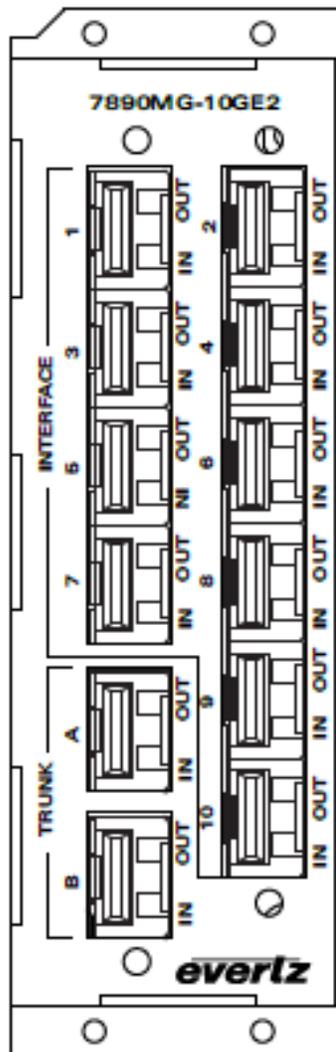


Figure 2-2: 7890MG 3RU Rear Plate

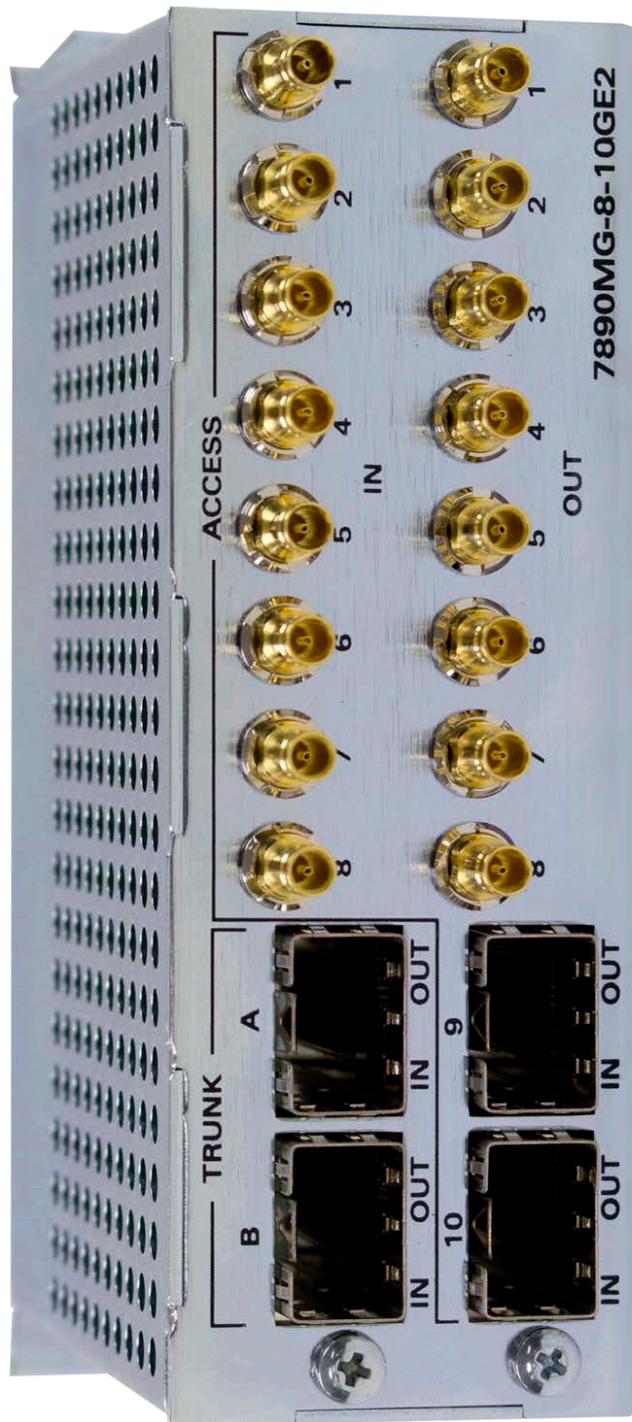


Figure 2-3: 7890MG-8-10GE2 Rear Plate

2.2. HARDWARE INSTALLATION

To successfully install the 7890MG, you will require the following:

1. Unused IP address on the network (for the 1RU MG Product).
2. Evertz serial cable (for firmware upgrades without VistaLINK)
3. VistaLINK[®] PRO Server and Client or VLPro-Configuration

Before handling the modules it is important to minimize the potential effects of static electricity. It is therefore recommended that an ESD strap be worn.

For the 3RU Rear Plate:

Locate on the chassis 3 adjacent vacant slots. Unpack the 7890MG and separate the rear panel from the main card. Locate on the rear of the rack the three slots and remove the blank panels. Insert the rear panel into the back of the chassis and secure using the screws provided.

Before inserting the card, connect the serial cable to the board using the serial cable provided. Now insert the 7890MG card into the corresponding front slots ensuring the card lines up with the slot runners on the bottom and the top of the chassis. Push the card **firmly** into the slot ensuring that when it mates with the rear card it has been firmly pushed into a seated position. Do not connect any cables to the rear card (failure to do this could cause unwanted network issues) until the initial configuration has been completed.

Connect the 9-pin D-type end of the serial cable to the serial port of your computer.

Open Tera Term (if using Windows XP or older operating systems, open Hyper Terminal) to make the required changes to the IP address on the card. Use username *customer* and password *customer* to login.

```
-----  
      **** Main Menu ****  
  
(1)  Network Setup  
(2)  SNMP Setup  
(3)  Engineering Debug Tool  
(4)  Build In System Test  
  
(X)  Save and Exit  
(W)  Exit without Saving  
  
-----
```

Figure 2-4: Tera Term Main Menu

2.3. CONFIGURING BASIC NETWORK SETTINGS

To make changes to the IP address select **Network Setup**. Set the IP address to the desired subnet as well as set the **Gateway**. Make the same changes for the IP address and Gateway of Trunk Port B as required. When done **Exit (X)** the Network Setup and **Save and Exit (X)** from the Main Menu to ensure all changes are saved.

```
> 1
*****
* WARNING:                                     *
* Improper changes to IP addresses may affect  *
* network configuration. Incorrect IP addresses *
* could potentially affect other devices on the *
* network. It is good practice to confirm      *
* validity of all IP addresses with your IT/IS  *
* departments prior to configuration.          *
*****
-----
**** Network Setup ****

(1) IP Address [192.168.245.73]
(2) Netmask   [255.255.255.0]
(3) Gateway   [192.168.245.1]
(4) Broadcast [192.168.245.255]
(5) IP Address (Port 2) [192.168.78.73]
(6) Netmask (Port 2) [255.255.255.0]
(7) Gateway (Port 2) [192.168.78.1]
(8) Broadcast (Port 2) [192.168.78.255]

(X) Exit
```

Figure 2-5: Tera Term Network Setup

Power Cycle the 7890MG to ensure all changes are applied to the card. Verify the network connectivity by opening the command window and try to ping the 7890MG using the IP address that was set.

2.4. CONNECTING TO VISTALINK PRO

This chapter assumes that the VistaLINK[®] PRO server and client are already configured for your network and you have basic knowledge of the VistaLINK[®] PRO interface. It also assumes that the user or network administrator has already added the appropriate jar file to the server, and both the client and server applications have been restarted. Please refer to the VistaLINK[®] PRO manual for instructions on how to load a jar file. If you are the network administrator refer to section 6 for information on updating the VistaLINK[®] PRO Server Jar File.

Open VistaLINK[®] PRO and click on the refresh tree icon. Expand the hardware tree by clicking on the “+” button. Your card should appear as a newly listed device with the IP address used to configure the card in section 2.3. It may take up to a minute to appear while the card and switch negotiate network settings (this can be verified directly on the switch if necessary). The user will be required to individually select each item to configure the appropriate function.



Note: If after a couple of minutes the card has still not appeared, try selecting *Add Agent* from the *Tree > Add/Update Agent* menu. Enter the IP address and select OK. The card should now be listed and will remain grayed out for a moment while VistaLINK[®] PRO finds the card and confirms its configuration.

Please consult your network administrator if you continue to have problems connecting the card with VistaLINK[®] PRO, alternatively contact Evertz Microsystems Ltd. or your authorized reseller for technical support.

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3. SPECIFICATIONS

3.1. SERIAL VIDEO INTERFACE

Per SFP:

Connectors: DIN 1.0/2.3
Standards: SMPTE 424M, SMPTE ST 259-C, SMPTE ST 292-1, DVB-ASI

3.2. INPUT:

Equalization: Automatic to 50m @ 2.97Gb/s, 50m @ 1.485 Gb/s and 50m @ 270 Mb/s on Belden 1694A or equivalent

3.3. OUTPUT:

Signal Level: 800mV nominal
DC Offset: 0V +/- 0.5V
Rise and Fall Time:
3G/HD: < 135 ps
SD: < 900 ps
Overshoot: < 10% of amplitude
Alignment Jitter: < 0.2 UI (Reclocked) to 1.485 Gb/s
< 0.3 UI (Reclocked) to 2.97 Gb/s

3.4. ETHERNET OPTICAL INTERFACE:

Connector: Female LC Duplex (on SFP module)
Wavelengths:
Standard: 1310nm, 1550nm
CWDM: 1270nm-1610nm

3.4.1. SFP Connections

Contained in this chart are a list of SFP Models that can be used for the Optical Interface and the important specifications for each.

SFP Model	Wavelength	Optical Output Power		Receiver Sensitivity	Normal Received Wavelength	Max Distance	Fiber Type
		MAX	MIN				
SFP10G-TR85	850nm	-1dBm	-6.5dBm	-11dBm	850nm	300m*	Multimode
SFP10G-TR13	1310nm	+0.5dBm	-8.5dBm	-14dBm	1310nm	10km	Singlemode
SFP10G-TR15S	1550nm	+4dBm	-5dBm	-15dBm	1550nm	40km	Singlemode
SFP10G-TR15H	1550nm	+3dBm	0dBm	-24dBm	1550nm	70km	Singlemode
SFP10G-TRCxxH	CWDM	+3dBm	0dBm	-24dBm	1270-1610nm	70km	Singlemode
SFP10G-TRDxxxH	DWDM	-1dBm	-1dBm	-24dBm	1535-1565nm	80km	Singlemode

* On 2000MHz/km MMF, consult Evertz for max distance on other multimode fiber types.

Table 1: SFP Models List with Optical Interface

3.5. ETHERNET ELECTRICAL INTERFACE:

Connector: RJ-45 (on SFP Module)
Standard: IEEE 802.3ab (1000BaseTX)
Cable Requirements:
1000BaseTX: UTP category 5 cable up to 328ft/100m (4 pairs)

3.6. TRUNK INTERFACE:

Number: 2 SFP cages
Connector Type: RJ-45 or LC/UPC, two simplex or one duplex per SFP/SFP+
Rates: 10 Gig Ethernet and 1 Gig Ethernet

3.7. ELECTRICAL:

Voltage: +12 VDC

3.8. PHYSICAL (NUMBER OF SLOTS):

350FR: 2
3700FR: 2
7800FR: 2
7801FR: 2

3.9. COMPLIANCE:

Laser Safety Class 1 laser product, complies with 24CFR 1040.10 and 1040.11, IEC 60825-1
EMI/RFI Complies with FCC regulations for class A devices
Complies with EU EMC directive

4. VISTALINK® PRO INTERFACE

4.1. SYSTEM TAB

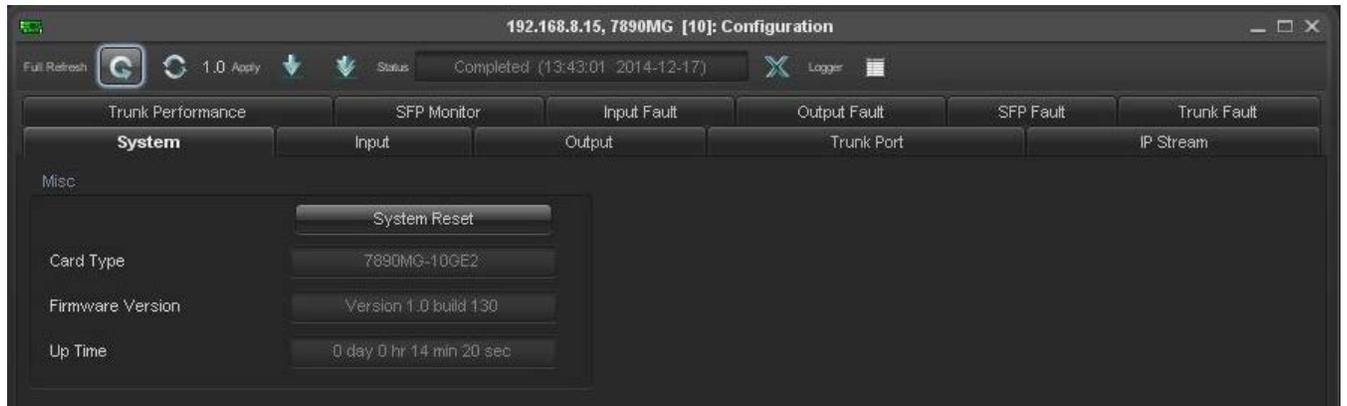


Figure 4-1: VistaLINK® PRO - System Tab

Misc

System Reset: Pressing this control will allow the user to reboot the MG module. Follow onscreen prompts to engage rebooting process.

Card Type: Displays of the type of MG module.

Firmware Version: Displays the firmware version of the MG module.

Up Time: Time elapsed since last boot.

4.2. INPUT TAB

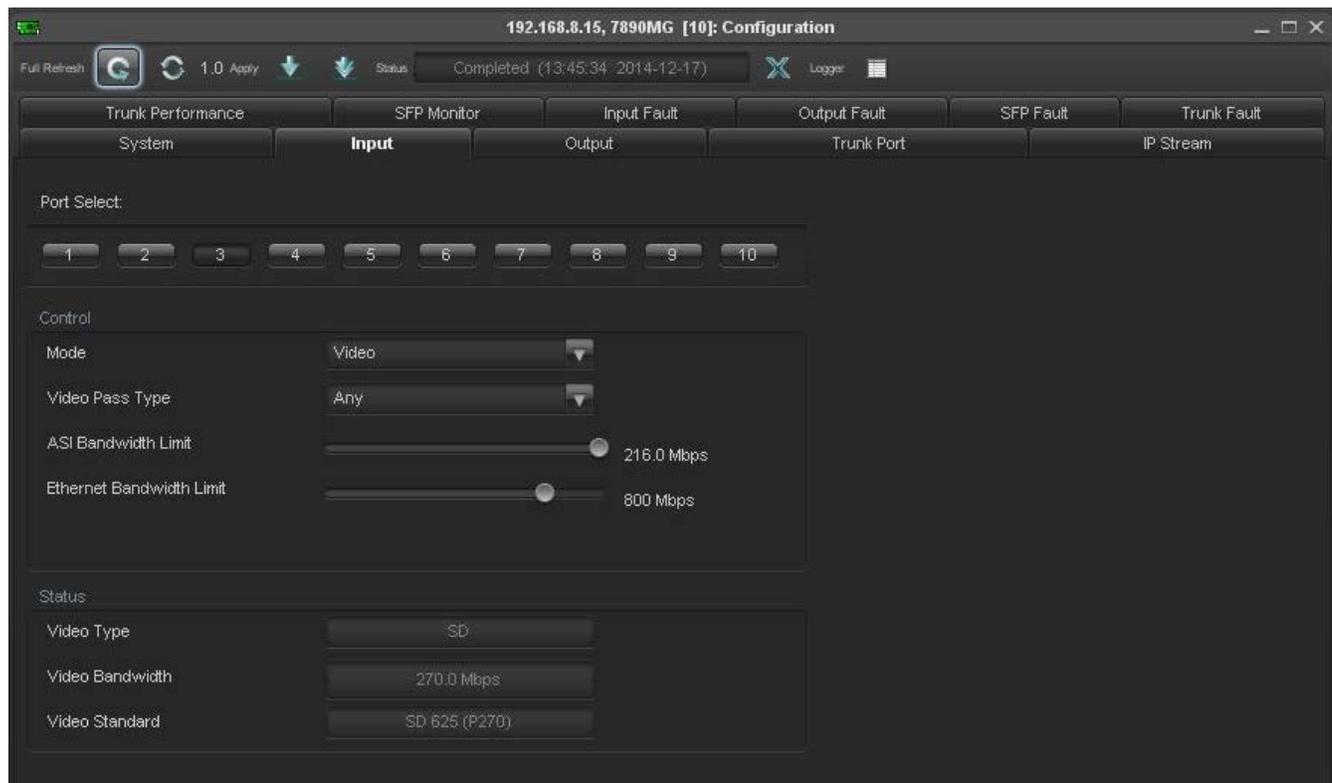


Figure 4-2: VistaLINK[®] PRO - Input Tab

Port Select

Each SFP Port contains a TX and RX port. Since the Input TAB is engaged the user will be addressing the RX Port only on that SFP. In this case “Input” refers to signals coming in to the MG card

Press the appropriate SFP Port to view the configuration and status for the input (RX) of the SFP Port selected.

Control

Mode: Select between Video and Ethernet Modes. Please note when Video is selected and used, a DIN SFP must be installed in that port. When Ethernet is selected and used, a copper RJ45 or Ethernet fiber SFP must be installed in that port. An SNMP alarm will be issued if the inserted SFP does not match this setting.

Video Pass Type: Selection of Video Type to be transported. The options for this are as follows

- **NONE** – While the input port will see and report on the incoming stream, it will not allow any video to be output over the Ethernet trunk ports.
- **3G** – The input port will allow only 3G-SDI (3Gbps) video signals to pass on to the trunk ports.
- **HD** – The input port will allow only HD-SDI (1.5Gbps) video signals to pass on to the trunk ports.
- **SD** - The input port will allow only SD-SDI (270Mbps) Video Signals to pass on to the trunk port
- **ASI** - The input port will only allow ASI video signals to pass on to the Trunk ports.
- **ANY (Autodetect)** – the input port pass any video it sees to the trunk ports.

ASI Bandwidth Limit: This control is used when ASI or ANY is selected and ASI is present at the input RX port of the SFP. This control allows the user to set the bandwidth limit for ASI video. Any video exceeding this cap will be clipped, to ensure the trunk ports do not go over bandwidth.

Ethernet Bandwidth Limit: This control is used when Ethernet is selected and Ethernet is connected to the SFP Port. This control allows the user to set the bandwidth limit for Ethernet. Any packets that arrive at the Ethernet port that cause the stream to be over bandwidth will be dropped, to prevent the trunk ports do not go over bandwidth.

Status

Video Type: Shows the type of video at the input (RX) of the SFP Port. Can be 3G, HD, SD, ASI or None. When Ethernet mode is engaged, this display is non-functional.

Video Bandwidth: Shows the bandwidth occupied by the incoming video on the input (RX) of the SFP Port.

3G	3.0Gbps
HD	1.485 Gbps
SD	270 Mbps
ASI	xxx Mbps (where xxx is the bandwidth of the incoming Transport stream)

Video Standard: Shows the appropriate video standard of the incoming video. For all SDI streams, this will show the frequency and resolution, and for ASI, this will display whether the stream is 188-byte or 204-byte.

4.3. OUTPUT TAB

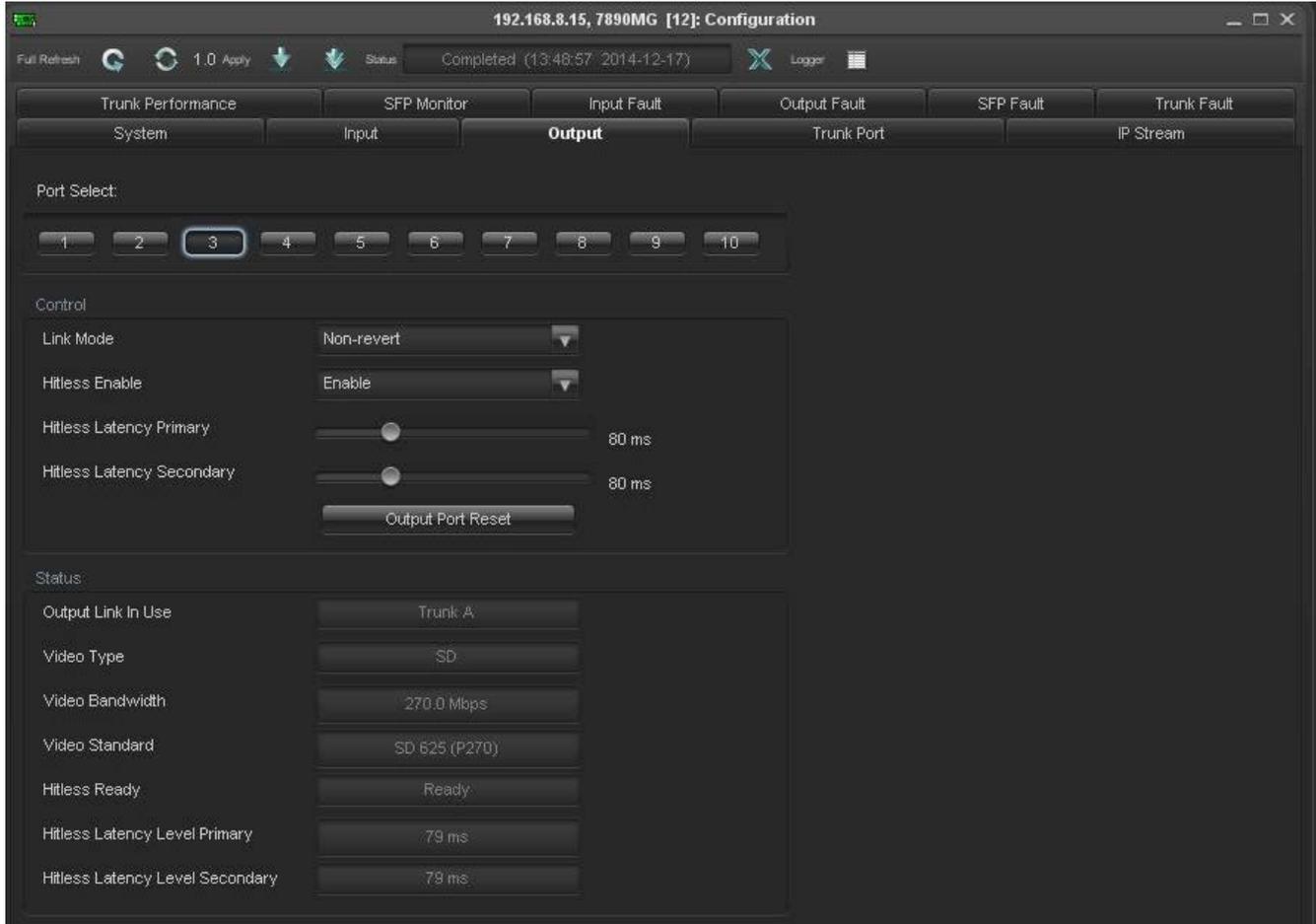


Figure 4-3: VistaLINK® PRO - Output Tab

Port Select

Each SFP Port contains a TX and RX port. Since the Output TAB is engaged the user will be addressing the TX Port only on that SFP. In this case “Output” refers to signals leaving the MG card.

Press the appropriate SFP Port to view the configuration and status for the input (TX) of the SFP Port selected.

Control

Link Mode: Sets how the output service sources the signal from the main and redundant Trunk. These can be set per-port; it is not a universal control.

Non-revertive – The port will select either Trunk without preference. It will stay on its selected trunk until it is no longer available.

Revertive Primary – The port will prefer to use Trunk A, but will switch to Trunk B if Trunk A becomes unavailable. Once Trunk A is restored, it will switch back.

Revertive Secondary - The port will prefer to use Trunk B, but will switch to Trunk A if Trunk B becomes unavailable. Once Trunk B is restored, it will switch back.

Force Primary – The port will use only Trunk A, and will never switch to Trunk B, even if there is valid data on Trunk B

Force Secondary – The port will only use Trunk B and will never switch to Trunk A, even if there is valid data on Trunk As

Hitless Enable: Enables hitless switching (for video only) – Turns the hitless video function on or off. If on, the user can select the amount of buffering required below

Hitless Latency Primary: Sets additional latency on Trunk A if required.

Hitless Latency Secondary: Sets additional latency on Trunk B if required.

Output Port Reset: Resets video output Port SFP

Status

Output Link In Use: Shows which link the output signal is sourcing its input from. Either Trunk A (Primary), or Trunk B (Secondary)

Video Type: Shows the video type being received.

Video Bandwidth: Shows the bandwidth of the video being received.

Video Standard: Shows the video standard received.

Hitless Ready: Shows if hitless switching is ready. Hitless switching control must be enabled and latency (below) must be sufficient to allow both Trunks to see incoming data. Additional Latency may be required to be added based on your network.

Hitless Latency Level Primary: Shows the buffer level of Trunk A

Hitless Latency Level Secondary: Shows the buffer level of Trunk B.



NOTE: Latency Levels of Primary and Secondary must be non-zero in order for hitless to become 'Ready'. If Latency Levels do not become non-zero then hitless switching will read 'Not Ready'. In this case, try increasing the latency, and monitor again.

4.4. TRUNK PORT TAB

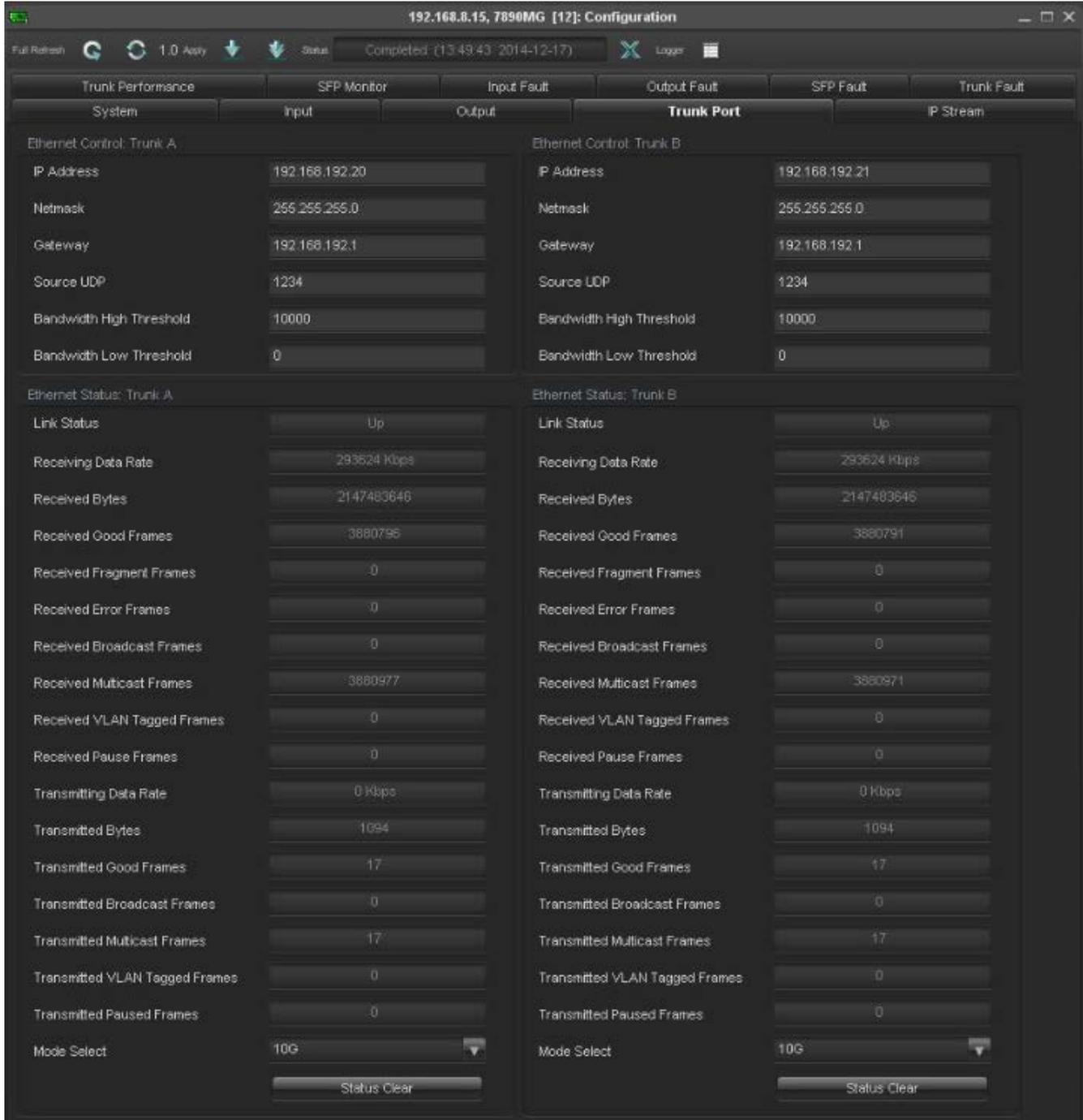


Figure 4-4: VistaLINK® PRO - Trunk Port Tab

Ethernet Control: Trunk A/B

IP Address: Physical Port IP address setting for Trunk A (Primary) and Trunk B (Secondary).

Netmask: Netmask setting of Physical Trunk IP Ports

Gateway: Gateway setting of Physical Trunk IP Ports

Source UDP: Source UDP Port Setting of Physical Trunk IP Ports

Bandwidth High Threshold: Set a max bandwidth warning through the Trunk IP Port in Mbps (default: 10000) – if this value is exceeded, an alarm will be issued through SNMP

Bandwidth Low Threshold: Sets a minimum bandwidth warning through the Trunk IP Port in Mbps (default: 0) – if incoming bandwidth is below this value, an alarm will be issued through SNMP.

Ethernet Status: Trunk A/B

Link Status: Displays the Link status of the Trunk interface. Up or Down. These correspond to Trunk A and Trunk B on the back of the rear plate.

Received Data Rate: Data rate received on selected Trunk in kbps

Received Bytes: Byte reception counter for Trunk

Received Good Frames: Counter for Good Frames received on Trunk

Received Fragment Frames: Fragmented or partial frames received on Trunk

Received Error Frames: Errored Frames received

Received Broadcast Frames: Broadcast frame Traffic received monitor

Received Multicast Frames: Broadcast Multicast frames received

Received VLAN Tagged Frames: Counter for incoming Ethernet VLAN Tagged Frames

Received Pause Frames: Counter for incoming Ethernet pause frames

Transmitting Data Rate: Current real-time transmitted data rate in kbps

Transmitted Bytes: Current counter for transmitted data bytes

Transmitted Good Frames: Counter for Good Frames transmitted

Transmitted Broadcast Frames: Counter for transmitted Broadcast Frames

Transmitted Multicast Frames: Counter for transmitted Multicast Frames

Transmitted VLAN Tagged Frames: Counter for transmitted Ethernet VLAN Tagged Frames

Transmitted Paused Frames: Counter for transmitted Ethernet pause frames

Mode Select: Allows the user to select the negotiated data rate of the Link Port. 1G or 10G.

Status Clear: Allows the user to clear all Transmitted and Receive counters above.

4.5. IP STREAM TAB

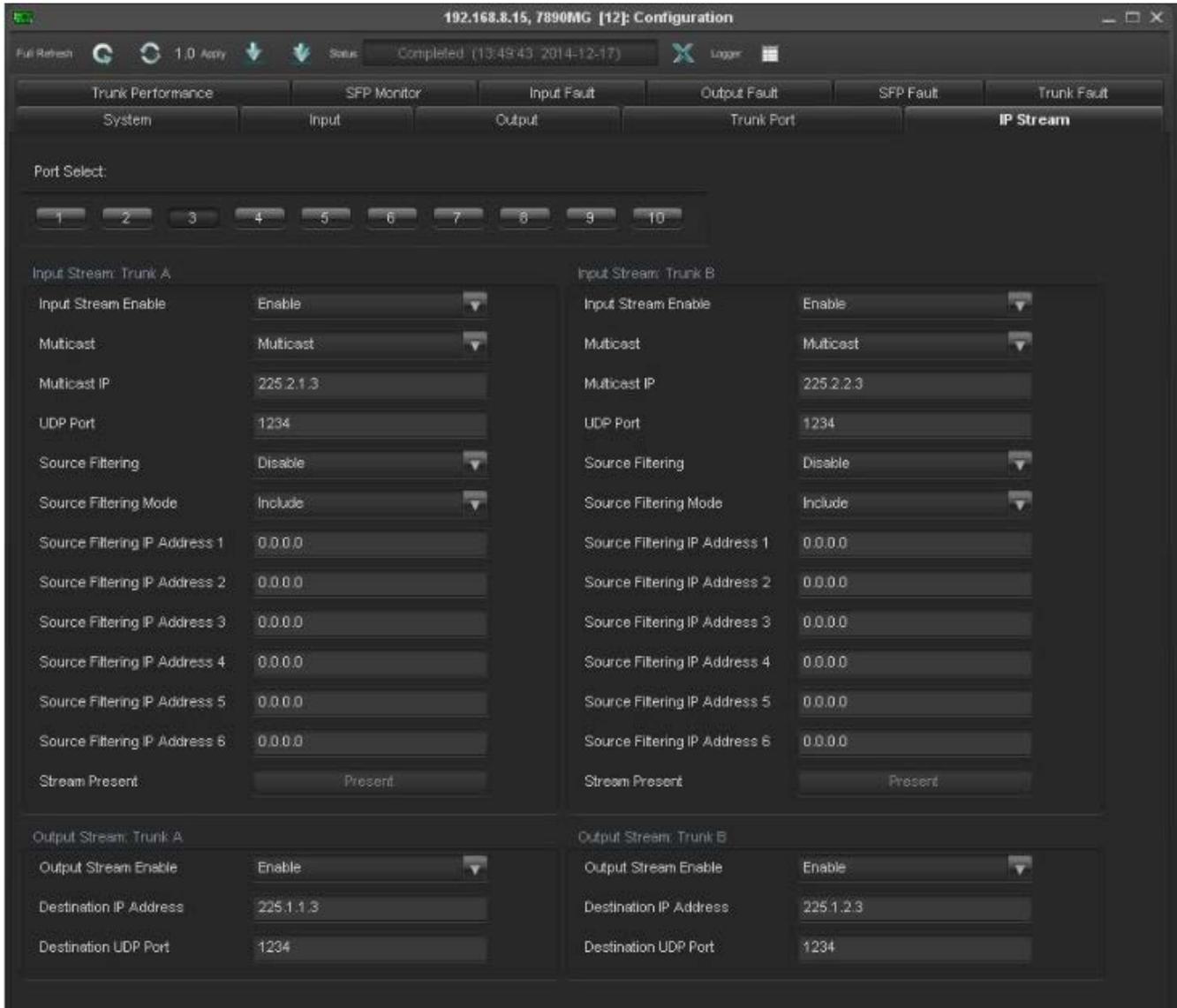


Figure 4-5: VistaLINK® PRO - IP Stream Tab

Port Select: Click to select which Access Port is selected. There are 10 ports. For each of the 10 ports there is an input stream and output stream. Both input IP stream parameters and output IP stream can be controlled in this tab.



NOTE: In this case, “Input” corresponds to streams entering the Trunk ports of the MG card, while “Output” corresponds to streams leaving the MG card through the Trunk ports. In other words, what came IN the video or Ethernet access ports goes OUT the Trunk port.

Input Stream: Trunk A/B

Each Access Port has the ability to subscribe to an input stream and output stream simultaneously. An input IP stream will appear on output referring to the particular access port selected.



NOTE: There can be a maximum of two simultaneous input streams to be sent to the output Port being selected. These input streams can appear on Trunk A and Trunk B simultaneously. Typically these will be main and backup input streams.

Input Stream Enable: Enables or Disables the output IP stream from the selected Port.



NOTE: No changes can be made to the settings of the input stream if this is set to "Disable".

Multicast: Sets the IP stream to accept Multicast or Unicast.

Multicast IP: Enter the multicast IP address that you would like this port to subscribe to.

UDP Port: Filter the Input stream on UDP Port.

Source Filtering: Enables or Disables filtering multicast streams by source (required for IGMPv3).

Source Filtering Mode: Sets the Exclusion mode for Source Filtering. Can be set to Include or Exclude. Include will indicate that the incoming multicast stream will include one of the Source Address below. Exclude will exclude multicast stream with the listed Source Address below (required for IGMPv3).

Source Filtering IP Address <1-6>: Source IP address of incoming multicast streams (required for IGMPv3)

Stream Present: Shows the status of the incoming IP stream. Valid statuses include Present or Loss.

Output Stream: Trunk A/B

Each Access Port has the ability to subscribe to an input stream and output stream simultaneously. An output IP stream will be the signal appearing at the input port selected.



NOTE: The output IP stream can be sent down Trunk A and Trunk B for main and redundant operation.

Output Stream Enable: Setting to enable or disable the output IP stream.



NOTE: At the time of this writing we recommend setting the Destination IP address to 0.0.0.0 to disable any streams output.

Destination IP Address: Sets the output multicast IP address that will be streamed out the Trunk port.

Destination UDP Port: Sets the output multicast IP UDP Port.

4.6. TRUNK PERFORMANCE TAB

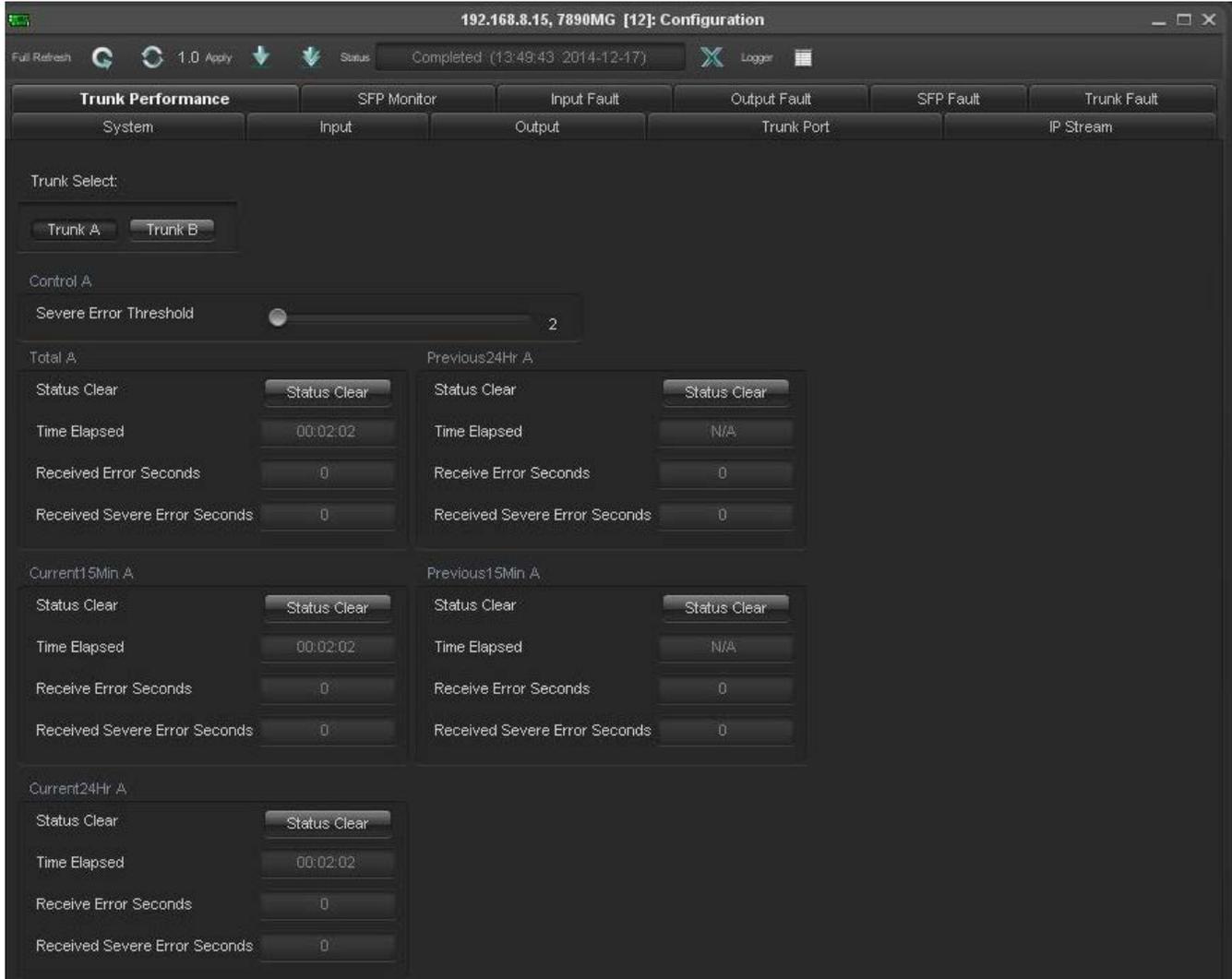


Figure 4-6: VistaLINK® PRO - Trunk Performance Tab

Trunk Select: Allows the user to view link received errored seconds for Trunk A or B. Received errored seconds are presented in the past 15 minute, current 15 minute and current 24 hour interval categories.

Categories Explained:

Current 15 Minute: The current 15 minute error window log. The number of errored seconds and severe errored seconds that occurred for the past 15 minutes.

Previous 15 Minute: The previous 15 minute error window log.

Current 24 Hr: The current 24 hour error window log. The number of errored seconds occurred for the past 24 hours.

Control

Severe Error Threshold: Sets the number of severe link errors to occur consecutively before sending an SNMP warning alarm.

Total

Status Clear: Clears the Trunk error counters for their respective categories.

Time Elapsed: Counter to show the time elapsed.

Received Error Seconds: Counter to show the number of errored seconds that occurred within its respective category.

Received Severe Error Seconds: Counter to show the number of severe error seconds that occurred within its respective category.

4.7. SFP MONITOR TAB

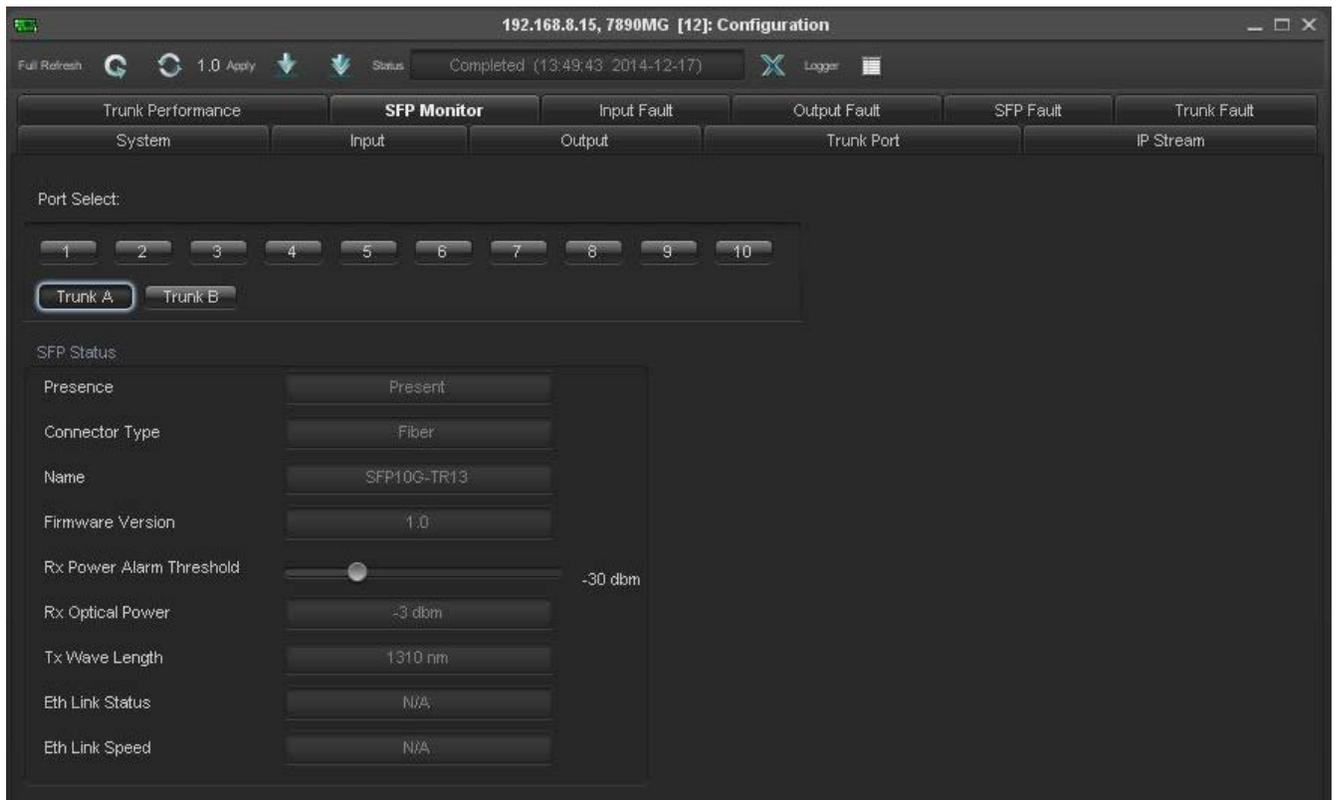


Figure 4-7: VistaLINK® PRO - SFP Monitor Tab

Port Select: The 7890MG-10GE possesses 12 SFP module sockets. 10 for the access and 2 for the trunk. The user can monitor SFP status for all SFP modules from this convenient view.

SFP Status

Presence: Displays whether or not a supported SFP is present in the slot.

Connector Type: Displays the type of SFP module installed. This will show as either ETH (for RJ-45 SFPs), DIN (for Video SFPs), or Fiber.

Name: Part number of the inserted SFP module.

Firmware Version: Firmware version of the inserted SFP module.

Rx Power Alarm Threshold: Sets the minimum received optical power before an SNMP alarm fault is sent. This control only works with Fiber based SFPs

Rx Optical Power: Receive optical power if a Fiber SFP module is used.

Tx Wave Length: Transmitted wavelength of the Fiber SFP module.

Eth Link Status: Displays Ethernet Link Presence for access ports. Non-functional on Trunk ports. For details on Trunk ports check the “Trunk Port” tab described above.

Eth Link Speed: Displays the negotiated link speed of Ethernet access ports. Will display as 10/100/1000 for ports 1-8 and 1000Mbps or 10Gbps for ports 9 and 10. This is non-functional on Trunk Ports. For details on Trunk ports, check the “Trunk Port” tab described above.

4.8. INPUT FAULT TAB

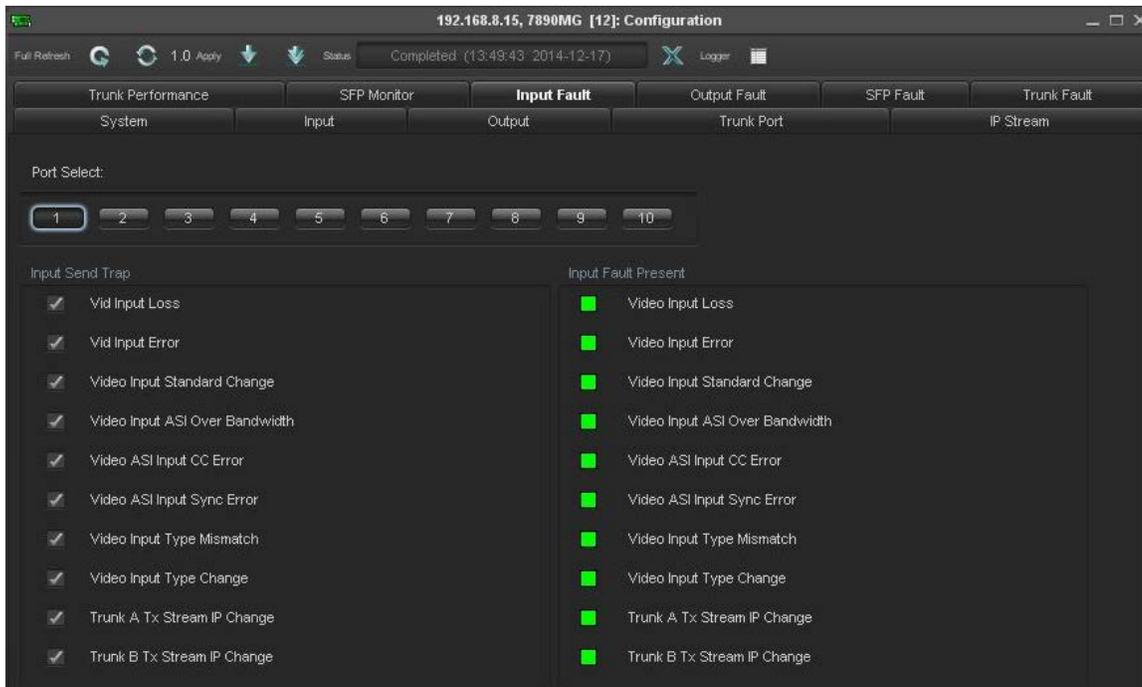


Figure 4-8: VistaLINK® PRO - Input Fault Tab

Port Select: Brings up the Input Fault SNMP Error Traps for each Access Port. The check boxes on the left will enable or disable these faults from being sent to the SNMP Fault Trap log.

Trap

Video Input Loss: Triggers when video was previously present, and has now ceased to be. If there is no video present, this will be red.

Video Input Error: Triggers when there is an video error detected on the input.

Video Input Standard Change: Triggers when the video Input Standard has changed.

Video Input ASI Over Bandwidth: Triggers when the input ASI stream is over the bandwidth setting located in the Input tab.

Video ASI Input CC Error: Triggers when Continuity Count Errors on ASI Video.

Video ASI Input Sync Error: Triggers when Sync Error on ASI Video.

Video Input Type Mismatch: Triggers when the video input does not match 'Video Pass Type' under the 'Input' TAB.

Video Input Type Change: Triggers when the video input format has changed.

Trunk A Tx Stream IP Change: Triggers when any changes have occurred to the settings on this stream for Trunk A.

Trunk B Tx Stream IP Change: Triggers when any changes have occurred to the settings on this stream for Trunk B.

4.9. OUTPUT FAULT TAB

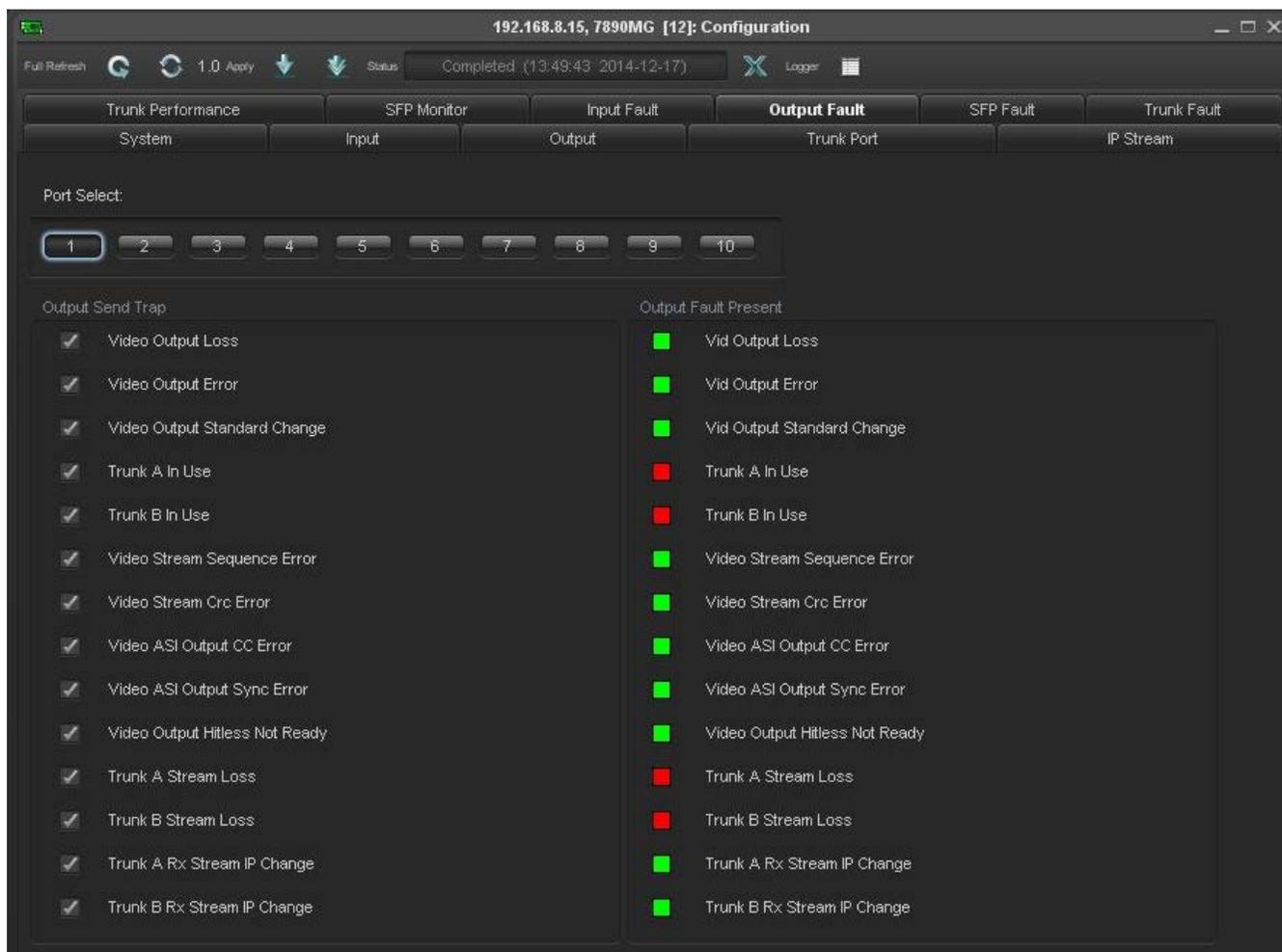


Figure 4-9: VistaLINK® PRO - Output Fault Tab

Port Select: Brings up the Output Fault SNMP Error Traps for each Access Port. The check boxes on the left will enable or disable these faults from being sent to the SNMP Fault Trap log.

Traps

Video Output Loss: Triggers when video was present and is now Lost. When no video is present, this indicator will be red.

Video Output Error: Triggers when the video output has errors.

Video Output Standard Change: Triggers when the video output standard has changed.

Trunk A In Use: Triggers when the incoming IP stream on Trunk A is in use for this port.

Trunk B In Use: Triggers when the incoming IP stream on Trunk B is in use for this port.

Video Stream Sequence Error: Triggers when there is a video output sequence count error.

Video Stream Crc Error: Triggers when there is a Video Output CRC Error.

Video ASI Output CC Error: Triggers when there is an ASI Continuity Count Error detected on output.

Video ASI Output Sync Error: Triggers when there is an ASI Sync Error Fault.

Video Output Hitless Not Ready: Triggers when hitless switching is not currently available on the selected port. Not having both Trunks plugged in for example could cause this fault.

Trunk A Stream Loss: Triggers when the IP stream for this port is lost on Trunk A.

Trunk B Stream Loss: Triggers when the IP stream for this port is lost on Trunk B.

Trunk A Rx Stream IP Change: Triggers when a change is made to the IP stream settings for this port on Trunk A.

Trunk B Rx Stream IP Change: Triggers when a change is made to the IP stream settings for Trunk B.

4.10. SFP FAULT TAB



Figure 4-10: VistaLINK® PRO - SFP Fault Tab

Port Select: Brings up the SFP Fault SNMP Error Traps for each SFP/SFP+ Port. The check boxes on the left will enable or disable these faults from being sent to the SNMP Fault Trap log.

Traps

SFP Type Incorrect: Triggers when the SFP inserted in the port does not correspond to the selected mode under the Input tab. I.e., user has inserted a video SFP, when Ethernet is selected.

SFP Rx Power Low: SFP Optical Receive Power is Low. Threshold is adjusted in the SFP Monitor TAB.

SFP Ethernet Link Status: SFP Ethernet Link Status Up or Down.

SFP Present: SFP Presence Detect.

4.11. TRUNK FAULT TAB



Figure 4-11: VistaLINK® PRO - Trunk Fault Tab

Trunk Select: Brings up the Trunk Fault SNMP Error Traps for Trunk A and Trunk B. The check boxes on the left will enable or disable these faults from being sent to the SNMP Fault Trap log.

Traps

Trunk Error: Triggers whenever errored seconds appear on the selected Trunk Interface.

Trunk Severe Error: Triggers whenever severe errored seconds appear on the selected Trunk Interface.

Trunk Link Down: Triggers when the trunk link is not active.

Trunk Bandwidth Higher: Trunk bandwidth is greater than max bandwidth threshold set in Trunk Port TAB → Bandwidth High Threshold.

Trunk Bandwidth Lower: Trunk bandwidth is less than min bandwidth threshold set in Trunk Port TAB -> Bandwidth Low Threshold.

5. WEBEASY® INTERFACE

5.1. SYSTEM

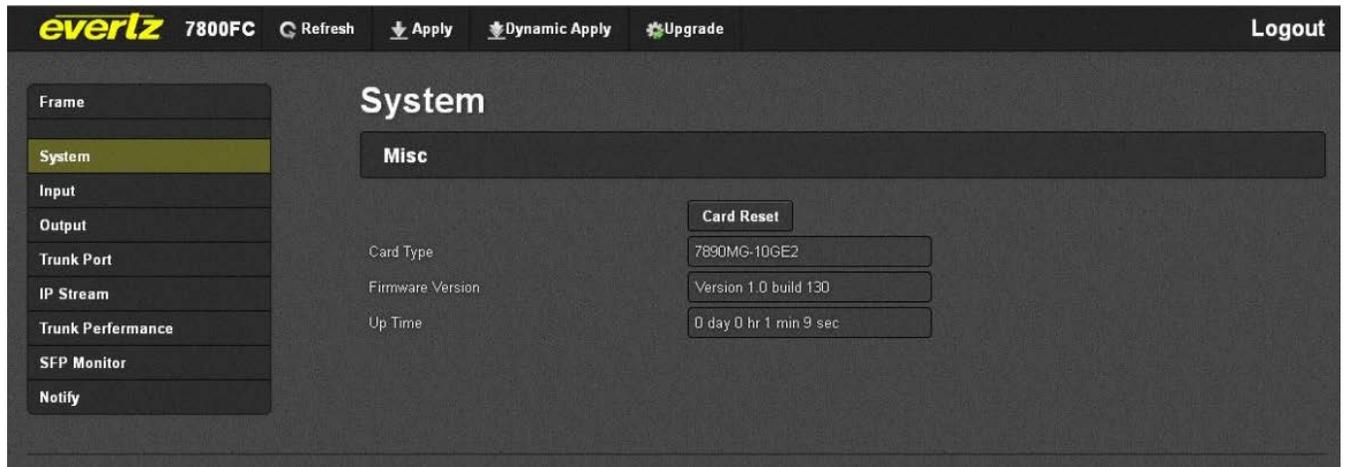


Figure 5-1: WebEasy® - System Page

Misc

System Reset: Pressing this control will allow the user to reboot the MG module. Follow onscreen prompts to engage rebooting process.

Card Type: Displays of the type of MG module.

Firmware Version: Displays the firmware version of the MG module.

Up Time: Time elapsed since last boot up.

5.2. INPUT

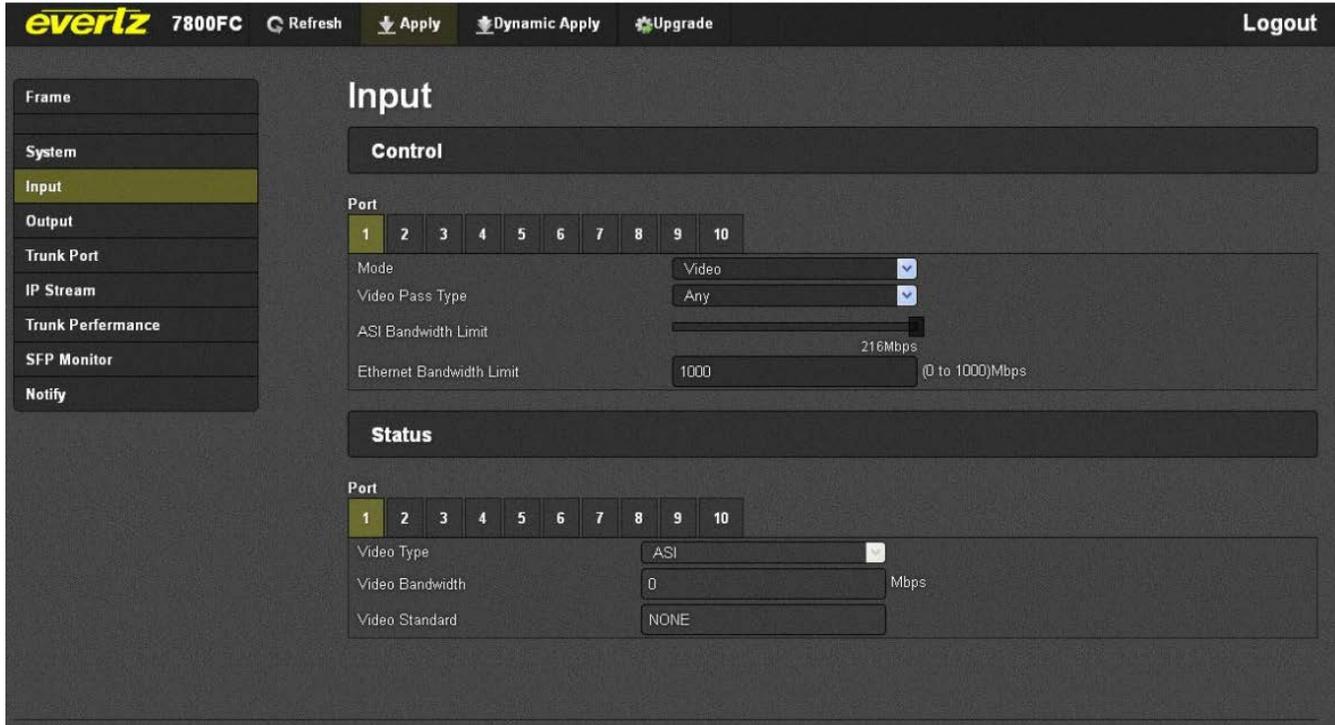


Figure 5-2: WebEasy® - Input Page

Port Select

Each SFP Port contains a TX and RX port. Since the Input TAB is engaged the user will be addressing the RX Port only on that SFP. In this case “Input” refers to signals coming in to the MG card.

Press the appropriate SFP Port to view the configuration and status for the input (RX) of the SFP Port selected.

Control

Mode: Select between Video and Ethernet Modes. Please note when Video is selected and used, a DIN SFP must be installed in that port. When Ethernet is selected and used, a copper RJ45 or Ethernet fiber SFP must be installed in that port. An SNMP alarm will be issued if the inserted SFP does not match this setting.

Video Pass Type: Selection of Video Type to be transported. The options for this are as follows:

- **NONE** – While the input port will see and report on the incoming stream, it will not allow any video to be output over the Ethernet trunk ports.
- **3G** – The input port will allow only 3G-SDI (3Gbps) video signals to pass on to the trunk ports.
- **HD** – The input port will allow only HD-SDI (1.5Gbps) video signals to pass on to the trunk ports.
- **SD** - The input port will allow only SD-SDI (270Mbps) Video Signals to pass on to the trunk port
- **ASI** - The input port will only allow ASI video signals to pass on to the Trunk ports
- **ANY (Autodetect)** – The input port pass any video it sees to the trunk ports.

ASI Bandwidth Limit: This control is used when ASI or ANY is selected and ASI is present at the input RX port of the SFP. This control allows the user to set the bandwidth limit for ASI video. Any video exceeding this cap will be clipped, to ensure the trunk ports do not go over bandwidth.

Ethernet Bandwidth Limit: This control is used when Ethernet is selected and Ethernet is connected to the SFP Port. This control allows the user to set the bandwidth limit for Ethernet. Any packets that arrive at the Ethernet port that cause the stream to be over bandwidth will be dropped, to prevent the trunk ports do not go over bandwidth.

Status

Video Type: Shows the type of video at the input (RX) of the SFP Port. Can be 3G, HD, SD, ASI or None. When Ethernet mode is engaged, this display is non-functional.

Video Bandwidth: Shows the bandwidth occupied by the incoming video on the input (RX) of the SFP Port.

3G	3.0Gbps
HD	1.485 Gbps
SD	270 Mbps
ASI	xxx Mbps (where xxx is the bandwidth of the incoming Transport stream)

Video Standard: Shows the appropriate video standard of the incoming video. For all SDI streams, this will show the frequency and resolution, and for ASI, this will display whether the stream is 188-byte or 204-byte.

5.3. OUTPUT

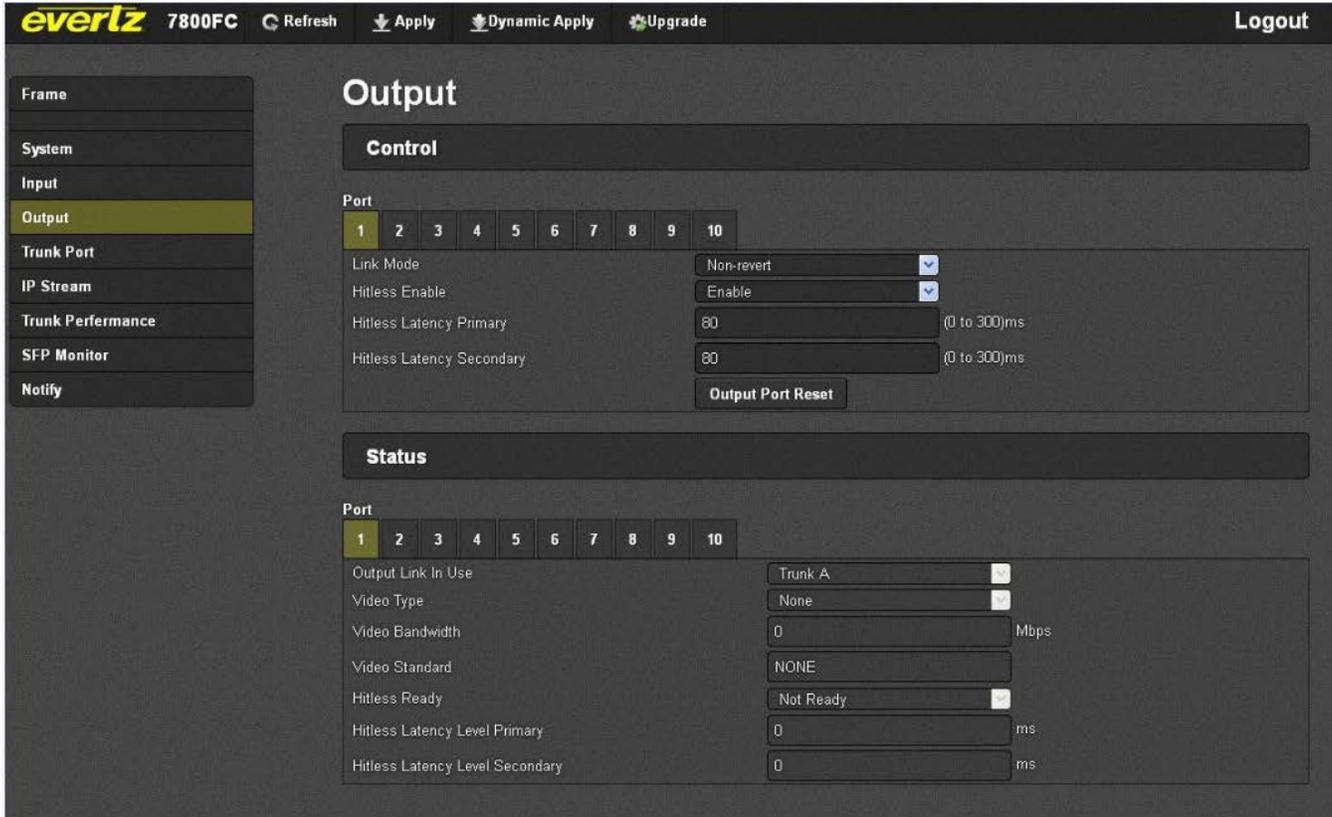


Figure 5-3: WebEasy® - Output Page

Port Select

Each SFP Port contains a TX and RX port. Since the Output TAB is engaged the user will be addressing the TX Port only on that SFP.

Press the appropriate SFP Port to view the configuration and status for the input (TX) of the SFP Port selected.

Control

Link Mode: Sets how the output service sources the signal from the main and redundant Trunk. These can be set per-port; it is not a universal control:

Non-revertive – The port will select either Trunk without preference. It will stay on its selected trunk until it is no longer available.

Revertive Primary – The port will prefer to use Trunk A, but will switch to Trunk B if Trunk A becomes unavailable. Once Trunk A is restored, it will switch back.

Revertive Secondary – The port will prefer to use Trunk B, but will switch to Trunk A if Trunk B becomes unavailable. Once Trunk B is restored, it will switch back.

Force Primary – The port will use only Trunk A, and will never switch to Trunk B, even if there is valid data on Trunk B

Force Secondary – The port will only use Trunk B and will never switch to Trunk A, even if there is valid data on Trunk A

Hitless Enable: Enables hitless switching (for video only) – Turns the hitless video function on or off. If on, the user can select the amount of buffering required below.

Hitless Latency Primary: Sets additional latency on Trunk A if required.

Hitless Latency Secondary: Sets additional latency on Trunk B if required.

Output Port Reset: Resets video output Port SFP.

Status

Output Link In Use: Shows which link the output signal is sourcing its input from. Either Trunk A (Primary), or Trunk B (Secondary).

Video Type: Shows the video type being received.

Video Bandwidth: Shows the bandwidth of the video being received.

Video Standard: Shows the video standard received.

Hitless Ready: Shows if hitless switching is ready. Hitless switching control must be enabled and latency (below) must be sufficient to allow both Trunks to see incoming data. Additional Latency may be required to be added based on your network.

Hitless Latency Level Primary: Shows the buffer level of Trunk A

Hitless Latency Level Secondary: Shows the buffer level of Trunk B



NOTE: Latency Levels of Primary and Secondary must be non-zero in order for hitless to become 'Ready'. If Latency Levels do not become non-zero then hitless switching will read 'Not Ready'. In this case, try increasing the latency, and monitor again.

5.4. TRUNK PORT

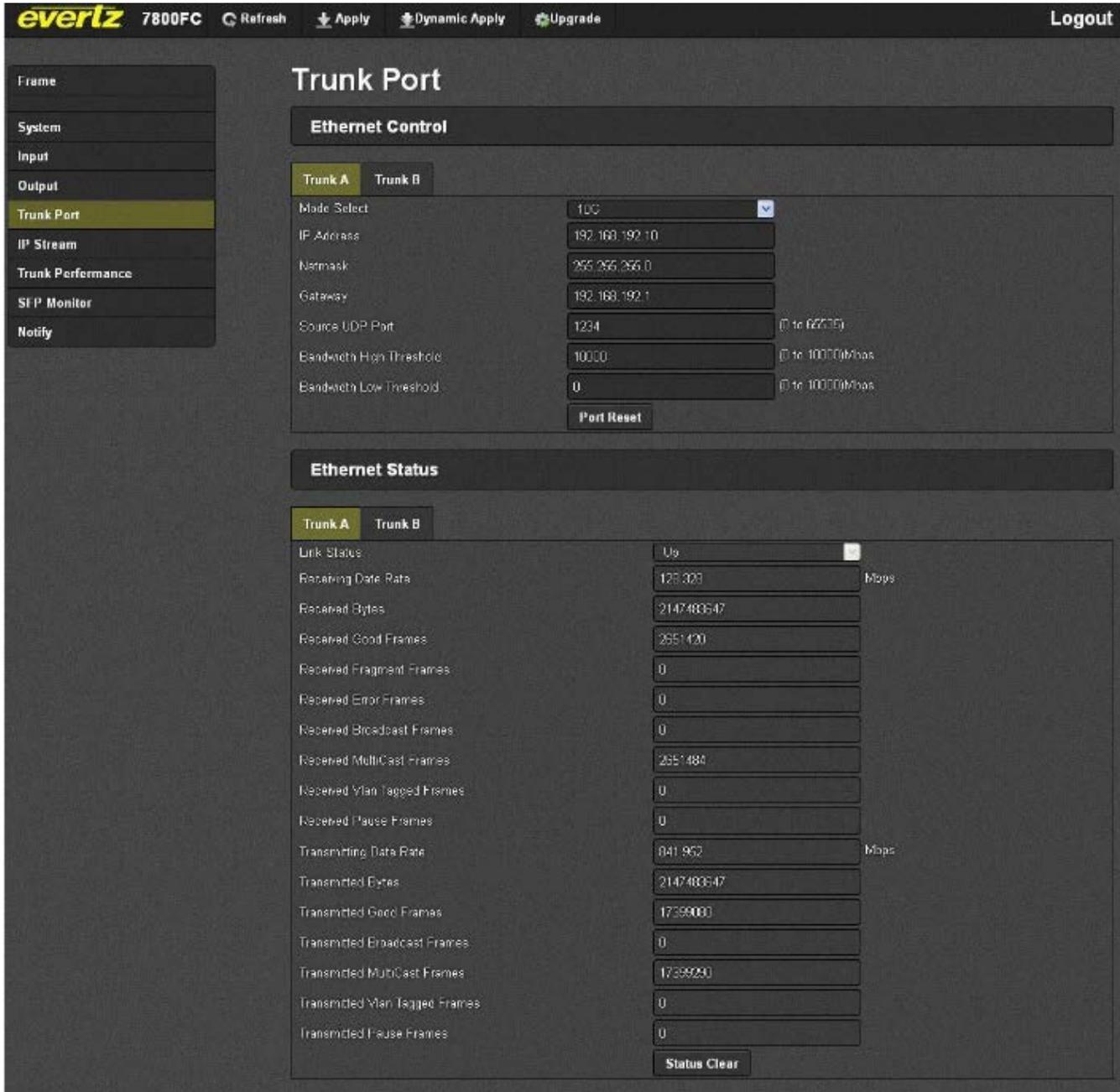


Figure 5-4: WebEasy® – Trunk Port Page

Ethernet Control: Trunk A/B

Mode Select: Allows the user to select the negotiated data rate of the Trunk Port. 1G or 10G. After changing this setting, we recommend a card reboot

IP Address: Physical Port IP address setting for Trunk A (Primary) and Trunk B (Secondary).

Netmask: Netmask setting of Physical Trunk IP Ports

Gateway: Gateway setting of Physical Trunk IP Ports

Source UDP: Source UDP Port Setting of Physical Trunk IP Ports.

Bandwidth High Threshold: Set a max bandwidth warning through the Trunk IP Port in Mbps (default: 10000) – if this value is exceeded, an alarm will be issued through SNMP.

Bandwidth Low Threshold: Sets a minimum bandwidth warning through the Trunk IP Port in Mbps (default: 0) – if incoming bandwidth is below this value, an alarm will be issued through SNMP.

Ethernet Status: Trunk A/B

Link Status: Displays the Link status of the Trunk interface. Up or Down. These correspond to Trunk A and Trunk B on the back of the rear plate.

Received Data Rate: Data rate received on selected Trunk in kbps

Received Bytes: Byte reception counter for Trunk

Received Good Frames: Counter for Good Frames received on Trunk

Received Fragment Frames: Fragmented or partial frames received on Trunk

Received Error Frames: Errored Frames received

Received Broadcast Frames: Broadcast frame Traffic received monitor

Received Multicast Frames: Broadcast Multicast frames received

Received VLAN Tagged Frames: Counter for incoming Ethernet VLAN Tagged Frames

Received Pause Frames: Counter for incoming Ethernet pause frames

Transmitting Data Rate: Current real-time transmitted data rate in kbps

Transmitted Bytes: Current counter for transmitted data bytes

Transmitted Good Frames: Counter for Good Frames transmitted

Transmitted Broadcast Frames: Counter for transmitted Broadcast Frames

Transmitted Multicast Frames: Counter for transmitted Multicast Frames

Transmitted VLAN Tagged Frames: Counter for transmitted Ethernet VLAN Tagged Frames

Transmitted Paused Frames: Counter for transmitted Ethernet pause frames

Mode Select: Allows the user to select the negotiated data rate of the Link Port. 1G or 10G.

Status Clear: Allows the user to clear all Transmitted and Receive counters above.

5.5. IP STREAM

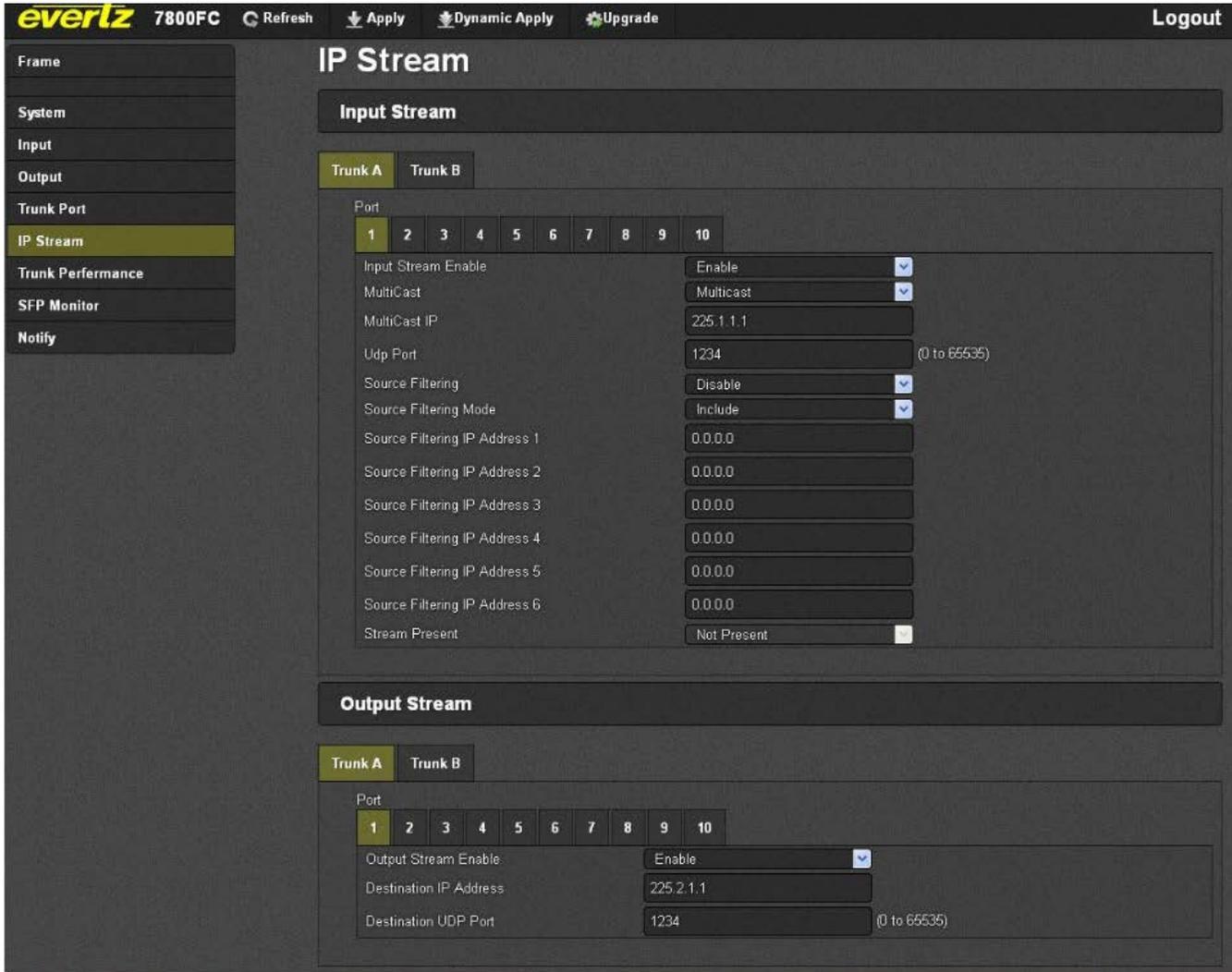


Figure 5-5: WebEasy® – IP Stream Page

Port Select: Click to select which Access Port is selected. There are 10 ports. For each of the 10 ports there is an input stream and output stream. Both input IP stream parameters and output IP stream can be controlled in this tab.



NOTE: In this case, “Input” corresponds to streams entering the Trunk ports of the MG card, while “Output” corresponds to streams leaving the MG card through the Trunk ports. In other words, what came IN the video or Ethernet access ports goes OUT the Trunk port.

Input Stream: Trunk A/B

Each Access Port has the ability to subscribe to an input stream and output stream simultaneously. An input IP stream will appear on output referring to the particular access port selected.



NOTE: There can be a maximum of two simultaneous input streams to be sent to the output Port being selected. These input streams can appear on Trunk A and Trunk B simultaneously. Typically these will be main and backup input streams.

Input Stream Enable: Enables or Disables the output IP stream from the selected Port. Note that no changes can be made to the settings of the input stream if this is set to “Disable”.

Multicast: Sets the IP stream to accept Multicast or Unicast.

Multicast IP: Enter the multicast IP address that you would like this port to subscribe to.

UDP Port: Filter the Input stream on UDP Port.

Source Filtering: Enables or Disables filtering multicast streams by source (required for IGMPv3)

Source Filtering Mode: Sets the Exclusion mode for Source Filtering. Can be set to Include or Exclude. Include will indicate that the incoming multicast stream will include one of the Source Address below. Exclude will exclude multicast stream with the listed Source Address below (required for IGMPv3).

Source Filtering IP Address <1-6>: Source IP address of incoming multicast streams (required for IGMPv3)

Stream Present: Shows the status of the incoming IP stream. Valid Statuses are Present or Loss.

Output Stream: Trunk A/B

Each Access Port has the ability to subscribe to an input stream and output stream simultaneously. An output IP stream will be the signal appearing at the input port selected. Please note that the output IP stream can be sent down Trunk A and Trunk B for main and redundant operation.

Output Stream Enable: Setting to enable or disable the output IP stream. Note: at the time of this writing we recommend setting the Destination IP address to 0.0.0.0 to disable any streams output.

Destination IP Address: Sets the output multicast IP address that will be streamed out the Trunk port.

Destination UDP Port: Sets the output multicast IP UDP Port.

5.6. TRUNK PERFORMANCE

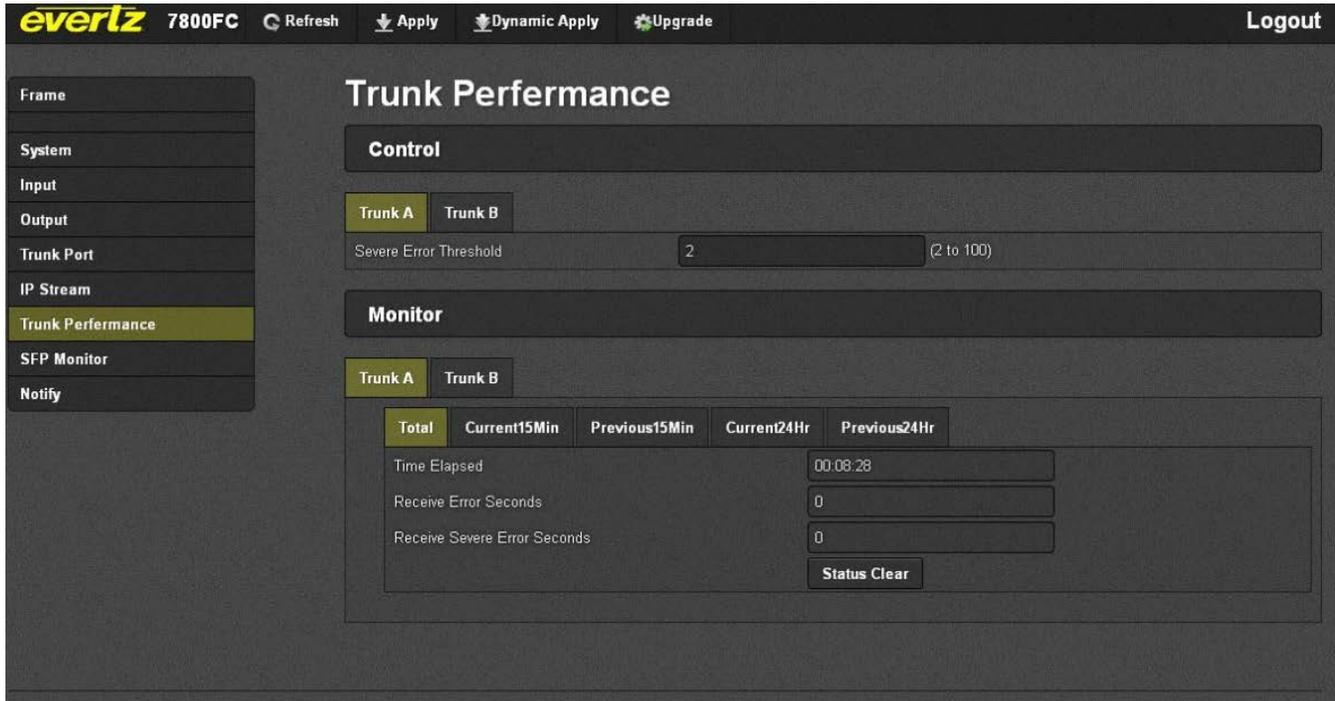


Figure 5-6: WebEasy® – Trunk Performance Page

Trunk Select: Allows the user to view Trunk received errored seconds for Trunk A or B. Received errored seconds are presented in the past 15 minute, current 15 minute and current 24 hour interval categories.

Categories Explained:

Current 15 Minute: The current 15 minute error window log. The number of errored seconds and severe errored seconds that occurred for the past 15 minutes.

Previous 15 Minute: The previous 15 minute error window log.

Current 24 Hr: The current 24 hour error window log. The number of errored seconds occurred for the past 24 hours.

Control

Severe Error Threshold: Sets the number of severe link errors to occur consecutively before sending an SNMP warning alarm.

Total

Status Clear: Clears the Trunk error counters for their respective categories.

Time Elapsed: Counter to show the time elapsed

Received Error Seconds: Counter to show the number of errored seconds that occurred within its respective category.

Received Severe Error Seconds: Counter to show the number of severe error seconds that occurred within its respective category.

5.7. SFP MONITOR

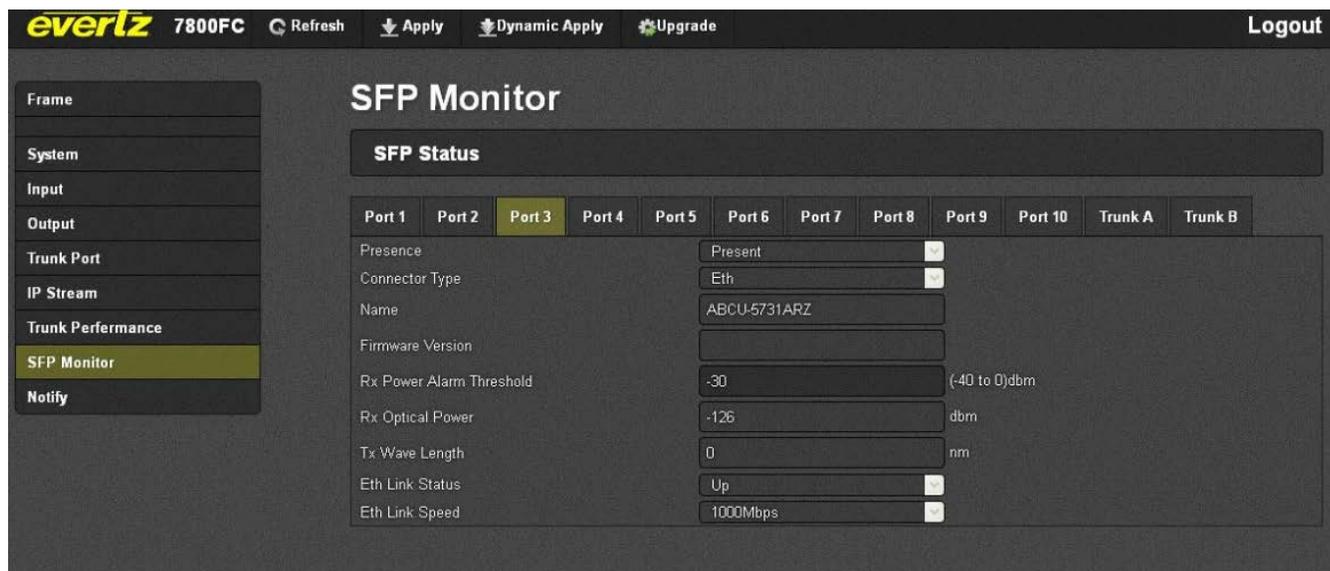


Figure 5-7: WebEasy® – SFP Monitor Page

Port Select: The 7890MG-10GE possesses 12 SFP module sockets. 10 for the access and 2 for the trunk. The user can monitor SFP status for all SFP modules from this convenient view.

SFP Status

Presence: Displays whether or not a supported SFP is present in the slot.

Connector Type: Displays the type of SFP module installed. This will show as either ETH (for RJ-45 SFPs), DIN (for Video SFPs), or Fiber.

Name: Part number of the inserted SFP module.

Firmware Version: Firmware version of the inserted SFP module.

Rx Power Alarm Threshold: Sets the minimum received optical power before an SNMP alarm fault is sent. This control only works with Fiber based SFPs.

Rx Optical Power: Receive optical power if a Fiber SFP module is used.

Tx Wave Length: Transmitted wavelength of the Fiber SFP module.

Eth Link Status: Displays Ethernet Link Presence for access ports. Non-functional on Trunk ports. For details on Trunk ports check the “Trunk Port” tab described above.

Eth Link Speed: Displays the negotiated link speed of Ethernet access ports. Will display as 10/100/1000 for ports 1-8 and 1000Mbps or 10Gbps for ports 9 and 10. This is non-functional on Trunk Ports. For details on Trunk ports, check the “Trunk Port” tab described above.

5.8. NOTIFY

The screenshot shows the 'Notify' page in the WebEasy interface. It features a sidebar on the left with navigation options: Frame, System, Input, Output, Trunk Port, IP Stream, Trunk Performance, SFP Monitor, and Notify (which is highlighted). The main content area is titled 'Notify' and contains four sections:

- Input Fault Present:** A table with columns for ports 1-10. Below the columns is a list of fault types: Video Input Loss, Video Input Error, Video Input Std Change, Video Input ASI Bandwidth Over, Video Input CC Error, Video Input Sync Error, Video Input Type Mismatch, Video Input Type Change, Trunk A Tx Stream IP Change, and Trunk B Tx Stream IP Change. Each fault type has a corresponding status indicator (red or green square).
- Output Fault Present:** A table with columns for ports 1-10. Below the columns is a list of fault types: Video Output Loss, Video Output Error, Video Output Std Change, Video Output Trunk A In Use, Video Output Trunk B In Use, Video Stream Request Error, Video Stream Std Error, Video ASI Output CC Error, Video ASI Output Sync Error, Video Output Buffer Not Ready, Trunk A Stream Loss, Trunk B Stream Loss, Trunk A Rx Stream IP Change, and Trunk B Rx Stream IP Change. Each fault type has a corresponding status indicator.
- SFP Fault Present:** A table with columns for Port 1-10, Trunk A, and Trunk B. Below the columns is a list of fault types: SFP Type Incorrect, SFP Rx Power Low, SFP Ethernet Link Status, and SFP Present. Each fault type has a corresponding status indicator.
- Trunk Fault Present:** A table with columns for Trunk A and Trunk B. Below the columns is a list of fault types: Trunk Error, Trunk Severe Error, Trunk Link Down, Trunk Bandwidth Higher, and Trunk Bandwidth Lower. Each fault type has a corresponding status indicator.

Figure 5-8: WebEasy® – Notify Page

Port Select: Brings up the Input Fault SNMP Error Traps for each Access Port. The check boxes on the left will enable or disable these faults from being sent to the SNMP Fault Trap log.

Trap

Video Input Loss: Triggers when video was previously present, and has now ceased to be. If there is no video present, this will be red.

Video Input Error: Triggers when there is an video error detected on the input.

Video Input Standard Change: Triggers when the video Input Standard has changed.

Video Input ASI Over Bandwidth: Triggers when the input ASI stream is over the bandwidth setting located in the Input tab.

Video ASI Input CC Error: Triggers when Continuity Count Errors on ASI Video.

Video ASI Input Sync Error: Triggers when Sync Error on ASI Video.

Video Input Type Mismatch: Triggers when the video input does not match 'Video Pass Type' under the 'Input' TAB.

Video Input Type Change: Triggers when the video input format has changed.

Trunk A Tx Stream IP Change: Triggers when any changes have occurred to the settings on this stream for Trunk A.

Trunk B Tx Stream IP Change: Triggers when any changes have occurred to the settings on this stream for Trunk B.

Port Select: Brings up the Output Fault SNMP Error Traps for each Access Port. The check boxes on the left will enable or disable these faults from being sent to the SNMP Fault Trap log.

Traps

Video Output Loss: Triggers when video was present and is now Lost. When no video is present, this indicator will be red.

Video Output Error: Triggers when the video output has errors.

Video Output Standard Change: Triggers when the video output standard has changed.

Trunk A In Use: Triggers when the incoming IP stream on Trunk A is in use for this port.

Trunk B In Use: Triggers when the incoming IP stream on Trunk B is in use for this port.

Video Stream Sequence Error: Triggers when there is a video output sequence count error.

Video Stream Crc Error: Triggers when there is a Video Output CRC Error.

Video ASI Output CC Error: Triggers when there is an ASI Continuity Count Error detected on output.

Video ASI Output Sync Error: Triggers when there is an ASI Sync Error Fault.

Video Output Hitless Not Ready: Triggers when hitless switching is not currently available on the selected port. Not having both Trunks plugged in for example could cause this fault.

Trunk A Stream Loss: Triggers when the IP stream for this port is lost on Trunk A.

Trunk B Stream Loss: Triggers when the IP stream for this port is lost on Trunk B.

Trunk A Rx Stream IP Change: Triggers when a change is made to the IP stream settings for this port on Trunk A

Trunk B Rx Stream IP Change: Triggers when a change is made to the IP stream settings for Trunk B

Port Select: Brings up the SFP Fault SNMP Error Traps for each SFP/SFP+ Port. The check boxes on the left will enable or disable these faults from being sent to the SNMP Fault Trap log.

Traps

SFP Type Incorrect: there can be a maximum of two simultaneous input streams to be sent to the output Port being selected. These input streams can appear on Trunk A and Trunk B simultaneously. Typically these will be main and backup input streams.

SFP Rx Power Low: SFP Optical Receive Power is Low. Threshold is adjusted in the SFP Monitor TAB

SFP Ethernet Link Status: SFP Ethernet Link Status Up or Down

SFP Present: SFP Presence Detect

Trunk Select: Brings up the Trunk Fault SNMP Error Traps for Trunk A and Trunk B. The check boxes on the left will enable or disable these faults from being sent to the SNMP Fault Trap log.

Traps

Trunk Error: Triggers whenever errored seconds appear on the selected Trunk Interface.

Trunk Severe Error: Triggers whenever severe errored seconds appear on the selected Trunk Interface.

Trunk Link Down: Triggers when the trunk link is not active.

Trunk Bandwidth Higher: Trunk bandwidth is greater than max bandwidth threshold set in Trunk Port TAB -> Bandwidth High Threshold.

Trunk Bandwidth Lower: Trunk bandwidth is less than min bandwidth threshold set in Trunk Port TAB -> Bandwidth Low Threshold.

6. UPGRADE PROCEDURE

6.1. UPDATING 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 be 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.

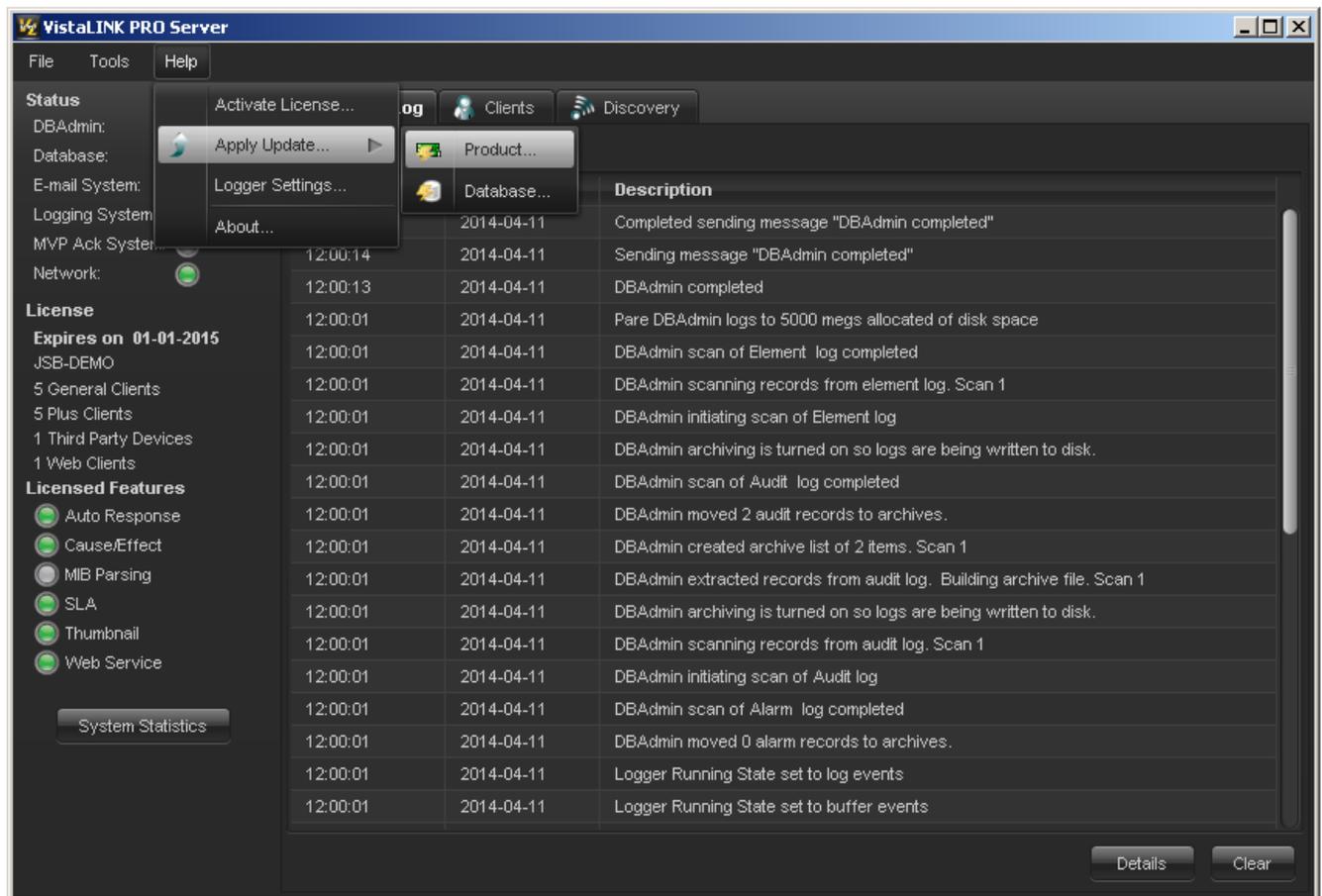


Figure 6-1: VistaLINK® PRO Server

A window will appear, as shown in Figure 6-2. Navigate to the location of the new JAR file and double click to select the file. The window will automatically close and the update will be applied in the background.

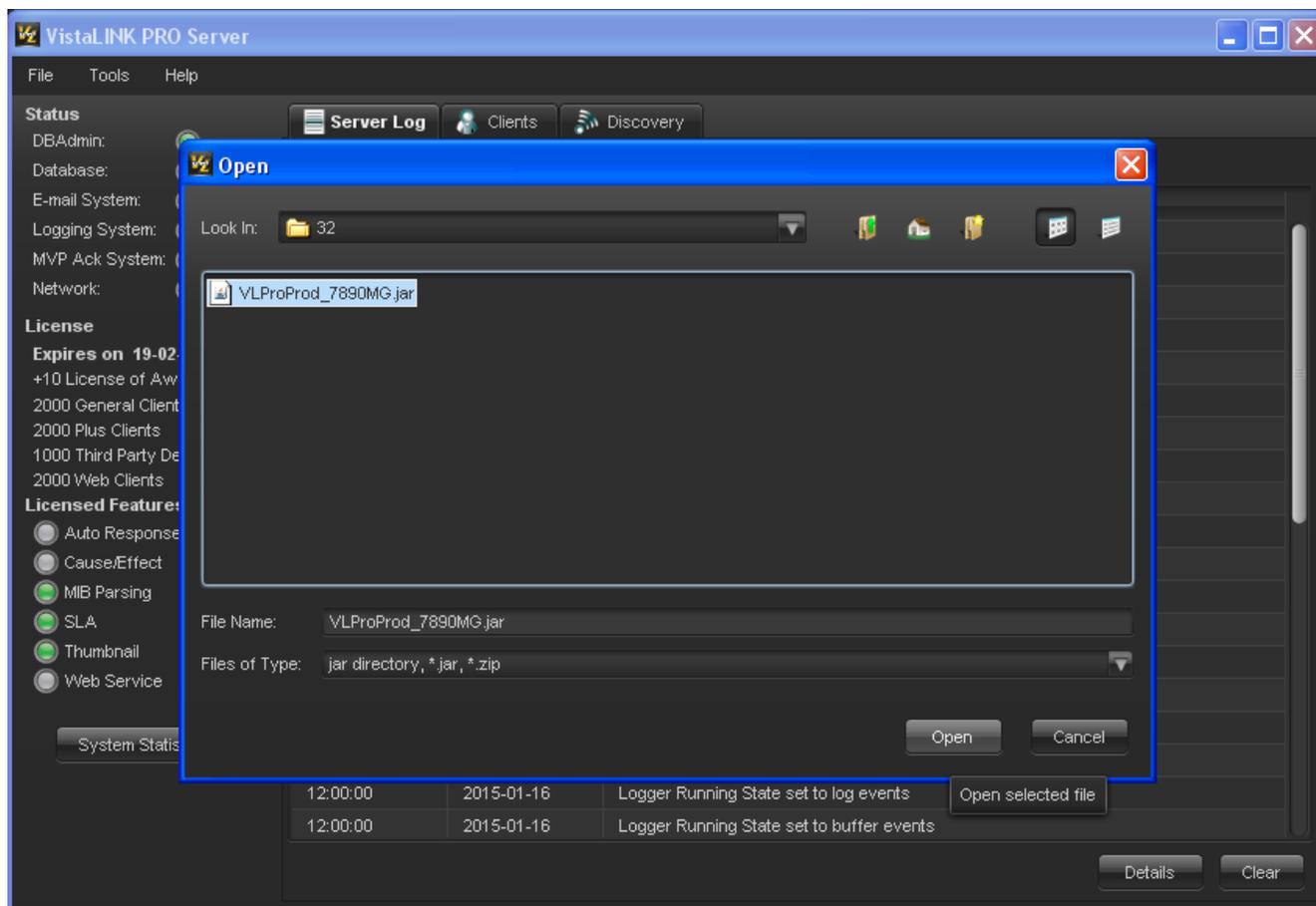


Figure 6-2: VistaLINK® PRO – Applying JAR Updates

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.



NOTE: You may confirm that all updates have been successfully applied by selecting from the menu *Tools>View>Show/Hide Product update log*.

Shutdown the server by selecting from the menu: *File>Shutdown Server*. Now re-open the server, it is normal for the start up to take marginally longer while each individual update is being applied. Once complete, you may restart the VLPro Clients. As the Client restarts you will experience a short delay while the update is applied. A prompt will appear confirming that the updates have been applied.

6.2. WEB INTERFACE UPGRADE PROCEDURE

On the top of the web page for the 7890MG, there is a tab labeled **Upgrade**. Select this tab and ensure that the latest firmware is running on the 7890MG card. If it is not upgrade the firmware using the latest .jar files which can be found on the Evertz website. Select **Browse** and locate the .jar file on the computer. Then select **Upgrade**, when the upgrade is complete the 7890MG will Reboot to apply the firmware upgrades.

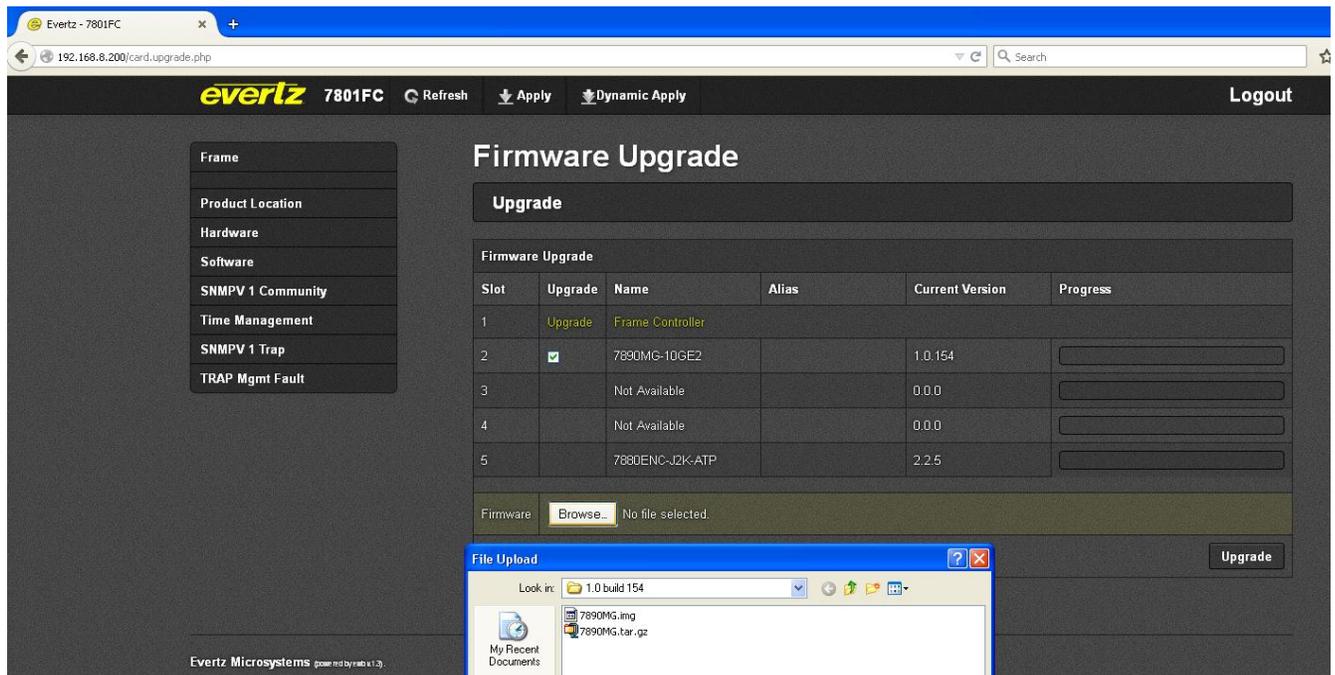


Figure 6-3: WebEasy - Firmware Upgrade

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