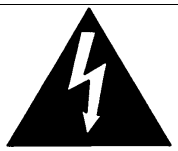
7882DEC-H264HD-IPASI
HD/SD MPEG-2 and H.264 Decoder
User Manual

EVERTZ MICROSYSTEMS LTD.
5288 John Lucas Drive
Burlington, Ontario
Canada L7L 5Z9
Phone: +1 905-335-3700
Sales: sales@evertz.com Fax: +1 905-335-3573
Tech Support: service@evertz.com Fax: +1 905-335-7571
Web Page: http://www.evertz.com

Version 1.0, October 2016

This page left intentionally blank

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

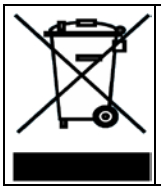
NOTE

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.

CE

EN60065	Safety
EN55103-1: 1996	Emission
EN55103-2: 1996	Immunity



EN504192 2005
Waste electrical products should not be disposed of with household waste. Contact your Local Authority for recycling advice

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.

REVISION HISTORY

REVISION	DESCRIPTION	DATE
0.1	Preliminary Release	Jun 2014
1.0	Updates throughout	Oct 2016

you encounter an error, please notify Evertz Customer Service department. Evertz reserves the right, without notice or liability, to make changes in equipment design or specifications.

This page left intentionally blank

TABLE OF CONTENTS

Figures

Tables

This page left intentionally blank

1. OVERVIEW

The 7882DEC-H264HD-IPASI is a professional high quality 3G/HD/SD-SDI H.264/MPEG2 decoder platform. It offers high end decoding support for both MPEG-2 and H.264/AVC optionally up to 4:2:2 10-bit.

The 7882DEC-H264HD-IPASI is perfect for monitoring applications or decoding for downstream baseband video and audio processing.

The 7882DEC-H264HD-IPASI can reconstruct in the most flexible way all VANC & HANC data in the baseband outputs.

The 7882DEC-H264HD-IPASI can be integrated in the Evertz® 7881IRD-H264HD-LB platform to create a highly flexible demodulating and decoding DVB-S/S2 satellite receiver.

Features & Benefits

- 1x H.264/MPEG-2 Video Decoder up to 4:2:2 10-bit
- 2x ASI and IP inputs
- Selection of decoded service
- Baseband outputs with embedded audio and ancillary data
- Frame sync reference optional via frame distribution (+FSE)
- Fully integrated with the industry leading VistaLINK® PRO system
- Control via 7800 Frame Controller or integrated HTTP interface.

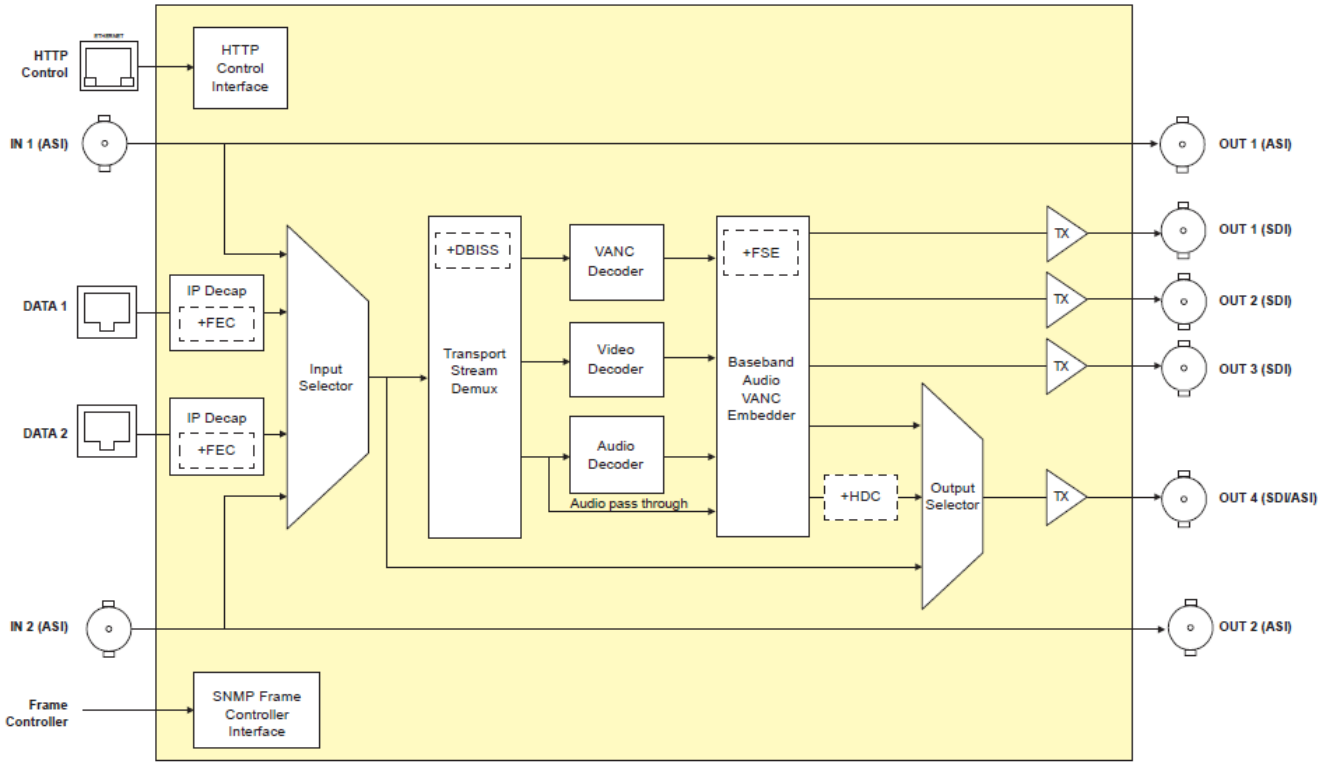


Figure 1-1: 7882DEC-H264HD-IPASI Block Diagram

2. GETTING STARTED

The 7882DEC-H264HD-IPASI module comes with a rear plate that occupies two slots in a frame.

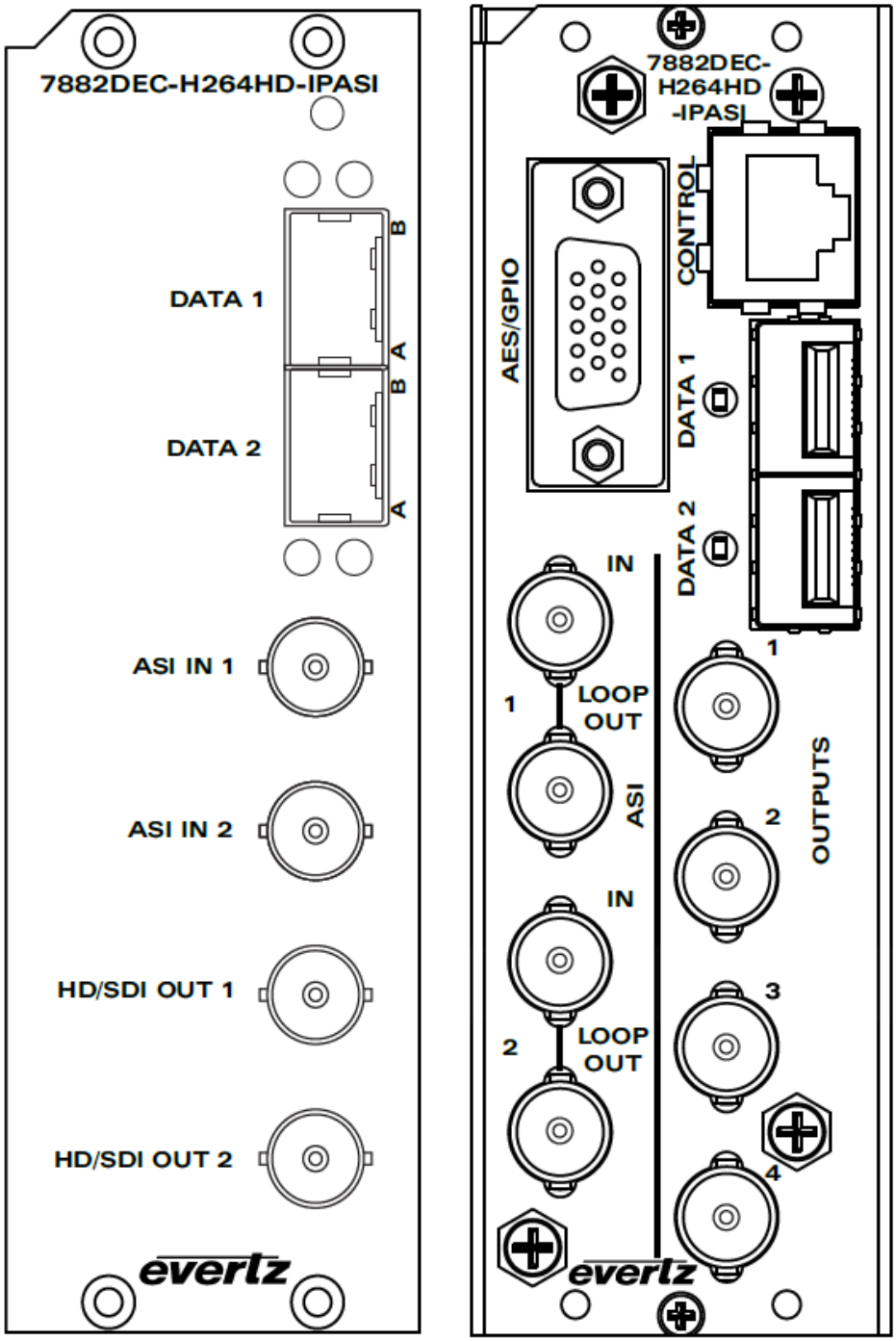


Figure 2-1: 7882DEC-H264HD-IPASI rev1 and rev2

Left Rear Plate: Applies to 7882DEC-H264HD-IPASI purchased prior to May 2014.
Right Rear Plate: Applies to 7882DEC-H264HD-IPASI purchased post May 2014.

2.1. CONNECTIONS

ASI IN 1-2: BNC connectors used to input ASI MPEG2 Transport Streams.

ASI OUT 1-2: BNC connector used to bypass given ASI Transport Streams. Active bypass when powered. Passive Bypass when un-powered.

SDI OUT 1-4: Four BNC connectors with re-clocked serial component video outputs, compatible with the SMPTE 259M, SMPTE 292M, and SMPTE 424M (+3G) standards. SDI OUT 3 and 4 can be additionally configured for ASI output from IP or the down-converted SD-SDI output (HDC).

DATA 1-2: Two SFP cages for streaming Transport Stream data. SFPTR-RJ45-SGM-AV sold separately.

CONTROL: One RJ-45 Ethernet port used for web interface control.

AES GPIO: The high-density DB-15 connector and Evertz breakout cable (sold separately) can bring various signals conveniently to BNC connectors. Eight unbalanced AES outputs per SMPTE 276M and 2x GPO's are provided on the DB-15 connector. The de-embedded and processed audio are available across eight AES channels. Figure 2-2 illustrates the breakout cable used for the DB-15 connection. Table 2-1 shows the respective DB-15 rear plate pin out. Table 2-2 shows the Evertz breakout cable pin out.

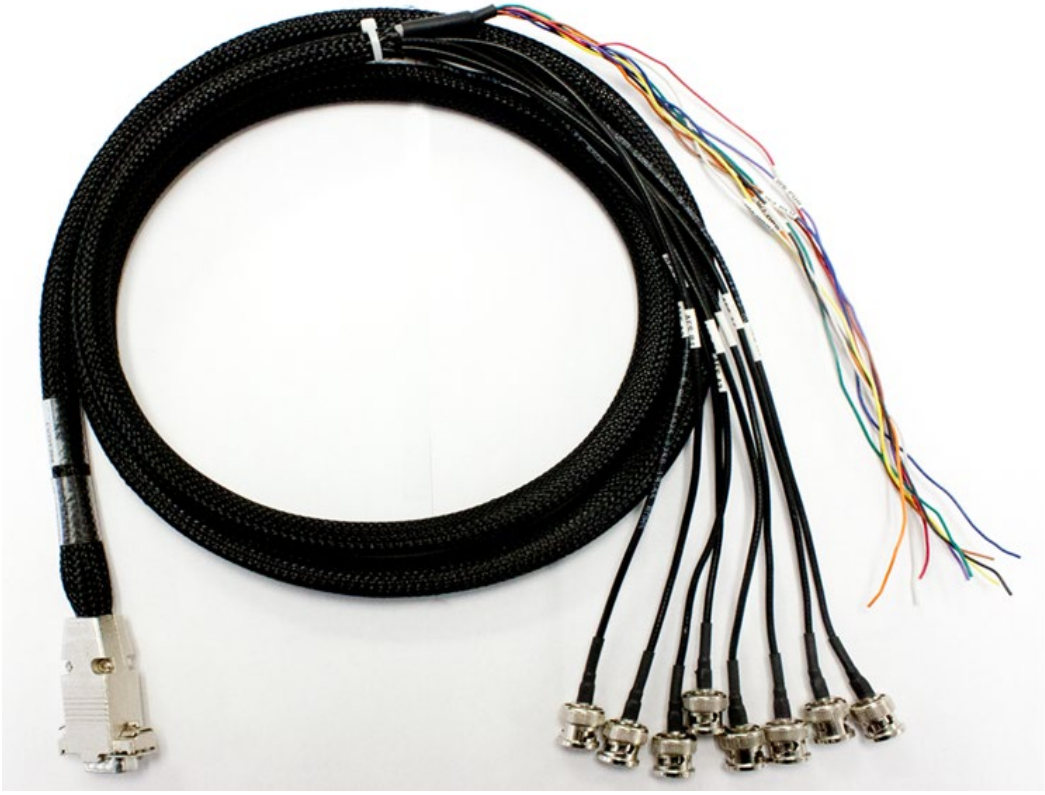
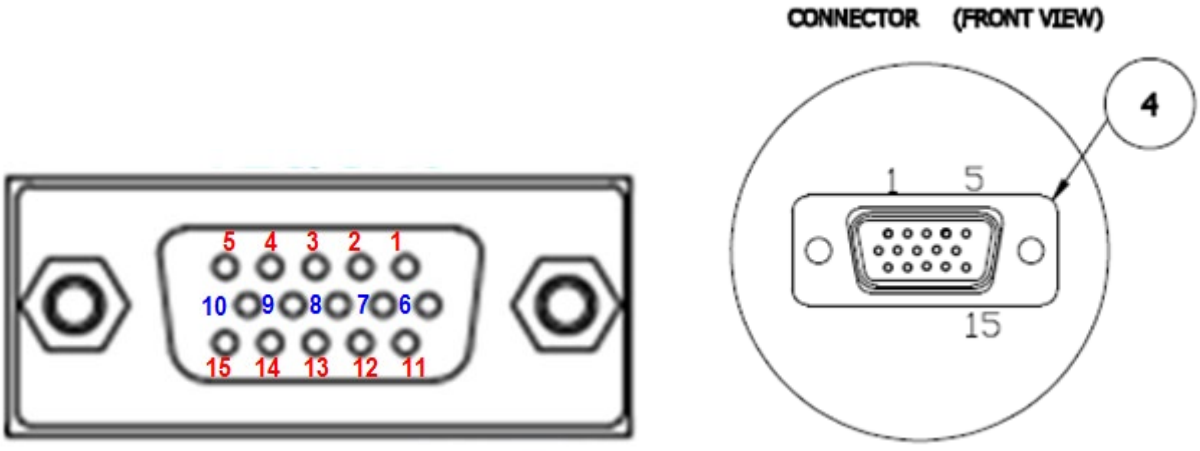


Figure 2-2: Illustration of DB15 Breakout Cable

The 7882DEC-H264HD-IPASI module can be shipped with a breakout cable for the DB-15 connector (separate ordering option – Evertz Part # WPAES8-BNCM-9W-6F/A).

The breakout cable can be used to facilitate wiring for the AES audio and GPI connections. The pin out of the DB-15 communication port and breakout cable is shown in Table 2-1 and Table 2-2.



Female Pin-Out on RP **Male Pin-Out on Breakout Cable**

Figure 2-3: DB15 Communications Port Pin-Out Mappings

DB-15 Pin	Name	Description
1	n/a	Reserved for Future Use
2	GPO 1	GPO 1
3	n/a	Reserved for Future Use
4	GPO 2	GPO 2
5	n/a	Reserved for Future Use
6	n/a	Reserved for Future Use
7	AES Out 2	AES A2 – Unbalanced
8	n/a	Reserved for Future Use
9	AES Out 6	AES B2 – Unbalanced
10	AES Out 5	AES B1 – Unbalanced
11	AES Out 1	AES A1 – Unbalanced
12	AES Out 8	AES B4 – Unbalanced
13	AES Out 7	AES B3 – Unbalanced
14	AES Out 4	AES A4 – Unbalanced
15	AES Out 4	AES A3 – Unbalanced
Shell	GND	Ground

Table 2-1: DB-15 Connector Pin Out

DB-15 PIN	Wire	Ground/Shield Connection	Label Name	Connector Type	DB-15 OUT FUNCTION
1	Red	n/a	W1 RED	WIRE	Reserved for Future
2	Green	n/a	W2 GRN	WIRE	GPO 1
3	Blue	n/a	W3 BLU	WIRE	Reserved for Future
4	Purple	n/a	W6 PUR	WIRE	GPO 2
5	Orange	n/a	W7 ORG	WIRE	Reserved for Future
6	White	n/a	W4 WHI	WIRE	Reserved for Future
7	Coax	DB15 Shell	AES A2	BNC MALE	AES Out 2
8	Yellow	n/a	W5 YEL	WIRE	Reserved for Future
9	Coax	DB15 Shell	AES B2	BNC MALE	AES Out 6
10	Coax	DB15 Shell	AES B1	BNC MALE	AES Out 5
11	Coax	DB15 Shell	AES A1	BNC MALE	AES Out 1
12	Coax	DB15 Shell	AES B4	BNC MALE	AES Out 8
13	Coax	DB15 Shell	AES B3	BNC MALE	AES Out 7
14	Coax	DB15 Shell	AES A4	BNC MALE	AES Out 4
15	Coax	DB15 Shell	AES A3	BNC MALE	AES Out 3
GND	Brown	n/a	GND BR	WIRE	Ground Wire
GND	Black	n/a	GND BL	WIRE	Ground Wire

Table 2-2: AES Audio Breakout Cable (Evertz Part # WPAES8-BNCM-9W-6F/A)

2.2. HARDWARE INSTALLATION

To successfully install the 7882DEC-H264HD-IPASI, you will require:

1. An unused IP address on the network
2. An Evertz serial cable
3. VLPro Server IP address

Before handling the card it is important to minimize the potential effects of static electricity. It is therefore recommended that an ESD strap be worn. Locate on a frame chassis a vacant slot. Unpack the 7882DEC-H264HD-IPASI and separate the rear panel from the main card. Locate the slot on the rear of the rack and remove the blanking panel. Insert the rear panel into the back of the chassis and secure using the two screws provided.

Before inserting the front card, connect the serial cable to the board using the serial cable provided. Now insert the 7882DEC-H264HD-IPASI card into the corresponding front slot ensuring the card lines up with the slot runners on the bottom and the top of the chassis. Push the card into the slot ensuring that when it mates with the rear panel is has been firmly pushed into a seated position. This can be confirmed when the connectivity lights for the Ethernet port are illuminated. Do not connect the HD/SDI Input cable to the rear card until the initial configuration has been completed (failure to do this could cause unwanted network issues).

2.2.1. Network Settings for VLPRO – 7882DEC-H264HD-IPASI

1. Connect the Evertz serial upgrade cable (ribbon cable) to the 2x3 header at the front edge of the 7882DEC-H264HD-IPASI card.

2. Start a terminal program and configure the port settings.

3. At the “netra-platform login” prompt, enter:
   - “**customer**” for username <Enter>
   - “**customer**” for password <Enter>

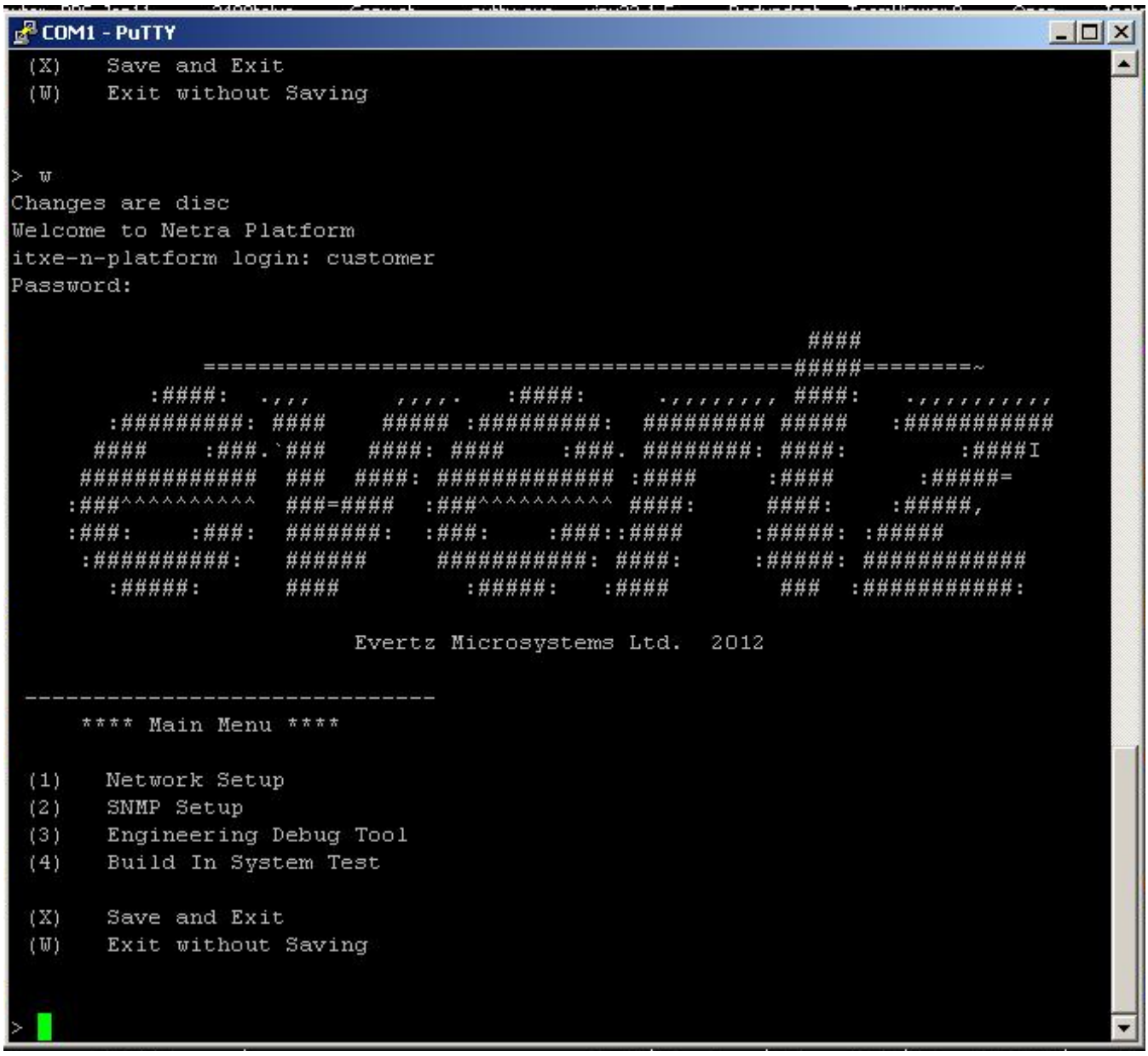


Figure 2-4: 7882DEC-H264HD-IPASI COM Login and Main Menu

4. From the main menu, four selections are available. Select *Network Setup* and the menu illustrated below will appear. Set the desired network addresses per your requirement. After entering all settings choose *Exit* two times to get back to the login prompt. The card must be rebooted for all the network settings to take effect.

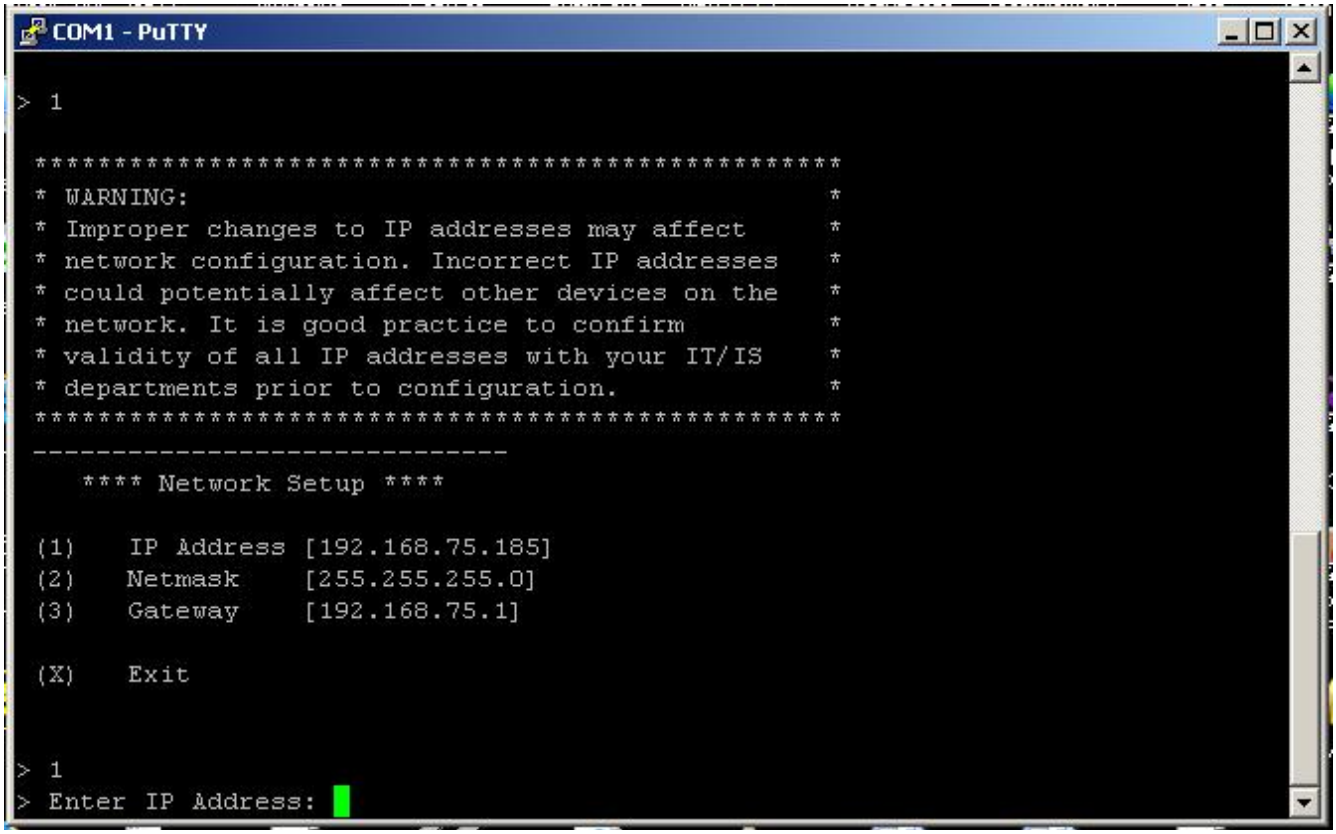


Figure 2-5: 7882DEC-H264HD-IPASI COM Network Setup

This page left intentionally blank

3. TECHNICAL SPECIFICATIONS

3.1. VIDEO SPECIFICATIONS

- Number of Inputs/Outputs:
  - BNC: 2x ASI Inputs
    2x ASI Outputs
    4x 3G/HD/SD-SDI Outputs
  - IP: 2x GbE Data Ports (Optional SFP)
    1x GbE Control Port
- Standard: SMPTE 425M/292M/259M
  3Gb/s, 1.485Gb/s, 270Mb/s
  ASI per DVB TR 101 891 (Max 213Mb/s)
  Max Program BR – 80Mb/s
  Max PIDs per Program – 50
  Max Programs per TS – 50
- Video Resolution: 1920x1080 @ 25, 29.97, 30, 59.94, 60Hz
  1280x720 @ 50, 59.94, 60Hz
  720x576 @ 25Hz (ITU-R BT.656-4)
  720x480 @ 29.97Hz (SMPTE 125M)
- Ethernet Connector: RJ-45 auto-negotiation
  UDP/RTP
  FEC per SMPTE-2022 (Optional)
  SPTS/MPTS
- Video Decompression: H.264/MPEG-2 4:2:0
  H.264/MPEG-2 4:2:2 8bit (Optional)
  H.264 4:2:2 10bit (Optional)
- Profile/Level: MP@ML up to Hi422P@4.1

3.2. AUDIO SPECIFICATIONS

- Number of Channels: 8x PIDs of audio processing across 16x Channels of Embedded PCM
- Compression Formats: MPEG-1 Layer 2
  Dolby Digital AC-3 up to 3/2L
  Passthrough
    PCM
    Dolby Digital
    Dolby-E
- Optional: Dolby-E Decode
  AAC-LC

3.3. ANCILLIARY SPECIFICATIONS

- Embedding of: Audio Pass Through
  Closed Caption/Teletext
  SCTE35 to 104 (optional)
  AFD/WSS
  Timecode

3.4. HIGH QUALITY DOWN CONVERT (+HDC)

- Down Conversion: SMPTE 292 to SMPTE 259
- Aspect Ratio: Fixed Scalar or Follow AFD

3.5. CONFIGURATION & MGMT

- Web Server: Integrated HTTP with full control
- SNMP: VistaLINK remote control and monitoring via Frame Controller

3.6. ELECTRICAL

- Input Voltage: Auto ranging 100 – 240VAC
- Power: <48W
- EMI/RFI: Complies with FCC regulations for class-A devices
  Complies with EU EMC directive

3.7. PHYSICAL (NUMBER OF SLOTS)

- 7800FR: 2
- 7800FR-QT: 2
- 7801FR: 2

4. VISTALINK® PRO INTERFACE

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 had already added the appropriate JAR file to the server, and both the client and server applications have been restarted.

There are two methods that can be used to communicate with the 7882DEC-H264HD-IPASI and VistaLINK® PRO.

1. 7800FC Frame Controller and 7882DEC-H264HD-IPASI with appropriate JAR file and by using the control port from the frame controller.

   Open VistaLINK® PRO and click on the refresh tree icon. Expand the hardware tree by clicking on the "+" button on the IP address of the frame controller's port. The 7800FC should show up and the number of 7882DEC-H264HD-IPASI cards installed after it in the tree formation.

2. Using the 7882DEC-H264HD-IPASI control port and the appropriate JAR file.

Open VistaLINK® PRO and click on the refresh tree icon. Select 7882DEC-H264HD-IPASI and right click to **View Configuration…** as shown below.

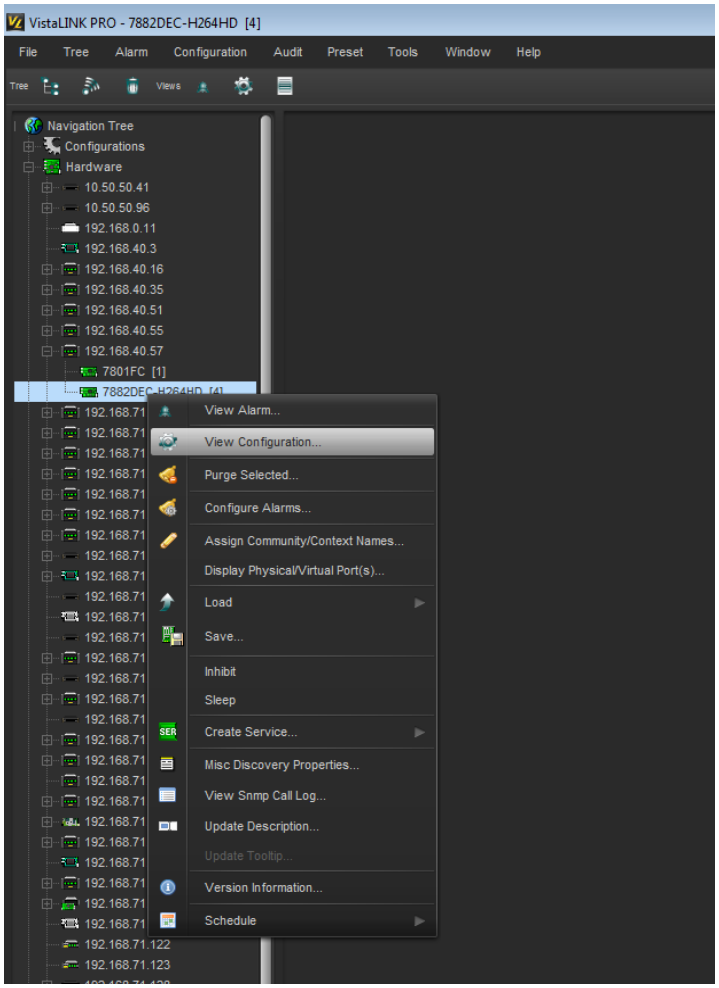


Figure 4-1: VistaLINK® Configuration

4.1. SYSTEM TAB

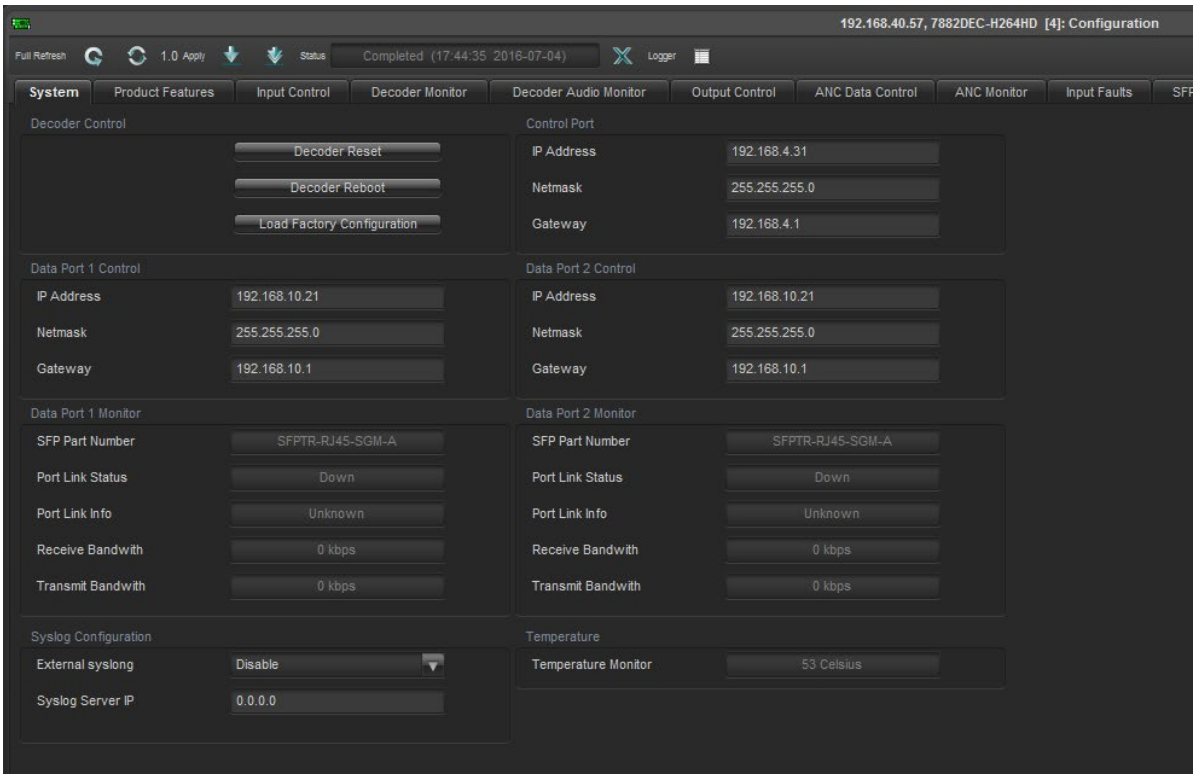


Figure 4-2: VistaLINK® - System Tab

Decoder Control

Decoder Reset: This control allows the user to reset the decoder.

Decoder Reboot: This control allows the user to power cycle the decoder.

Load Factory Configuration: This control allows the user to soft reset the decoder to the factory settings.

Control Port

IP Address: This control allows the user to set the IP address on the Control Port. This control will also display the currently set IP address.

Netmask: This control allows the user to set the Netmask for the Control Port IP address. This control will also display the currently set Netmask.

Gateway: This control allows the user to set the Gateway for the Control Port. This control will also display the currently set Gateway.

Data Port <1,2> Control

IP Address: This control allows the user to set the IP address on the Data Port. This control will also display the currently set IP address.

Netmask: This control allows the user to set the Netmask for the Data Port IP address. This control will also display the currently set Netmask.

Gateway: This control allows the user to set the Gateway for the Data Port. This control will also display the currently set Gateway.

Data Port <1,2> Monitor

SFP Part Number: This parameter returns the part number of the SFP located in the Data Port.

Port Link Status: This parameter returns the link status for the data port, communicating to the user whether the link is up or down.

Port Link Info: This parameter returns the link status for the data port, containing information about speed and duplex.

Receive Bandwidth: When the link is Up, this parameter returns the receive bandwidth currently being read on the Data Port. Reading is in kbps.

Transmit Bandwidth: When the link is Up, this parameter returns the transmit bandwidth currently being sent on the Data Port. Reading is in kbps.

Syslog Configuration

Syslog is a valuable tool for debugging the device operation. It is essentially serial readouts over IP, sent to a dedicated server. If issues are present, Evertz can help install and setup a syslog server for constant monitoring of the device activity.

External Syslog: This parameter allows the user to enable or disable sending syslog information to the configured external server.

Syslog Server IP: This parameter allows the user to assign the external syslog server IP address. This will be the address of a PC with the syslog server software installed (e.g. Kiwi Syslog Server).

Temperature

Temperature Monitor: This displays the temperature of the module.

4.2. PRODUCT FEATURES

The 7882DEC-H264HD-IPASI has the ability to enable features by adding/updating applicable licenses. Please contact Evertz Microsystems Ltd for any additional license generation along with Product Serial Number and Product MAC address.

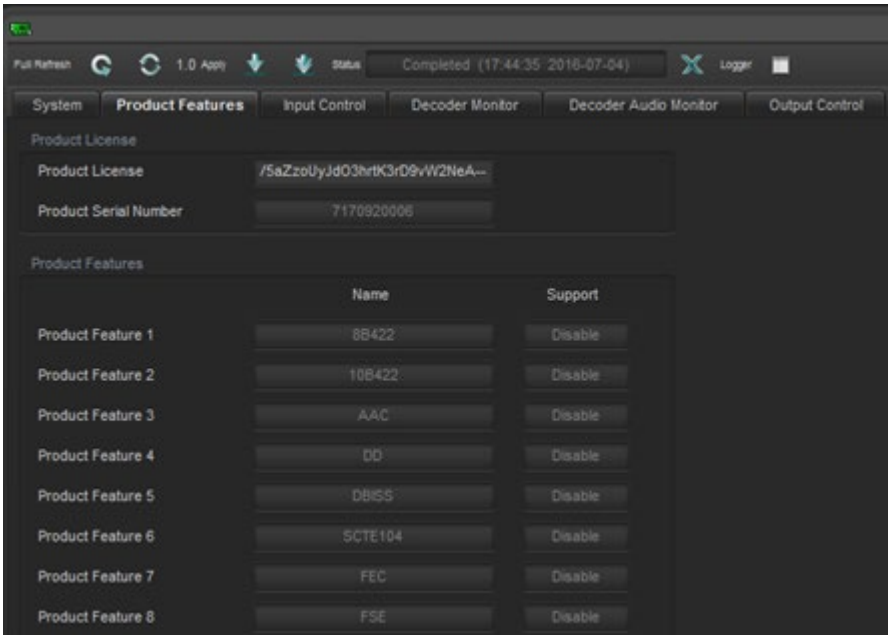


Figure 4-3: VistaLINK® - Product Features Tab

Product License: This parameter displays the product license key loaded to the hardware. This parameter can also be used to apply license keys that will enable product features. Please contact the factory if product features need to be purchased

Product Serial Number: This parameter displays the card serial number. This is required by Evertz when generating or updating license files on the 7882DEC-H264HD-IPASI.

Product Feature: This parameter returns the product features supported on this card, as well as whether the product feature support is enabled or disabled.

8 Bit 422 Product Feature: With the 8 bit 422 license key, the decoder will support 4:2:2 8 bit Chroma Sampling.

10 Bit 422 Product Feature: With the 10 bit 422 license key, the decoder will support 4:2:2 10 bit Chroma Sampling.

AAC Product Feature: With the AAC license key, the decoder will support AAC-LC decoding.

DD Product Feature: With the DD license key, the decoder will support DolbyE full 8 Channel Decode.

DBISS Product Feature: With the DBISS license key, the decoder will provide BISS 1 and BISS E descrambling capability.

SCTE104 Product Feature: With the SCTE104 license key, the decoder will support SCTE35 to SCTE104 translation.

FEC Product Feature: With the FEC license key, the decoder will support Forward Error Correction.

FSE Product Feature: With the FSE license key, the decoder will provide Frame Sync support.

4.3. INPUT CONTROL

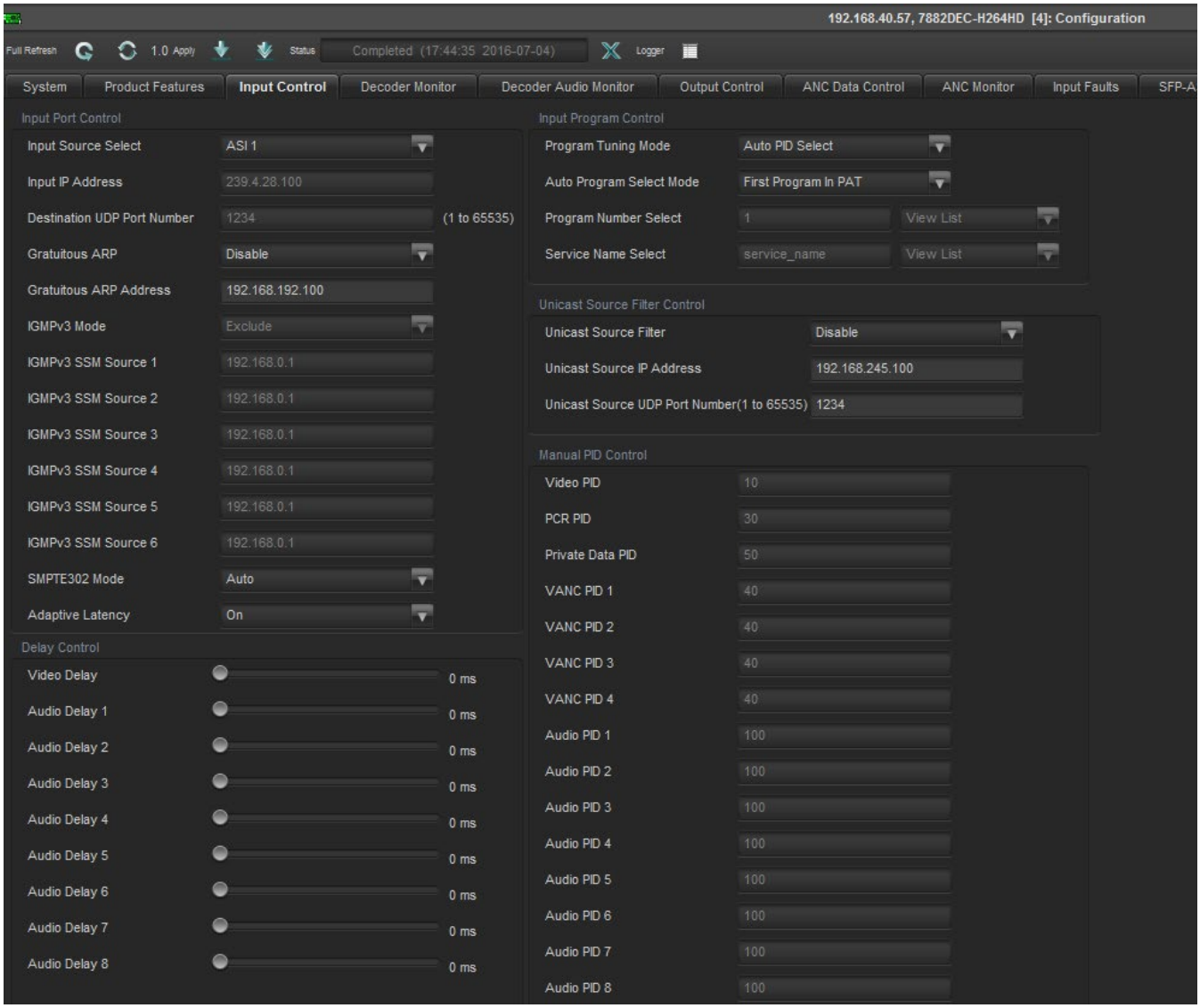


Figure 4-4: VistaLINK® - Input Control Tab

Input Port Control

Input Source Select: This parameter allows the user to select which input port the data will enter the decoder from. The available options include ASI 1, ASI 2, Data 1 and Data 2.

Input IP Address: This parameter allows the user to set the IP Address of the input data.

Destination UDP Port Number: This parameter allows user to select the destination UDP port number for the input data stream.

Gratuitous ARP: This parameter allows the user to enable/disable the Gratuitous ARP feature. This is most useful when accepting a unicast stream to prevent last hop switch from Mac address flooding.

Gratuitous ARP Address: When Gratuitous ARP is enabled, the Decoder Data port will ARP for the IP address provided at an approximate 2 minute interval. A suggestion is to enter the default gateway of the subnet. This will refresh the switches' MAC address table and help to prevent a unicast flood scenario.

IGMPv3 Mode: This parameter allows the user to include or exclude IGMPv3 SSM sources.

IGMPv3 SSM Source <1-6>: This parameter allows the user to set the IP address to be used while forming the source filter for IGMP V3 communication.

SMPTE302 Mode: This parameter allows the user to select how the SMPTE302 audio streams are handled; the options include Auto, PCM, DolbyE and AC3.

Adaptive Latency: This parameter allows the user to enable adaptive latency mode. This parameter can also be configured to the Min latency mode.

When adaptive latency is configured "ON", input stream HRD parameters are examined to determine which buffer settings can be applied for the decoder.

When configured "OFF", input stream HRD parameters are ignored and the maximum buffer offset is applied to the decoder as a safety precaution.

When configured "MIN", input stream HRD parameters are examined to determine which buffer settings can be applied for the decoder, but also more aggressively if HRD parameters are missing, the decoder tries to infer from other parameters. This is an advanced setting, the user must be very careful before setting the decoder to MIN adaptive latency mode. If the buffers are set to minimum level and the HRD parameters are incorrect, it will result in a buffer underflow.

Delay Control

Video Delay: This parameter allows the user to add a delay to the video to synchronize the audio and the video stream. This can be done by sliding the video delay to the desired setting, to a maximum of 200ms.

Audio Delay <1-8>: This parameter allows the user to add a delay to the audio to synchronize the audio and the video stream. This can be done by sliding the audio delay to the desired setting, to a maximum of 50ms for each of the 8 audio streams.

Input Program Control

Program Tuning Mode: This parameter allows the user to tell the decoder how to select the program to decode. The options include Auto or Manual PID Select.

Auto Program Select Mode: This parameter allows the user to specify which program to decode, the options include First Program in PAT, Specific Service Name, Specific Program Select or Lowest Program Number. This parameter is only available if Program Tuning Mode is set to Auto PID Select.

Program Number Select: This parameter allows the user to select the program to decode based on program number; this parameter is only available if Auto Program Select Mode is set to Specific Program Select.

Service Name Select: This parameter allows the user to select the program to decode based on service name; this parameter is only available if Auto Program Select Mode is set to Specific Service Name.

Unicast Source Filter Control

Unicast Source Filter: This control allows the user to enable or disable Unicast Source filtering. This control works similar to IGMP v3 SSM.

Unicast Source IP Address: This control allows the user to enter a source IP address of a unicast stream. The decoder will not accept the input unless the source IP matches in the unicast stream (if enabled).

Unicast Source UDP Port Number: This control allows the user to also filter by the UDP port of the incoming unicast stream. The decoder will not accept the input unless the UDP port matches in the unicast stream (if enabled).

Manual PID Control

Video PID: This parameter allows the user to set the Video Packet ID (PID). The video PID allows the decoder to sort the video packets in the transport stream to organize them for output.

PCR PID: This parameter displays the Packet ID of the Program Clock Reference (PCR) of the program being output. The value of the PCR is used to generate a system timing clock in the decoder. This clock provides a highly accurate time base that is used to synchronize audio and video elementary streams.

Private Data PID: This parameter displays the control data output PID. Private/control data can be sent directly to 3080UEP-H264HD-IPASI control IP Port, the data is then captured and embedded into the encoder output on a Private Data PID. The 7882DEC can extract data from this Private Data PID and output it as a UDP packet on its own control port.

VANC PID <1-4>: This parameter allows the user to specify the SMPTE2038 PID. This PID is required to reconstruct Vertical Ancillary data from the SMPTE2038.

Audio PID <1-8>: This parameter allows the user to set the Audio Packet ID (PID) for the associated audio stream.

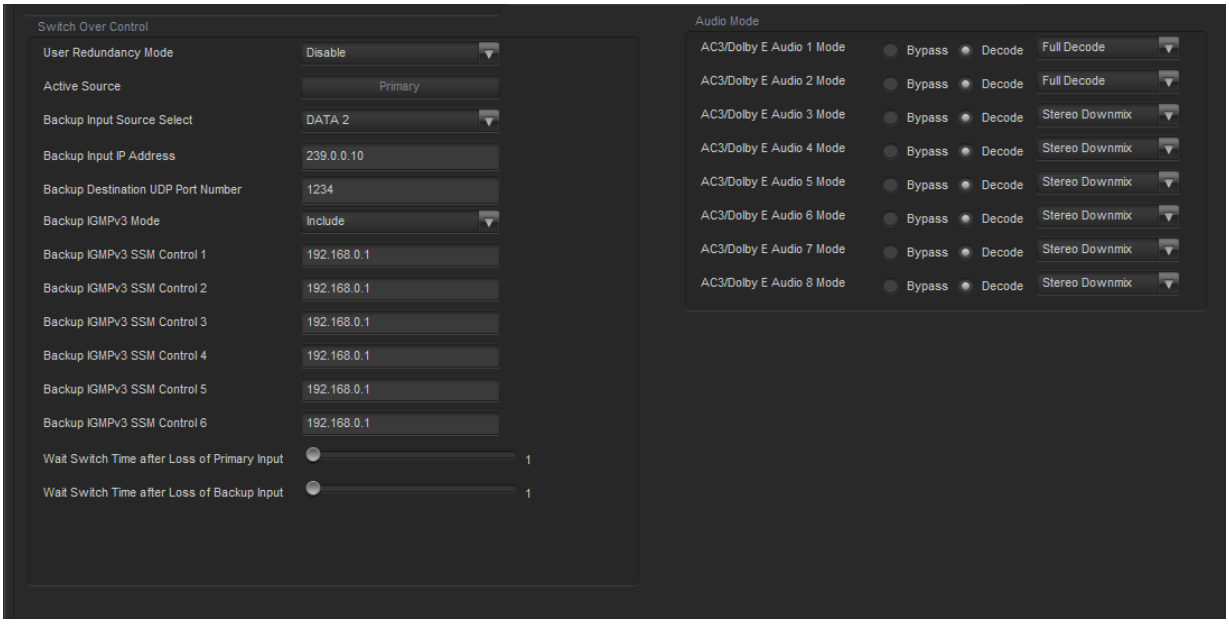


Figure 4-5: VistaLINK® - Input Control Tab continued

Switch Over Control

User Redundancy Mode: This control allows the user to enable or disable redundancy mode on input.

Active Source: This monitor displays the active input.

Backup Input Source Select: This control allows the user to select SFP 1 or SFP 2 as the backup port.

Backup Input IP Address: This control allows the user to specify the multicast address to be used as backup.

Backup Destination UDP Port Number: This parameter allows the user to select the destination UDP port number of the backup streaming output.

Backup IGMPv3 Mode: This control allows the user to select between include and exclude for IGMPv3 mode.

Backup IGMPv3 SSM Control <1-6>: This control allows the user to set the IP addresses to be used while forming the source filter for IGMPv3 communications.

Wait Switch Time after Loss of Primary Input: This parameter controls the time to wait after seeing a Primary input loss in seconds. After the timeout, the input will switch to backup.

Wait Switch Time after Loss of Backup Input: This parameter controls the time to wait after seeing a Backup input loss in seconds. After the timeout, the input will switch to primary.

Audio Mode

AC3/Dolby E Audio Mode: This parameter allows the user to set the audio mode to either bypass or decode the audio stream. When configured to Decode the user can further select if full decode or stereo downmix is required. By default full decode of Dolby AC3 is supported. However, the license key for Dolby Decode must be purchased for full decode of Dolby E.

4.4. DECODER MONITOR

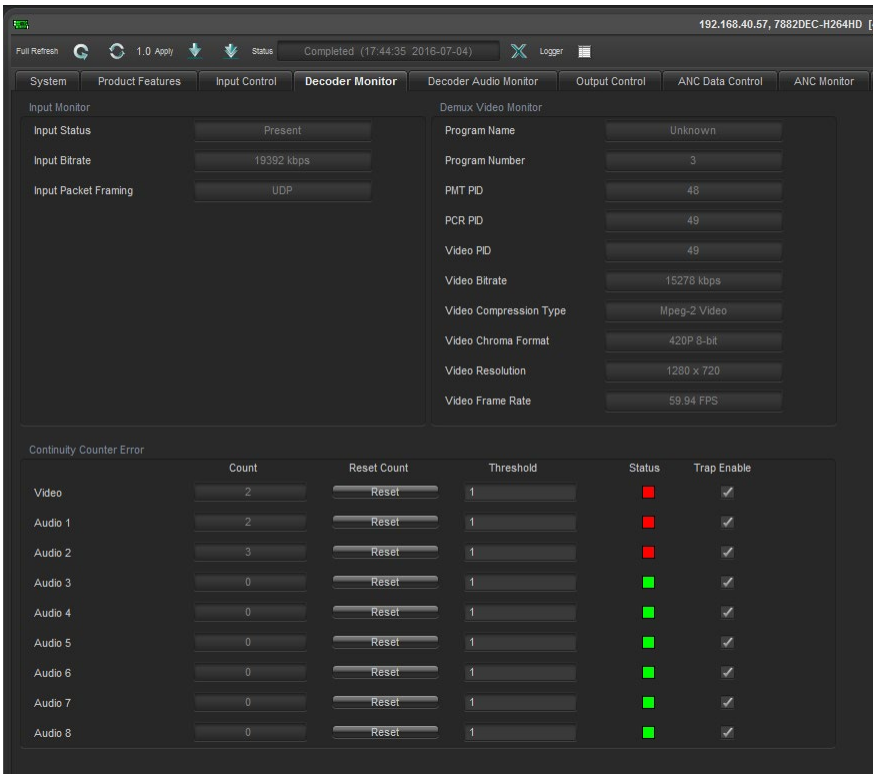


Figure 4-6: VistaLINK® - Decoder Monitor Tab

Input Monitor

Input Status: This parameter returns the status of the input stream. It provides an indication if the input stream is present or not present.

Input Bitrate: This parameter returns the Transport Stream bitrate of the input stream.

Input Packet Framing: This parameter reflects if the incoming packets are UDP or RTP.

Demux Video Monitor

Program Name: This parameter displays the program name associated with the Transport Stream input.

Program Number: This parameter returns the program number for the program being demuxed/decoded.

PMT PID: This parameter displays the Program Map Table Packet ID for the associated Transport Stream input.

PCR PID: This parameter displays the Program Clock Reference Packet ID for the associated Transport Stream input.

Video PID: This parameter displays the Video Packet ID (PID). The video PID allows the decoder to sort the video packets in the transport stream to organize them for output.

Video Bitrate: This parameter displays the video bitrate of the associated video stream.

Video Compression Type: This parameter displays the video compression type of the associated Transport Stream input.

Video Chroma Format: This parameter displays the chroma format of the associated Transport Stream input.

Video Resolution: This parameter displays the video resolution of the associated Transport Stream input.

Video Frame Rate: This parameter displays the video frame rate of the associated Transport Stream input.

Continuity Counter Error

Count: This parameter displays the number of continuity errors counted.

Reset Count: This parameter allows the user to reset the count of continuity errors.

Threshold: This parameter displays the error threshold for continuity.

Status: This indicator displays the fault status of the continuity; if it is red it indicates there is a fault present in continuity.

Trap Enable: This parameter allows the user to enable the monitoring of faults.

4.5. DECODER AUDIO MONITOR

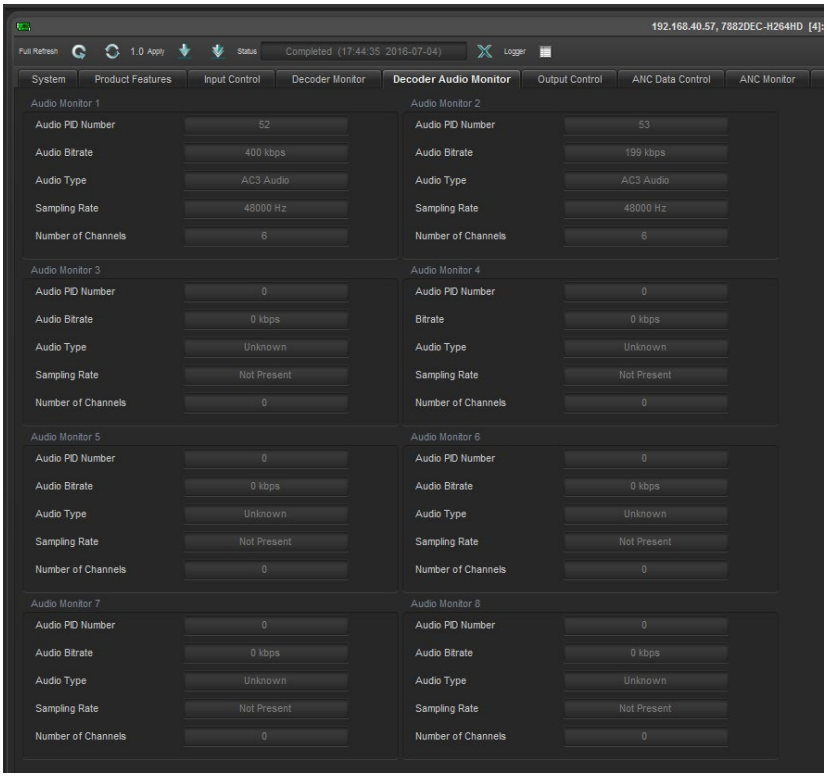


Figure 4-7: VistaLINK® - Decoder Audio Monitor Tab

The 7882DEC can decode up to 8 audio PIDs, and for each of the audio PIDs the following information is monitored and displayed.

Audio PID Number: This parameter displays the Audio Packet ID (PID) number for the audio stream that is being decoded.

Audio Bitrate: This parameter displays the audio bitrate for the audio stream that is being decoded.

Audio Type: This parameter displays the audio compression type of the audio stream that is being decoded.

Sampling Rate: This parameter displays information such as sampling frequency; channel configuration etc. for the audio stream that is being decoded.

Number of Channels: This parameter displays the number of audio channels that are being decoded by the decoder.

4.6. OUTPUT CONTROL

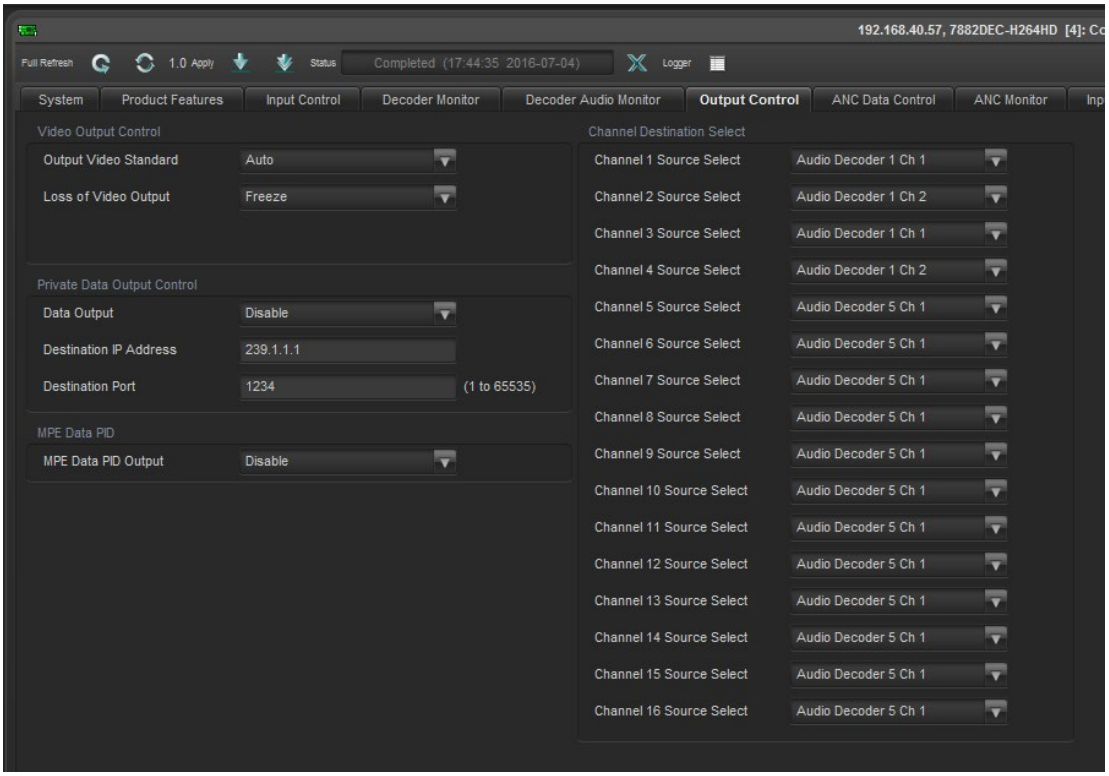


Figure 4-8: VistaLINK® - Output Control Tab

Video Output Control

Output Video Standard: This control allows the user to select the output video standard.

Loss of Video Output: This parameter allows the user to set the response of the decoder when the video output is lost. The options include freeze, black, and blue, red and off.

Private Data Output Control

Data Output: This parameter allows the user to enable data output from the decoder.

Destination IP Address: This parameter allows the user to set the destination IP address of the output data.

Destination Port: This parameter allows the user to set the destination port number of the output data.

Channel Destination Select

Channel <1-16> Source Select: This parameter allows the user to specify which decoded audio channel to use for each source.

4.7. ANC DATA CONTROL

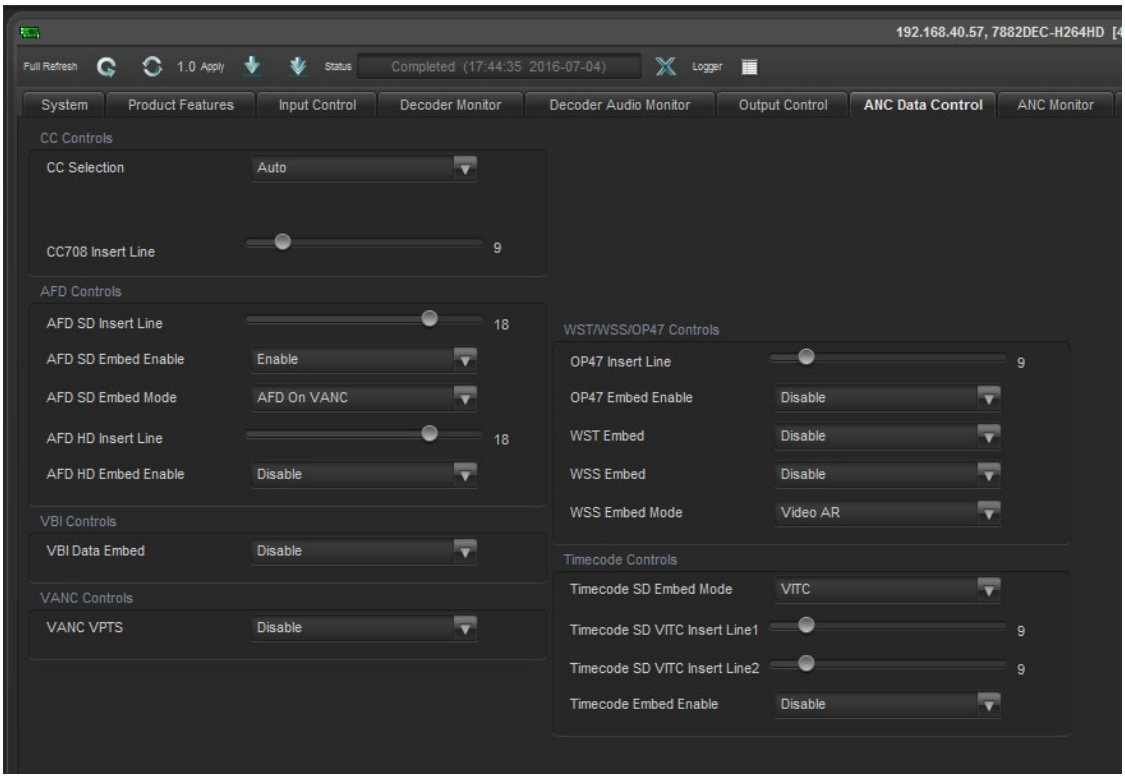


Figure 4-9: VistaLINK® - ANC Data Control Tab

CC Controls

CC Selection: This parameter allows the user to select if Closed Caption 608/708/Divicom should be embedded on the decoded output. In Auto mode, it will automatically pick the correct CC type in the decoded transport stream. Other options include SCTE128 and disabled.

CC708 Insert Line: This parameter allows the user to select the line on which to insert the CC708 for ANC services.

AFD Controls

AFD SD Insert Line: This parameter allows the user to select the AFD insertion lines for SD video.

AFD SD Embed Enable: This parameter allows the user to enable AFD in the output for SD video.

AFD SD Embed Mode: This drop down allows the user to select the AFD data embedding in the Video Index (VI) or VANC.

AFD HD Insert Line: This parameter allows the user to select the AFD insertion lines for HD video.

AFD HD Embed Enable: This parameter allows the user to enable AFD in the output for HD video.

VBI Controls

VBI Data Embed: This parameter allows the user to enable VBI data in the output SDI.

VANC Controls

VANC VPTS: This control allows the user to enable or disable VANC VPTS.

WST/WSS/OP47 Controls

OP47 Insert Line: This parameter allows the user to select the OP47 insertion lines for ANC services.

OP47 Embed Enable: This parameter allows the user to enable the embedding of OP47 in the output.

WST Embed: This parameter allows the user to enable the embedding of World Standard Teletext in the output SDI.

WSS Embed: This parameter allows the user to enable the embedding of WSS in the output SDI.

WSS Embed Mode: This parameter allows the user to select the embedding mode for WSS. The two options available include AR mode and PID mode. If the user selects AR mode, WSS is generated based on the video display aspect ratio extracted from the elementary stream. If the user selects PID mode, WSS is generated using the data extracted per ETSI EN472 and EN775. Data is carried in separate PID.

Timecode Controls

Timecode SD Embed Mode: This parameter allows the user to select if SD VITC timecode is embedded in the output SDI or if ATC timecode is embedded in the output SDI.

Timecode SD VITC Insert: This parameter allows the user to select the insertion lines for the SD VITC Time Code data.

Timecode Embed Enable: This parameter allows the user to enable the embedding of Time Code.

4.8. ANC MONITOR

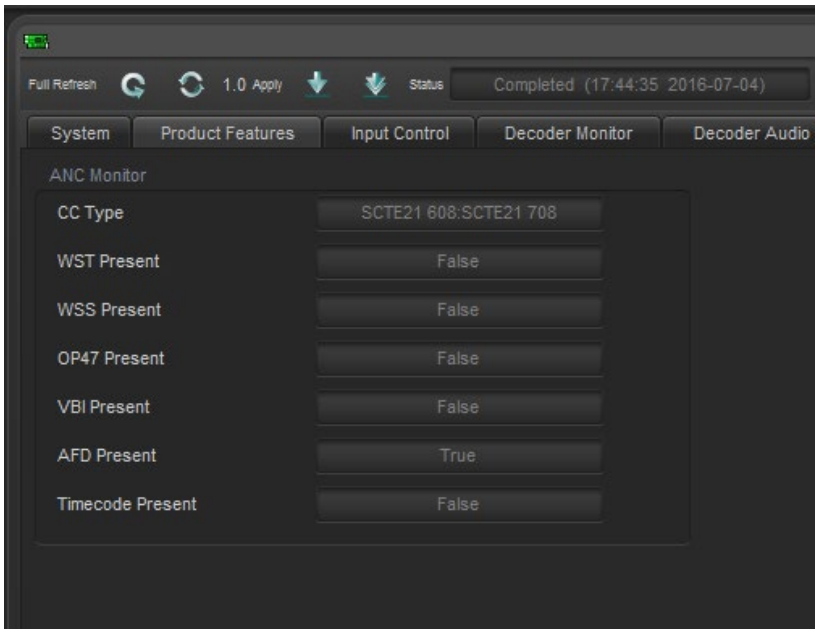


Figure 4-10: VistaLINK® - ANC Monitor Tab

ANC Monitor

CC Type: This parameter displays the type of encoded closed captions present in the Transport Stream.

WST Present: This parameter displays the status of the WST.

WST Present: This parameter displays the status of the WSS.

OP47 Present: This parameter displays the status of the OP47.

VBI Present: This parameter displays the status of the VBI.

AFD Present: This parameter displays the status of the AFD.

Timecode Present: This parameter displays the status of the timecode.

4.9. INPUT FAULTS

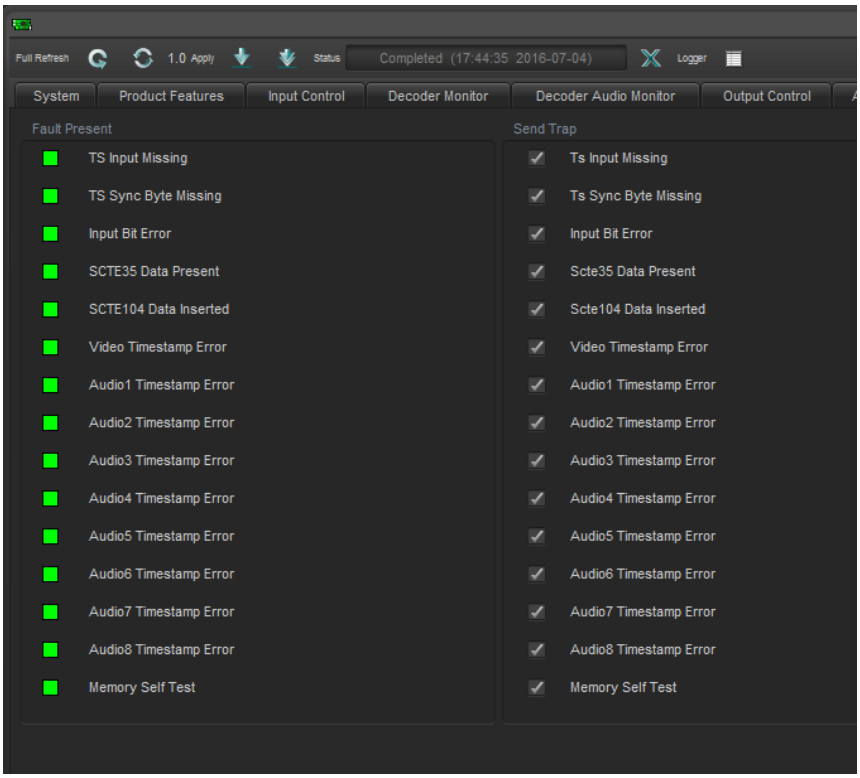


Figure 4-11: VistaLINK® - Input Faults Tab

TS Input Missing: Transport Stream input signal detection. The alarm is triggered when enabled and the input stream is missing.

TS Sync Byte Missing: Transport Stream Sync Byte 0x47 detection. The alarm is triggered when enabled and the TS Sync Byte 0x47 is missing.

Input Bit Error: Input bit error detection. The alarm is triggered when enabled and there is an error in the input bits.

SCTE35 Data Present: SCTE35 Data present monitoring. The alarm is triggered when enabled and the SCTE35 data is no longer present.

SCTE104 Data Inserted: SCTE104 Data insertion monitoring. The alarm is trigged when SCTE35 trigger is translated and inserted as SCTE104 on the decoder output.

Video Timestamp Error: This parameter provides the status of the video link. The alarm is triggered when enabled and there is a video timestamp error. This fault is used as an engineering reference tool.

Audio Timestamp Error: The audio timestamp errors provide the status of the audio link. The alarm is triggered when enabled and there is an audio timestamp error. This fault is used as an engineering reference tool.

Memory Self Test: The Fault Present monitor displays the fault condition of the memory self test. Green indicates healthy while red indicates a fault. Enabling the Send Trap control sends out a trap if there is a fault generated by the memory self test.

4.10. SFP-ASI TRANSMIT

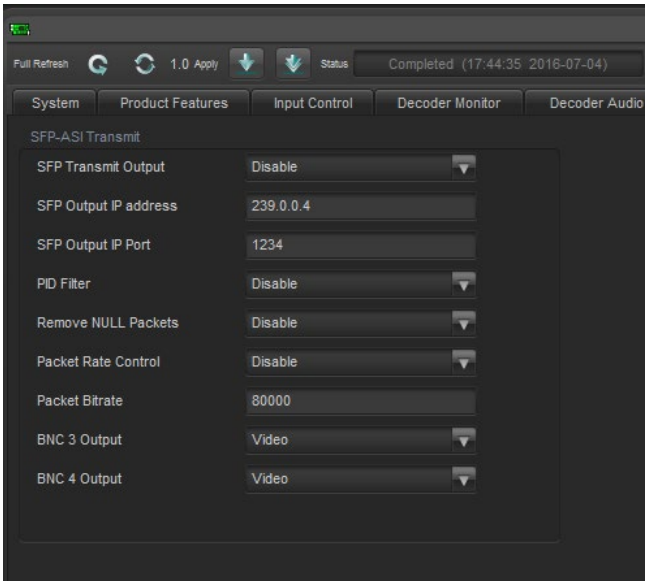


Figure 4-12: VistaLINK® - SFP-ASI Transmit Tab

SFP Transmit Output: This parameter allows the user to set the mode of the SFP transmit feature, to enable or disable transmitting on a specific output.

SFP Output IP Address: This parameter allows the user to set the output IP address of the SFP transmit stream if SFP Transmit is enabled.

SFP Output IP Port: This parameter allows the user to set the output IP port number of the SFP transmit stream if SFP Transmit is enabled.

PID Filter: This parameter allows the user to enable PID filtering for the SFP transmit output stream.

Remove NULL Packets: This parameter allows the user to enable the removal of NULL packets in the SFP transmit stream.

Packet Rate Control: This parameter allows the user to enable the packet rate control in the SFP transmit stream.

Packet Bitrate: This parameter displays the packet bitrate of data in the SFP transmit stream in kbps.

BNC <3,4> Output: This parameter allows the user to select the BNC <3,4> output type.

4.11. INBAND CONTROL

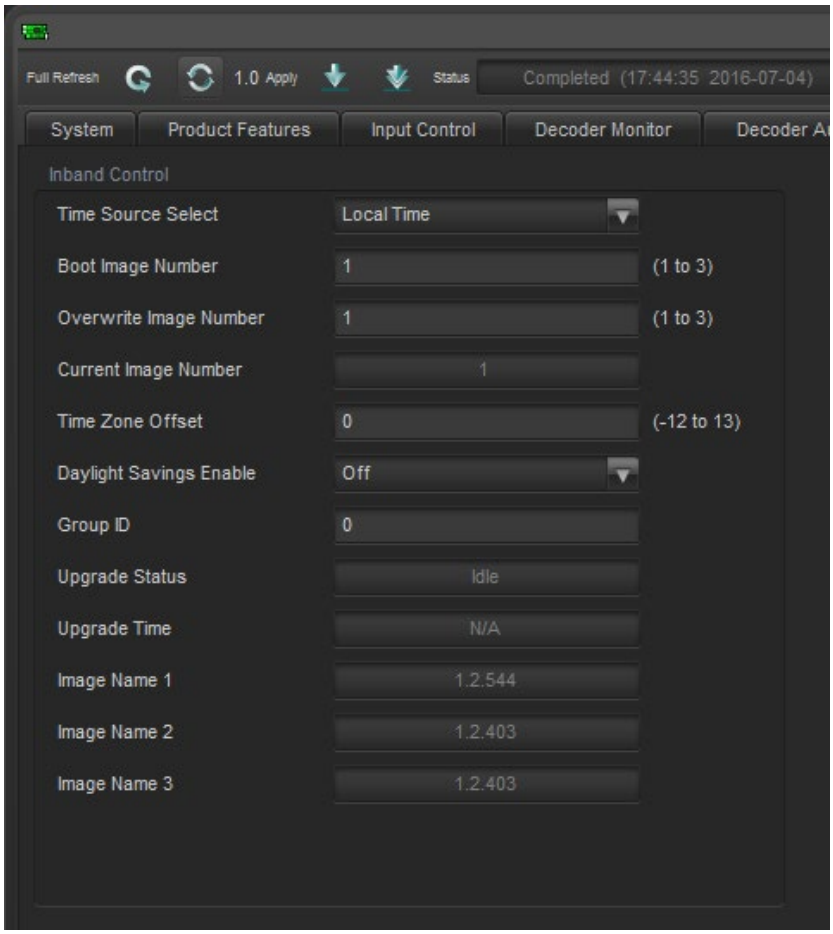


Figure 4-13: VistaLINK® - Inband Control Tab

Time Source Select: This parameter allows the user to set the time source that will identify when the decoder should reboot. Available options include Local Time, External NTP and LTC PID.

Boot Image Number: This parameter allows the user to set the image number to boot the next time a reboot is triggered.

Overwrite Image Number: This parameter allows the user to set the image number to overwrite when doing a webpage or VLPro upgrade.
Current Image Number: This parameter returns the image number that is currently running.

Time Zone Offset: This parameter allows the user to set the time zone offset, for GMT, to apply to the external NTP and local clock time sources.

Daylight Savings Enable: This parameter allows the user to set if daylight savings time should be enabled when using the external NTP or local clock source.

Group ID: This parameter sets the Group ID number for the device ID used for inband purposes.

Upgrade Status: This parameter returns the status for inband firmware upgrades.

Upgrade Time: This parameter returns the time pending for inband firmware upgrades.

Image Name <1-3>: This parameter displays the upgrade image names that are currently written to flash.

5. WEB INTERFACE

After the card has been installed and configured with the required network addresses for the control port, it can be completely configured using the web interface. To do this, simply type in the IP address of the control port on the 7882DEC-H264HD-IPASI module in the web browser.

Note: Computer must be on the same subnet in order to have communication with module.

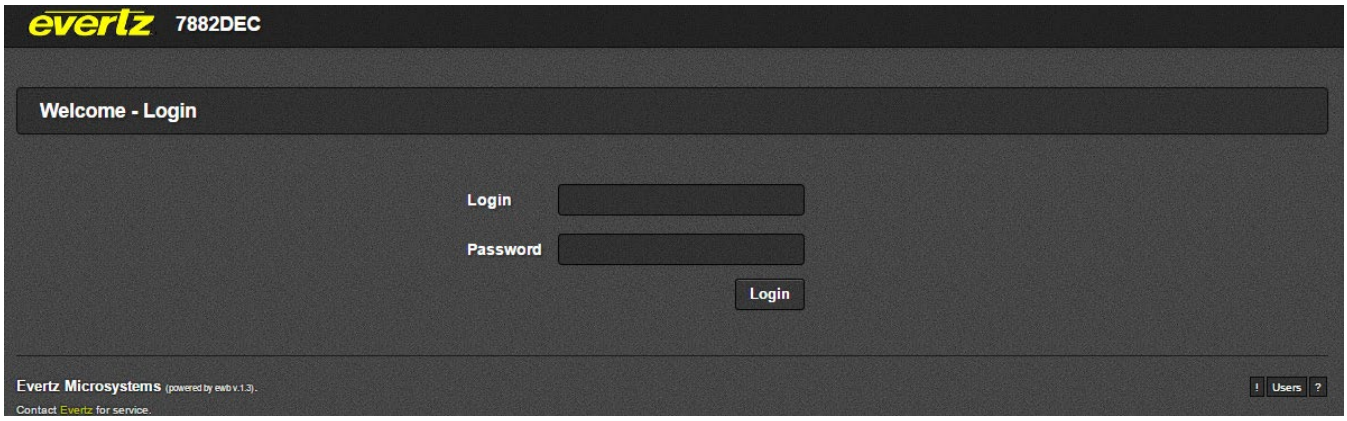


Figure 5-1: WebEASY® – Login Menu

For login and password, type in "**root**" and "**evertz**" respectively.

Due to the size of the certain menu tabs, we will be breaking up screen tab images into multiple images. Some of the screen shots will also require the user to zoom in to see the image more clearly.

5.1. SYSTEM

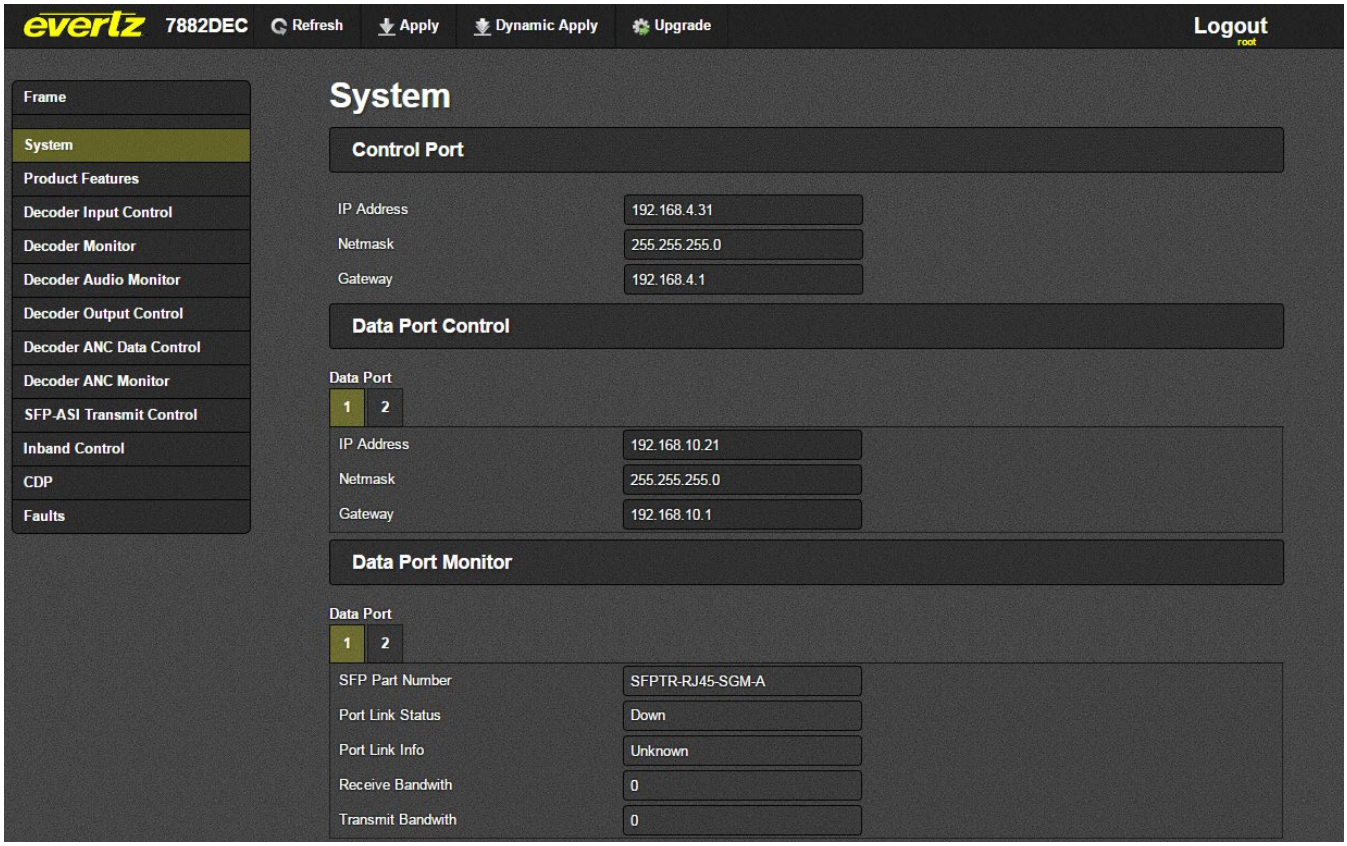


Figure 5-2: WebEASY® – System Tab

Control Port

IP Address: This control allows the user to set the IP address on the Control Port. This control will also display the currently set IP address.

Netmask: This control allows the user to set the Netmask for the Control Port IP address. This control will also display the currently set Netmask.

Gateway: This control allows the user to set the Gateway for the Control Port. This control will also display the currently set Gateway address.

Data Port Control 1 & 2

IP Address: This control allows the user to set the IP address on the Data Port. This control will also display the currently set IP address.

Netmask: This control allows the user to set the Netmask for the Data Port IP address. This control will also display the currently set Netmask.

Gateway: This control allows the user to set the Gateway for the Data Port. This control will also display the currently set Gateway address.

Data Port Monitor 1 & 2

SFP Part Number: This parameter returns the part number of the SFP located in the Data Port.

Port Link Status: This parameter returns the link status for the Data Port. The status could be either Up or Down.

Port Link Info: When the link is Up, this parameter returns link speed & duplex mode information for the Data Port.

Receive Bandwidth: When the link is Up, this parameter returns the receive bandwidth currently being read on the Data Port. Reading is in kbps.

Transmit Bandwidth: When the link is Up, this parameter returns the transmit bandwidth currently being sent on the Data Port. Reading is in kbps.

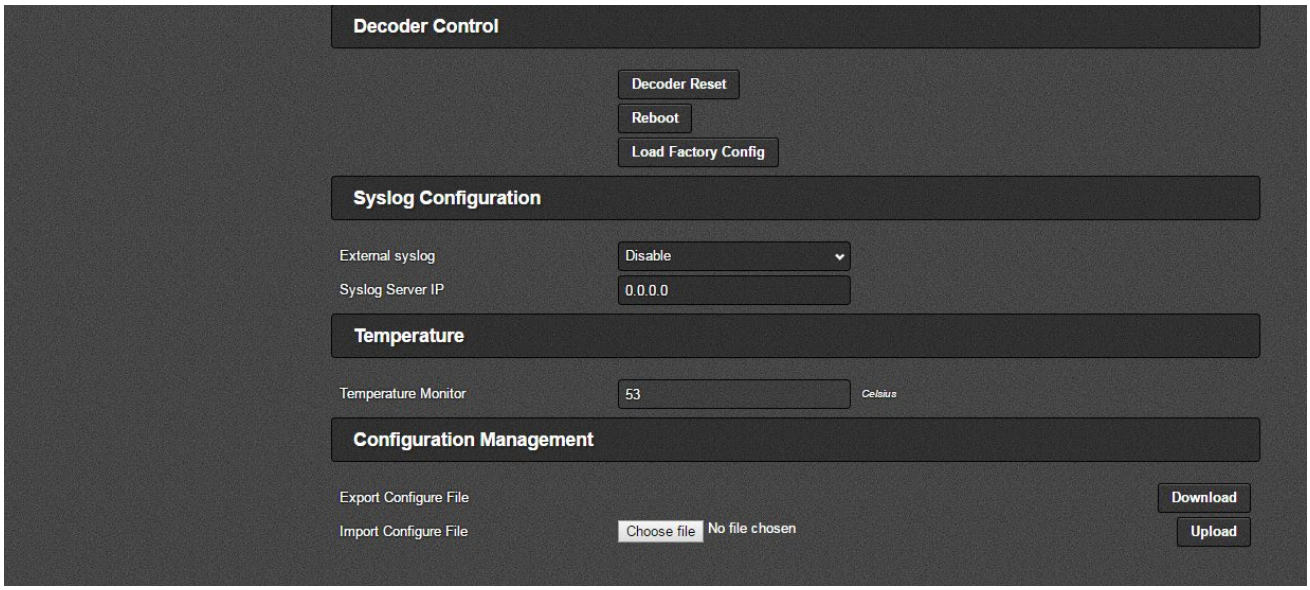


Figure 5-3: WebEASY® – System Tab continued

Decoder Control

Decoder Reset: This control is reserved for engineering use.

Decoder Reboot: This control can be used to soft reboot the device. It will cycle the power relay and cause an effective power cycle.

Load Factory Configuration: This control returns all parameters to the original factory default.

Syslog Configuration

Syslog is a valuable tool for debugging the device operation. It is essentially serial readouts over IP, sent to a dedicated server. If issues are present, Evertz can help install and setup a syslog server for constant monitoring of the device activity.

External Syslog: This parameter allows the user to enable or disable sending syslog information to the configured external server.

System Server IP: This parameter allows the user to assign the external syslog server IP address. This will be the address of a PC with the syslog server software installed (e.g. Kiwi Syslog Server)

Temperature

Temperature Monitor: This displays the temperature of the module.

Configuration Management

Export Configure File: This parameter allows the user to Export a config file for the entire decoder.

Import Configure File: This parameter allows the user to Import a config file for the entire decoder.

5.2. PRODUCT FEATURES

The 7882DEC-H264HD-IPASI has the ability to enable features by adding/updating applicable licenses.

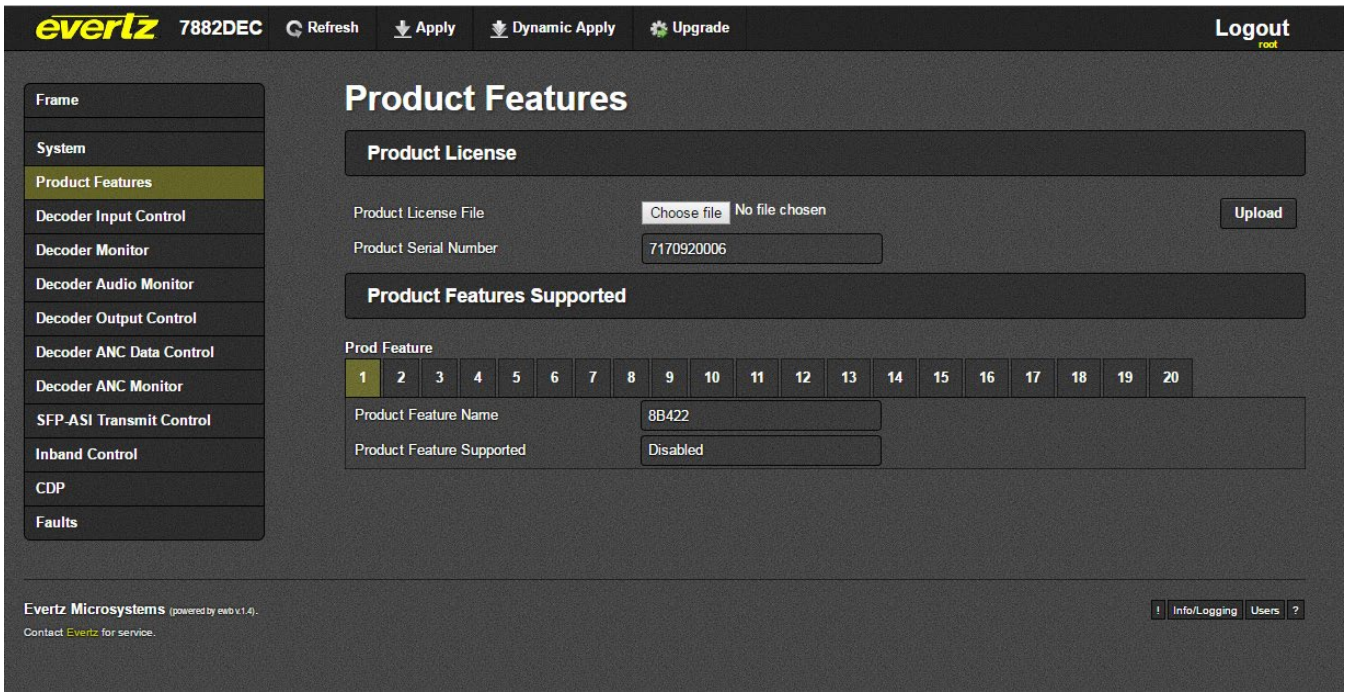


Figure 5-4: WebEASY® – Product Features Tab

Product License

Product License File: This parameter allows the user to search for their product license file.

Product Serial Number: This parameter displays the card serial number. This is required by Evertz when generating or updating license files on the 7882DEC-H264HD-IPASI.

Product Features Supported

Product Feature Name: This parameter returns the product features supported on this card, as well as whether the product support is enabled or disabled.

Product Feature Supported: This parameter displays the status of features currently supported. Enabled means the license key is installed and disabled means the license key is not installed.

5.3. DECODER INPUT CONTROL

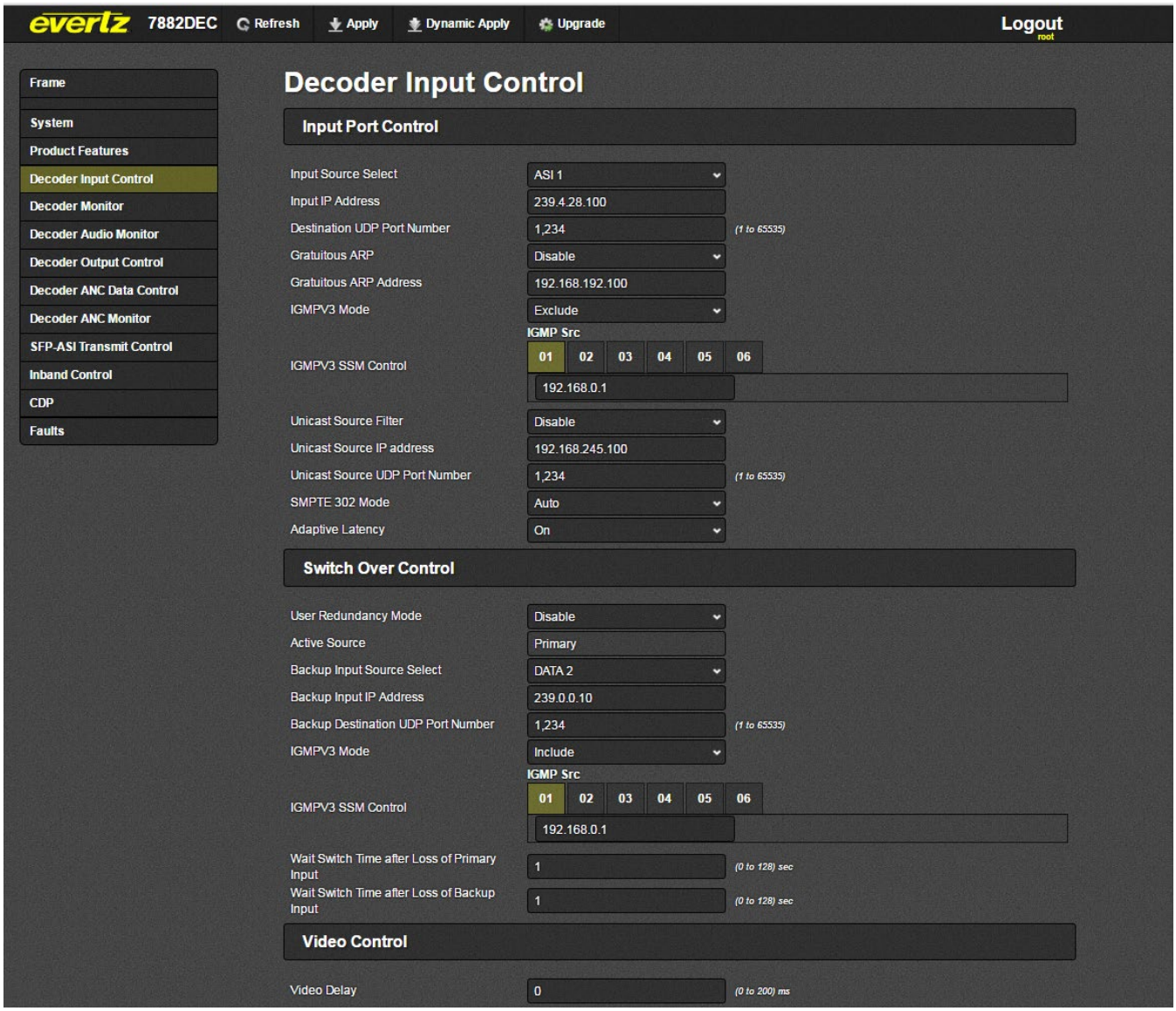


Figure 5-5: WebEASY® – Decoder Input Control Tab

Input Port Control

Input Source Select: This control allows the user to select which port the data will enter the decoder from.

Input IP Address: This control allows the user to select the IP Address of the input data.

Destination UDP Port Number: This control allows user to select the destination UDP port number of the data.

Gratuitous ARP: This parameter allows the user to enable or disable the Gratuitous ARP feature. This is most useful when accepting a unicast stream to prevent last hop switch from Mac address flooding.

Gratuitous ARP Address: When Gratuitous ARP is enabled, the Decoder Data port will ARP for the IP address provided at an approximate 2 minute interval. A suggestion is to enter the default gateway of the subnet. This will refresh the switches' MAC address table and help to prevent a unicast flood scenario.

IGMPv3 Mode: This control allows the user to enable the use of the IGMPv3 mode.

IGMPv3 SSM Source <1-6>: This control allows the user to set the IP addresses to be used while forming the source filter for IGMPv3 communications.

Unicast Source Filter: This control allows the user to enable or disable the Unicast Source filtering. This control works similar to IGMP v3 SSM.

Unicast Source IP Address: This control allows the user to enter a source IP address of a unicast stream. The decoder will not accept the input unless the source IP matches in the unicast stream (if enabled).

Unicast Source UDP Port Number: This control allows the user to also filter by the UDP port of the incoming unicast stream. The decoder will not accept the input unless the UDP port matches in the unicast stream (if enabled).

SMPTE302 Mode: This parameter allows the user to select how the SMPTE302 audio streams are handled; the options include PCM, DolbyE and AC3.

Adaptive Latency: This parameter allows the user to enable adaptive latency mode. This parameter can also be configured to the Min latency mode.

When adaptive latency is configured "ON", input stream HRD parameters are examined to determine what buffer settings can be applied for the decoder.
When configured "OFF", input stream HRD parameters are ignored and the maximum buffer offset is applied to the decoder as a safety precaution.
When configured "MIN", input stream HRD parameters are examined to determine what buffer settings can be applied for the decoder, but also more aggressively if HRD parameters are missing, the decoder tries to infer from other parameters. This is an advanced setting, the user must be very careful before setting the decoder to MIN adaptive latency mode. If the buffers are set to minimum level and the HRD parameters are incorrect, this will result in a buffer underflow.

Switch Over Control

User Redundancy Mode: This control allows the user to enable or disable redundancy mode on input.

Active Source: This monitor displays the active input.

Backup Input Source Select: This control allows the user to select SFP 1 or SFP 2 as the backup port.

Backup Input IP Address: This control allows the user to specify the multicast address to be used as backup.

Backup Destination UDP Port Number: This parameter allows the user to select the destination UDP port number of the backup streaming output.

IGMPv3 Mode: This control allows the user to enable the use of the IGMPv3 mode.

IGMPv3 SSM Control <1-6>: This control allows the user to set the IP addresses to be used while forming the source filter for IGMPv3 communications.

Wait Switch Time after Loss of Primary Input: This parameter controls the time to wait after seeing a Primary input loss in seconds. After the timeout, the input will switch to backup.

Wait Switch Time after Loss of Backup Input: This parameter controls the time to wait after seeing a Backup input loss in seconds. After the timeout, the input will switch to primary.

Video Control

Video Delay: This parameter allows the user to add a delay to the video to synchronize the audio and the video stream. This can be done by sliding the video delay to the desired setting, to a maximum of 50ms.

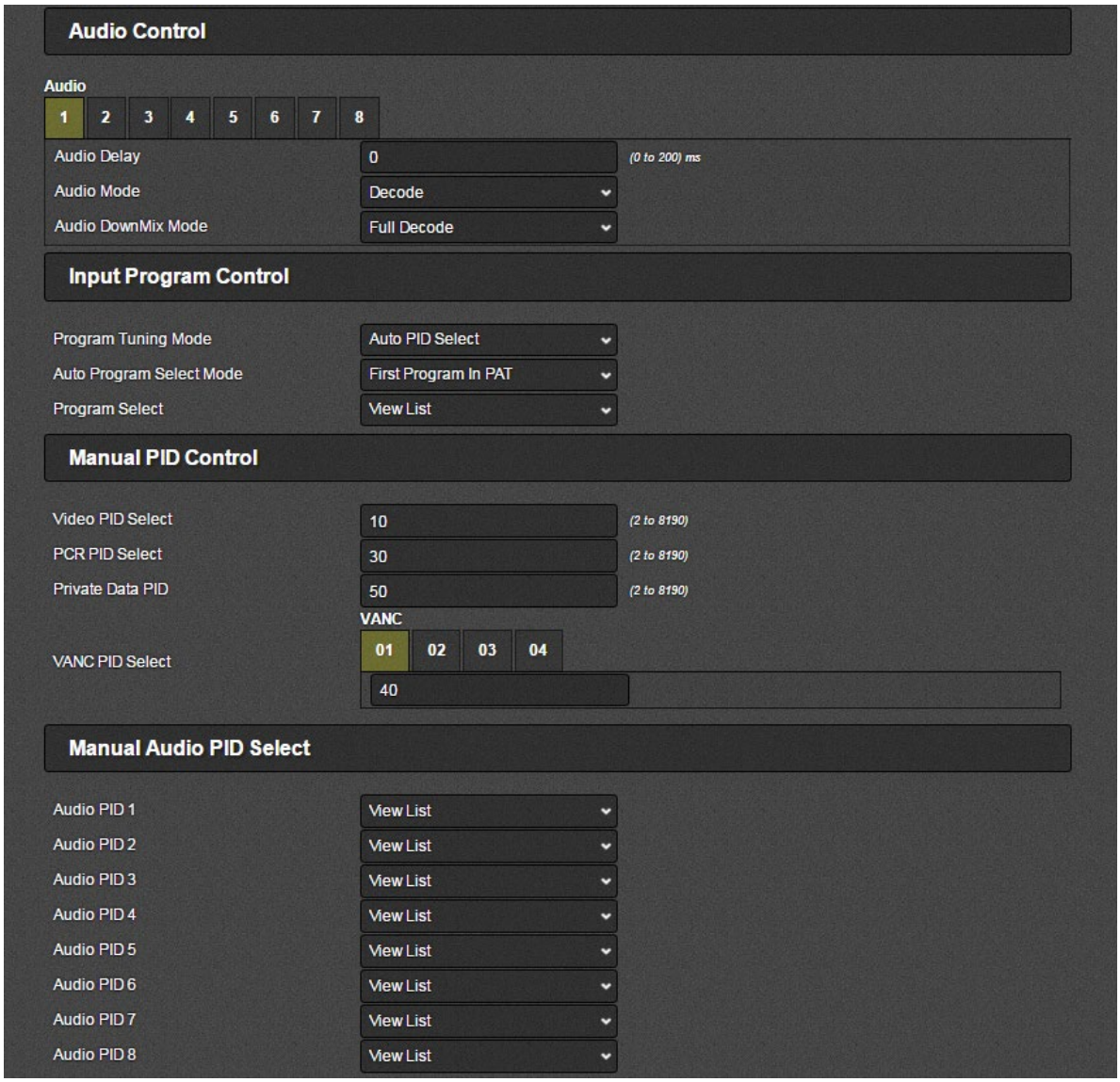


Figure 5-6: WebEASY® – Decoder Input Control Tab continued

Audio Control

Audio Delay <1-8>: This parameter allows the user to add a delay to the audio to synchronize the audio and the video stream. This can be done by sliding the audio delay to the desired setting, to a maximum of 50ms for each of the 8 audio streams.

Audio Mode <1-8>: This parameter allows the user to set the audio mode to either bypass or decode the audio stream.

Audio DownMix Mode: This parameter allows the user to set the audio downmix mode.

Input Program Control

Program Tuning Mode: This parameter allows the user to tell the decoder how to select the program to decode. The options include Auto or Manual PID Select.

Auto Program Select Mode: This parameter allows the user to specify which program to select to decode, the options include First Program in PAT, Specific Service Name, Specific Program Select or Lowest Program Number. This parameter is only available if Program Tuning Mode is set to Auto PID Select.

Program Select: This parameter allows the user to select the program to decode; this parameter is only available if Auto Program Select Mode is set to Specific Program Select.

VANC PID Select: This parameter allows the user to specify the SMPTE2038 PID. This PID is required to reconstruct Vertical Ancillary data from the SMPTE2038.

Manual Audio PID Select

Audio PID <1-8>: This parameter allows the user to set the audio Packet ID (PID) for the associated audio stream.

5.4. DECODER MONITOR

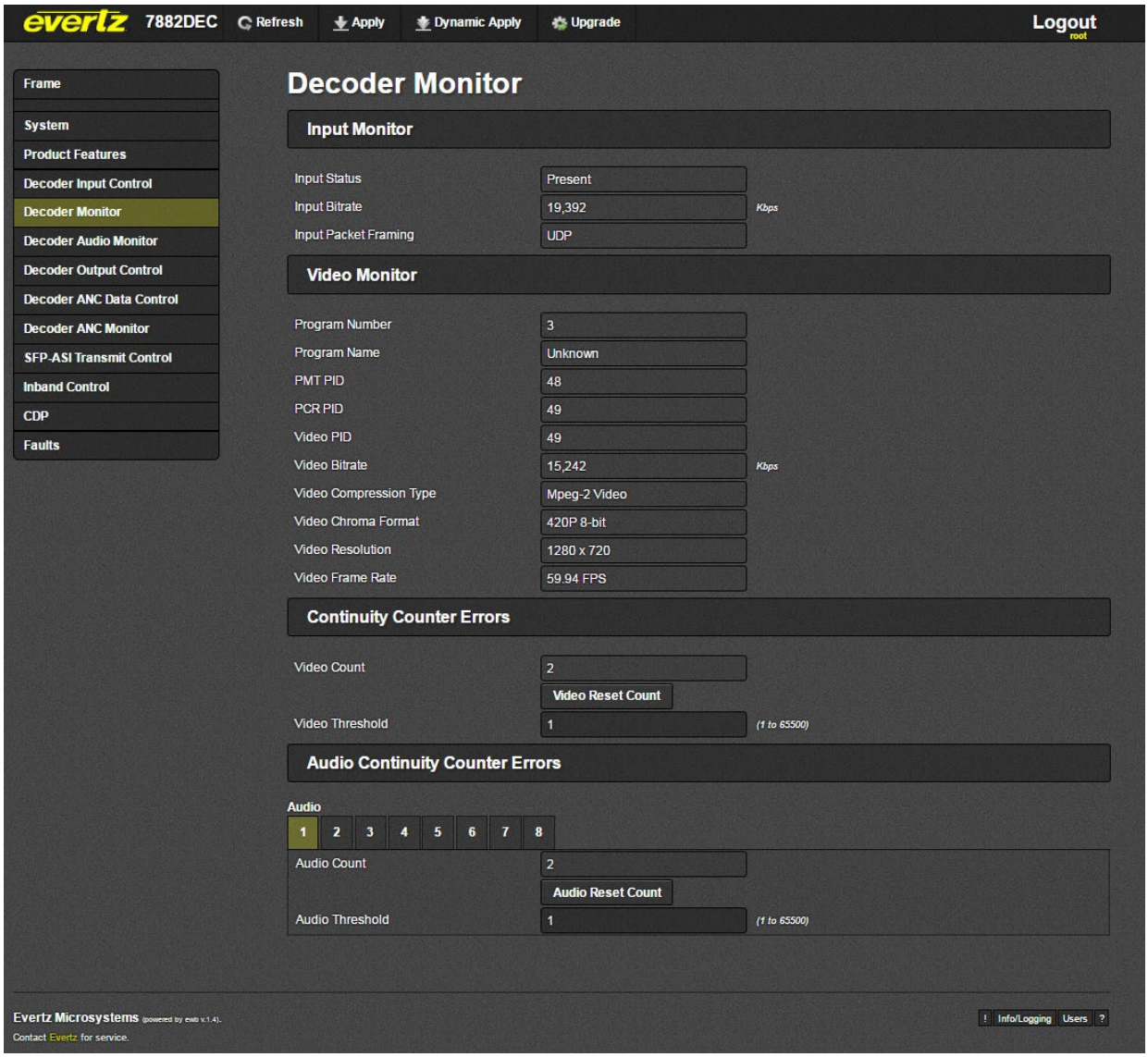


Figure 5-7: WebEASY® – Decoder Monitor Tab

Input Monitor

Input Status: This parameter returns the status of the input video.

Input Bitrate: This parameter returns the bitrate of the input video in kbps.

Input Packet Framing: This parameter reflects if the incoming packets are UDP or RTP.

Video Monitor

Program Number: This parameter returns the program number for the program being demuxed/decoded.

Program Name: This parameter displays the program name associated with the video input.

PMT PID: This parameter displays the Program Map Table Packet ID for the associated video input.

PCR PID: This parameter displays the Program Clock Reference Packet ID for the associated video input.

Video PID: This parameter displays the Video Packet ID (PID). The video PID allows the decoder to sort the video packets in the transport stream to organize them for output in kbps.

Video Bitrate: This parameter displays the video bitrate of the associated video stream.

Video Compression Type: This parameter displays the video compression type of the associated video stream.

Video Chroma Format: This parameter displays the chroma format of the associated video stream.

Video Resolution: This parameter displays the video resolution of the associated video stream.

Video Frame Rate: This parameter displays the video frame rate of the associated video stream.

Continuity Counter Error

Video Count: This parameter returns the current value of the video CC error count.

Video Reset Count: This parameter allows the user to reset the count of video continuity errors.

Video Threshold: This parameter allows the user to set the video CC error threshold for the video CC error traps.

Audio Continuity Counter Error

Audio Count: This parameter displays the number of audio continuity errors counted.

Audio Reset Count: This parameter allows the user to reset the count of audio continuity errors.

Audio Threshold: This parameter displays the error threshold for audio continuity.

5.5. DECODER AUDIO MONITOR

Figure 5-8: : WebEASY® – Decoder Audio Monitor Tab

Audio Monitor

Audio PID Number: This parameter displays the Audio Packet ID (PID) number for the audio stream that is being decoded.

Audio Bitrate: This parameter displays the audio bitrate for the audio stream that is being decoded.

Audio Type: This parameter displays the audio compression type of the audio stream that is being decoded.

Sampling Rate: This parameter displays information such as sampling frequency; channel configuration etc for the audio stream tat is being decoded.

Number of Channels: This parameter displays the number of audio channels that are being decoded by the decoder.

5.6. DECODER OUTPUT CONTROL

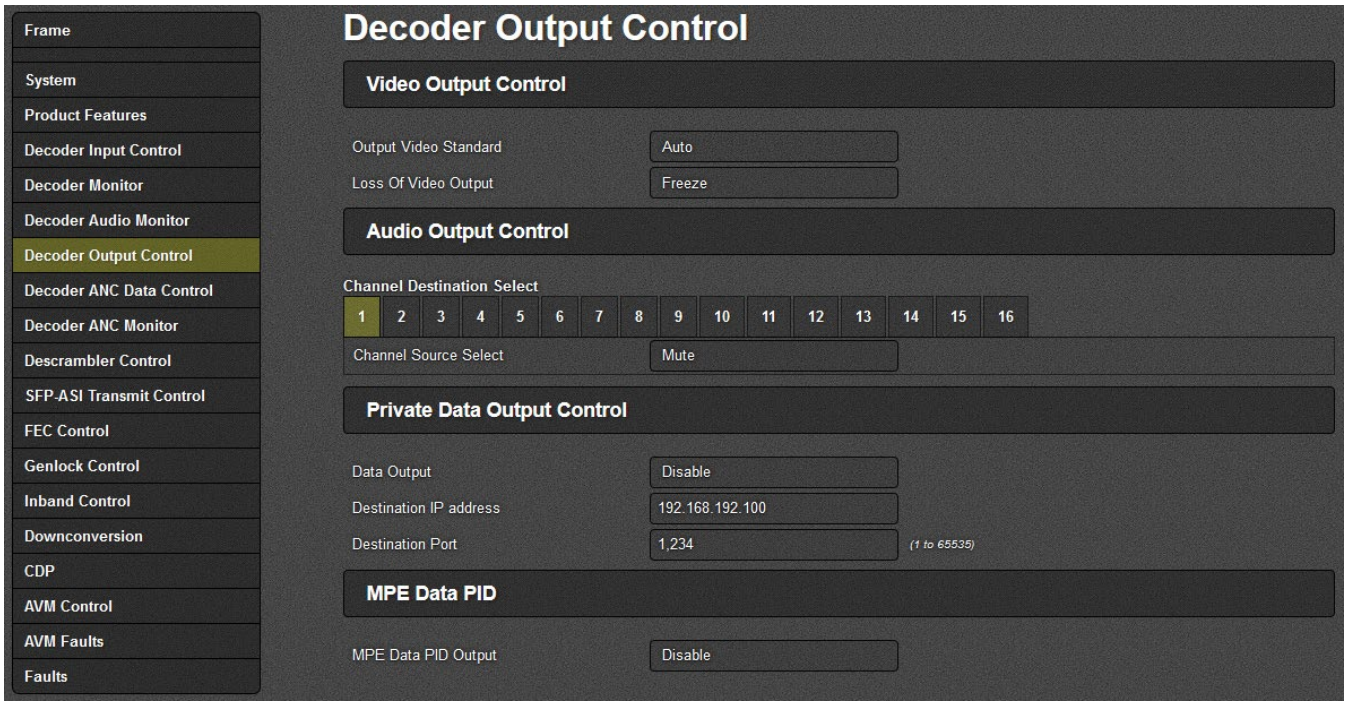


Figure 5-9: WebEASY® – Decoder Output Control Tab

Video Output Control

Output Video Standard: This control allows the user to select the output video standard.

Loss of Video Output: This parameter allows the user to set the response of the decoder when the video output is lost. The options include freeze, black and blue, red and off.

Audio Output Control

Channel <1-16> Source Select: This parameter allows the user to specify which decoded audio channel to use for each source.

Private Data Output Control

Data Output: This parameter allows the user to enable data output from the decoder.

Destination IP Address: This parameter allows the user to set the destination IP address of the output data.

Destination Port: This parameter allows the user to set the destination port number of the output data.

5.7. DECODER ANC DATA CONTROL

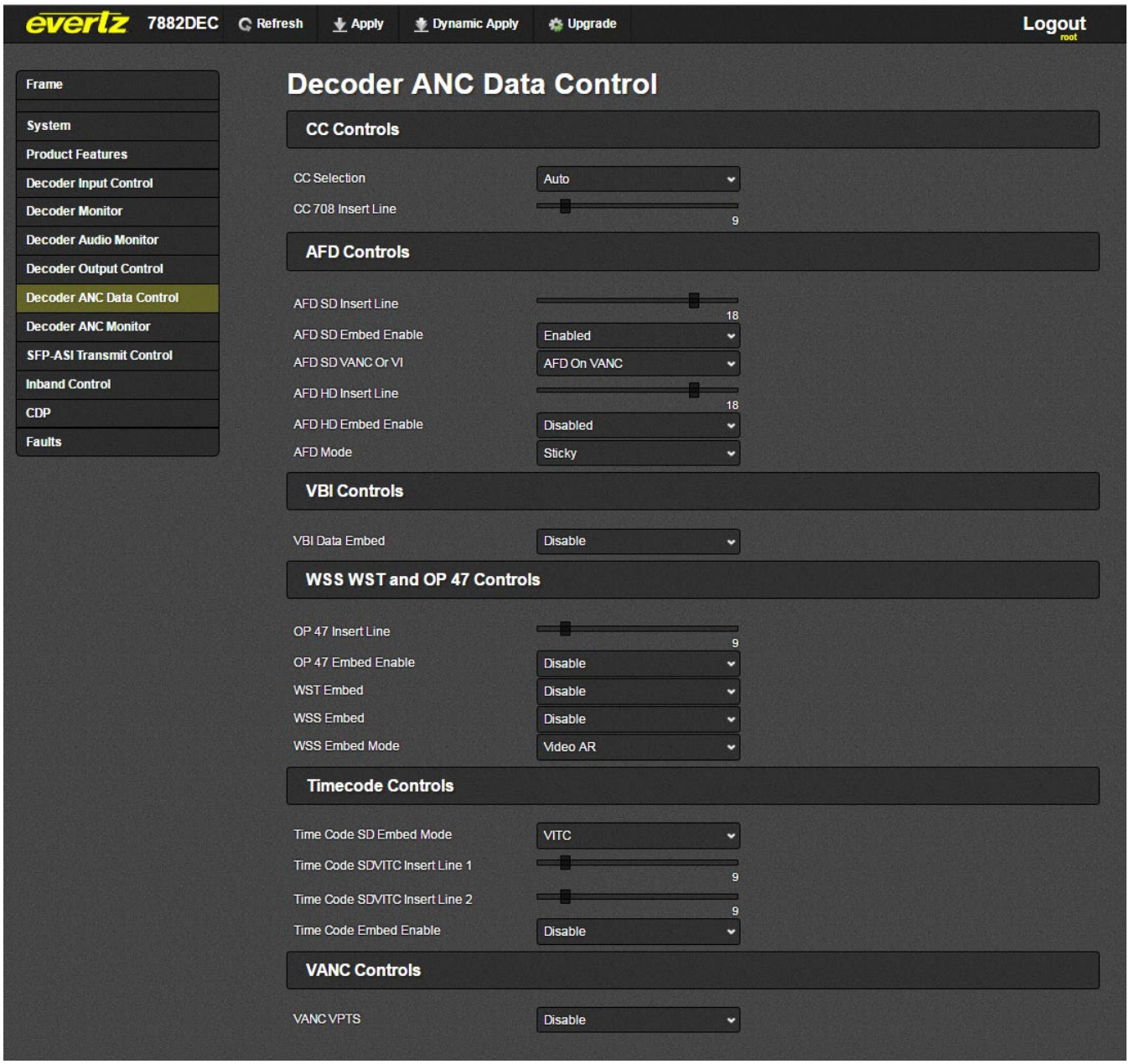


Figure 5-10: : WebEASY® – Decoder ANC Data Control Tab

Decoder ANC Data Control

CC Selection: This parameter allows the user to select the type of embedded Closed Captions to use.

CC708 Insert Line: This parameter allows the user to select the line on which to insert the CC708 for ANC services.

AFD SD Insert Line: This parameter allows the user to select the AFD insertion lines for SD video.

AFD SD Embed Enable: This parameter allows the user to enable or disable AFD in the output for SD video.

AFD SD VANC or VI: This parameter allows the user to select whether to embed AFD data on VANC or VI, the default is AFD On VANC.

AFD HD Insert Line: This parameter allows the user to select the AFD insertion lines for HD video.

AFD HD Embed Enable: This parameter allows the user to enable AFD in the output for HD video.

AFD Mode: This parameter allows the user to control if the AFD is set for Sticky or Follow Input.

VBI Data Embed: This parameter allows the user to enable VBI data in the output SDI.

SCTE104 Insert Line: This parameter allows the user to select the SCTE104 insertion lines for ANC service.

SCTE104 Embed Enable: This parameter allows the user to enable the embedding of SCTE104 ancillary packets in the output.

Splice Delay: SCTE104 splice delay for ANC services.

SCTE 104 GPO Invert: This parameter allows the user to invert the SCTE 104 GPO pulse.

OP47 Insert Line: This parameter allows the user to select the OP47 insertion lines for ANC services.

OP47 Embed Enable: This parameter allows the user to enable the embedding of OP47 Closed Captions in the output.

WST Embed: This parameter allows the user to enable the embedding of World Standard Teletext in the output SDI.

WSS Embed: This parameter allows the user to enable the embedding of WSS in the output SDI.

WSS Embed Mode: This parameter allows the user to select the embedding mode for WSS.

Timecode SD Embed Mode: This parameter allows the user to select the mode to use when embedding the Time Code for SD video.

Timecode SDVITC Insert Line <1-2>: This parameter allows the user to select the line to insert the SD VITC Time Code data.

Timecode Embed Enable: This parameter allows the user to enable the embedding of Time Code for SD video.

VANC VPTS: This parameter allows the user to enable or disable VANC VPTS.

5.8. DECODER ANC MONITOR

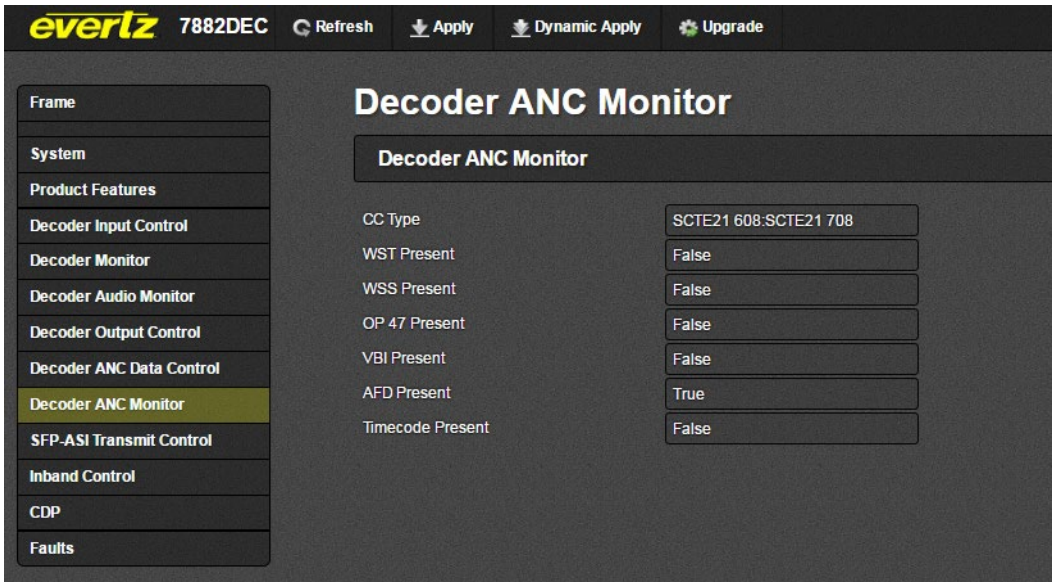


Figure 5-11: WebEASY® – Decoder ANC Monitor Tab

Decoder ANC Monitor

CC Type: This parameter displays the type of embedded closed captions used in the output.

WST Present: This parameter displays the status of the WST.

WSS Present: This parameter displays the status of the WSS.

OP 47 Present: This parameter displays the status of the OP47.

VBI Present: This parameter displays the status of the VBI.

AFD Present: This parameter displays the status of the AFD.

Timecode Present: This parameter displays the status of the timecode.

5.9. SFP-ASI TRANSMIT CONTROL

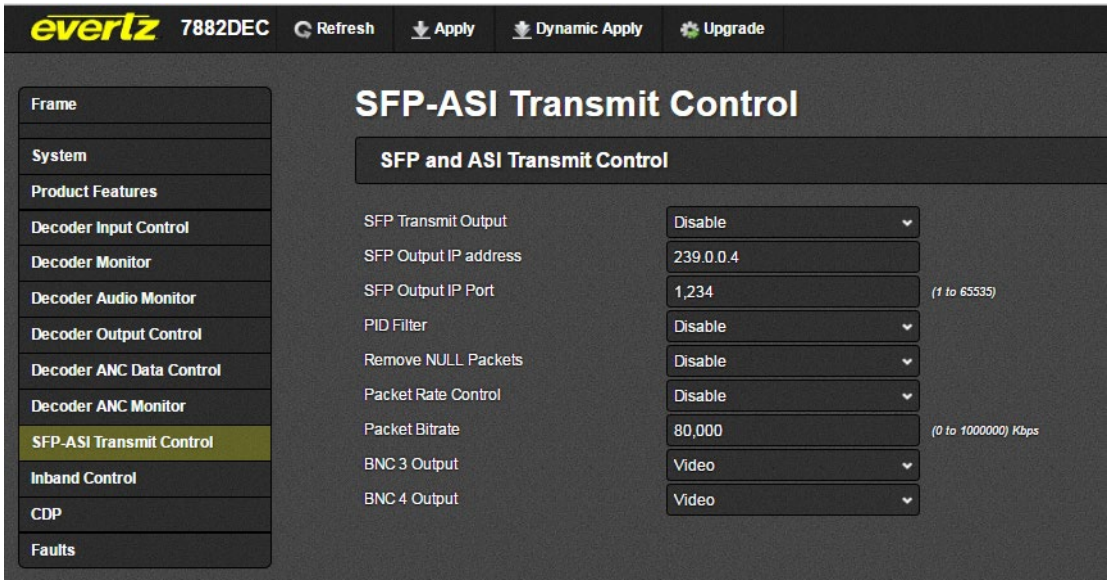


Figure 5-12: : WebEASY® – SFP Transmit Control Tab

SFP Transmit Control

SFP Transmit Output: This parameter allows the user to set the mode of the SFP transmit feature, to enable or disable transmitting on a specific output.

SFP Output IP Address: This parameter allows the user to set the output IP address of the SFP transmit stream if SFP Transmit is enabled.

SFP Output IP Port: This parameter allows the user to set the output IP port number of the SFP transmit stream if SFP Transmit is enabled.

PID Filter: This parameter allows the user to enable PID filtering for the SFP transmit output stream.

Remove NULL Packets: This parameter allows the user to enable the removal of NULL packets in the SFP transmit stream.

Packet Rate Control: This parameter allows the user to enable the packet rate control in the SFP transmit stream.

Packet Bitrate: This parameter displays the packet bitrate of data in the SFP transmit stream in kbps.

BNC <3,4> Output: This parameter allows the user to select the BNC <3,4> output type.

5.10. INBAND CONTROL

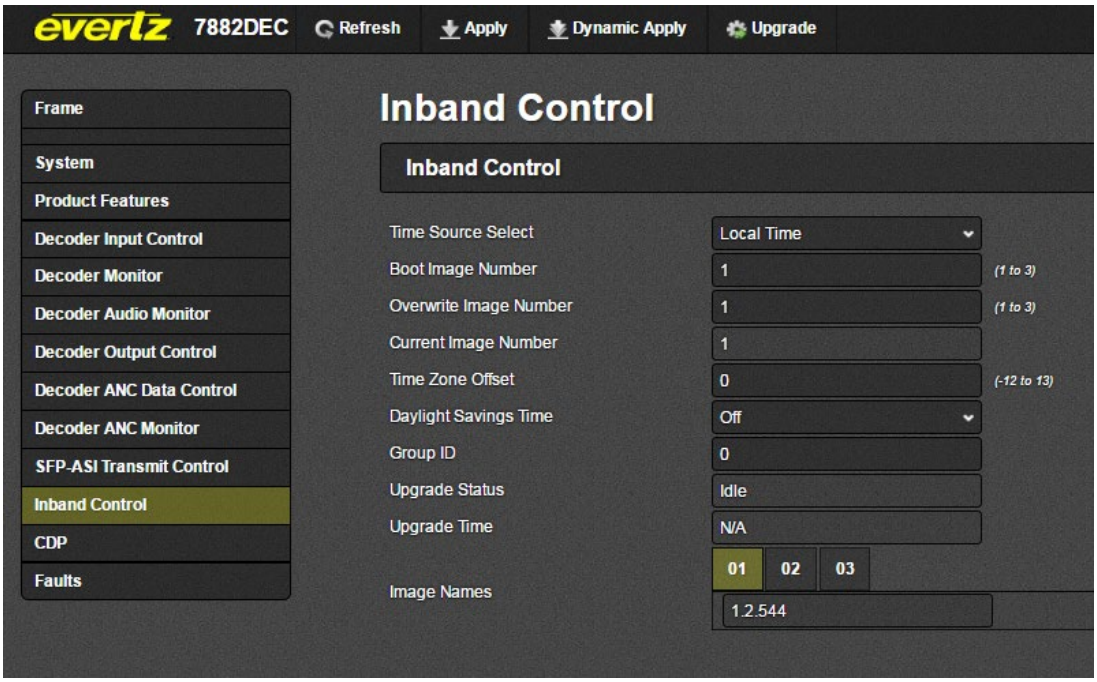


Figure 5-13: : WebEASY® – Inband Control Tab

Inband Control

Time Source Select: This parameter allows the user to set the time source to be used when checking if a firmware upgrade is needed for an upgrade image with a timestamp.

Boot Image Number: This parameter allows the user to set the image number to boot the next time a reboot is triggered.

Overwrite Image Number: This parameter allows the user to set the image number to overwrite when doing a webpage or VLPro upgrade.

Current Image Number: This parameter returns the image number that is currently running.

Time Zone Offset: This parameter allows the user to set the time zone offset, for GMT, to apply to the external NTP and local clock time sources.

Daylight Savings Time: This parameter allows the user to set if daylight savings time should be enabled when using the external NTP or local clock source.

Group ID: This parameter sets the Group ID number for the device ID used for inband purposes.

Upgrade Status: This parameter returns the status for inband firmware upgrades.

Upgrade Time: This parameter returns the time pending for inband firmware upgrades.

Image Name: This parameter displays the upgrade image names that are currently written to flash.

5.11. FAULTS

7882DEC-H264HD-IPASI has a Fault Page where the following information can have traps set and will display if there is a fault present. Red indicates there is a fault present and green indicates there is no fault present.

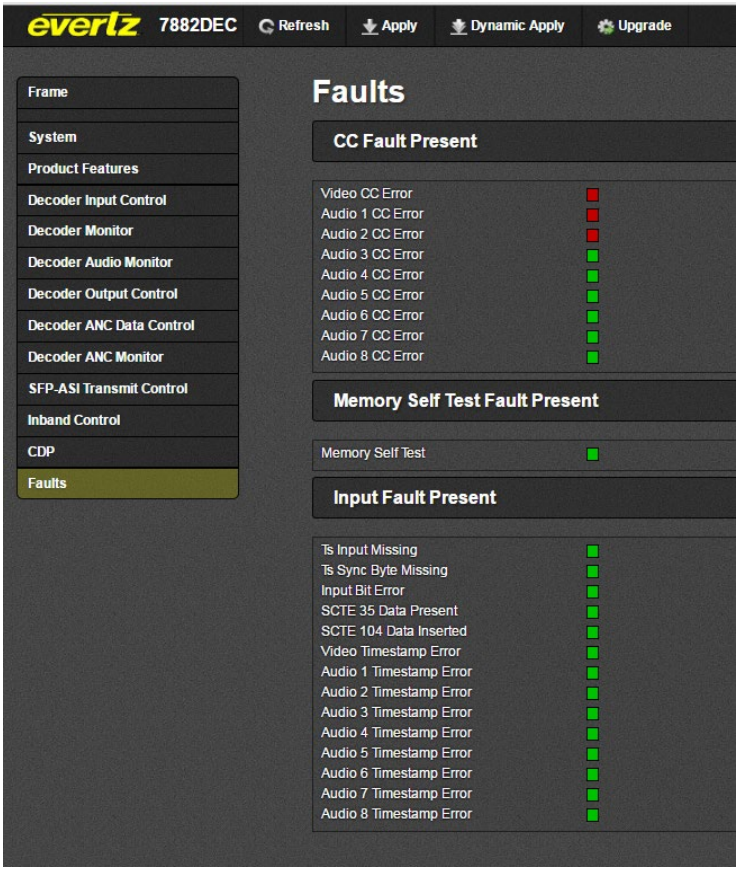


Figure 5-14: : WebEASY® – Faults Tab

CC Fault Present

Video CC Error: This control checks whether a continuity counter fault is currently present.

Audio 1-4 CC Error: This control checks whether a continuity counter fault is currently present.

Memory Self Test Fault Present

Memory Self Test: This control checks whether a memory self test fault is currently present.

Input Fault Present

TS Input Missing: This control checks whether an input fault is currently present.

TS Sync Byte Missing: This control checks whether a TS Sync Byte is missing.

Input Bit Error: This control is used to enable and disable input traps.

SCTE 35 Data Present: This control is used to enable and disable input traps.

SCTE 104 Data Inserted: This control is used to enable and disable input traps.

Video Timestamp Error: This control is used to enable and disable input traps.

Audio Timestamp Error 1-8: This control is used to enable and disable input traps.

This page left intentionally blank

6. UPGRADE PROCEDURES

6.1. UPDATING VISTALINK PRO 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.

To perform a JAR update, ensure that all VLPro clients are closed (the 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 and select *Help>Apply Update>Product* from the menu.

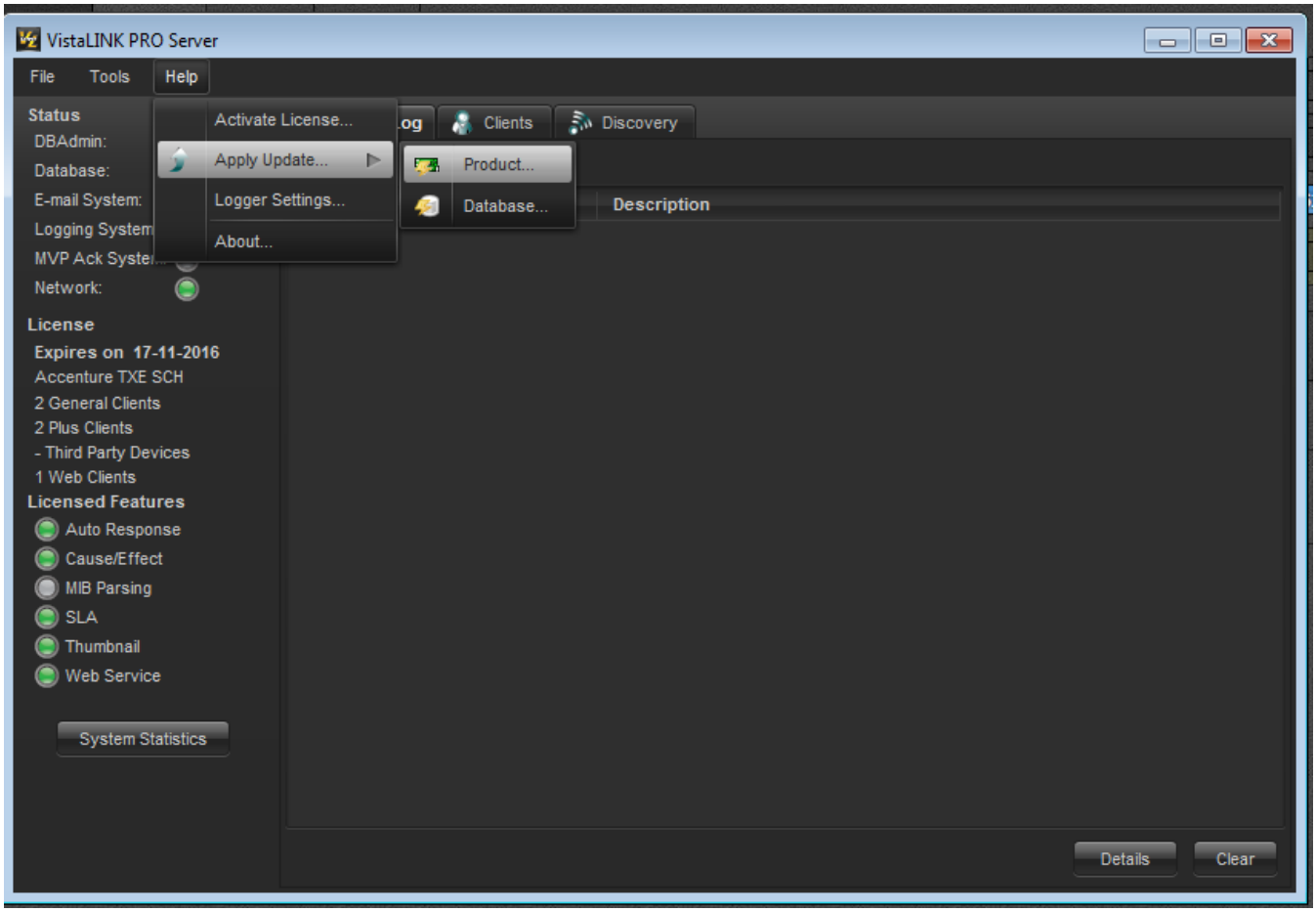


Figure 6-1: VistaLINK® PRO Server Help Menu

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.

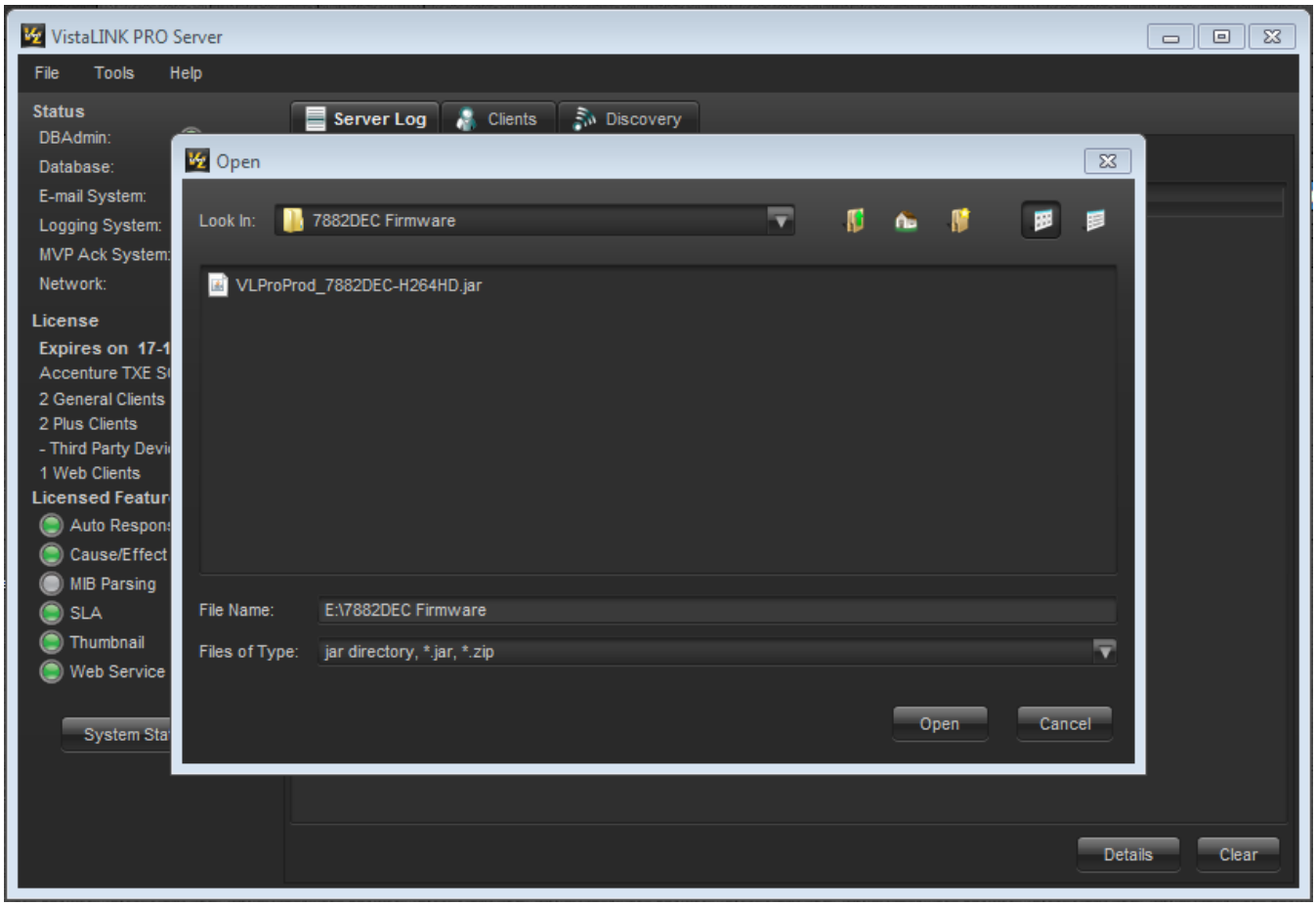


Figure 6-2: VistaLINK® PRO – Applying JAR Updates

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 *File>Shutdown Server* from the menu bar. 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 Client. 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. FIRMWARE UPGRADE

There are two recommended ways to upgrade the firmware for the 7882DEC-H264HD-IPASI.

1. WebEASY®
2. VistaLINK® with the 7800FC

Using the WebEASY® on a web interface is the fastest and recommended procedure to load firmware onto the 7882DEC-H264HD-IPASI.

6.2.1. Firmware Upgrade Using WebEASY®

When first visiting the 7882DEC-H264HD-IPASI web interface, the user will be asked to enter a Login and Password. Enter "***customer***" for Login and "***customer***" for Password.

On the top of the web page for the 7882DEC-H264HD-IPASI, there is a tab labelled Upgrade. The Upgrade tab is used to check current firmware version and upload the latest firmware.

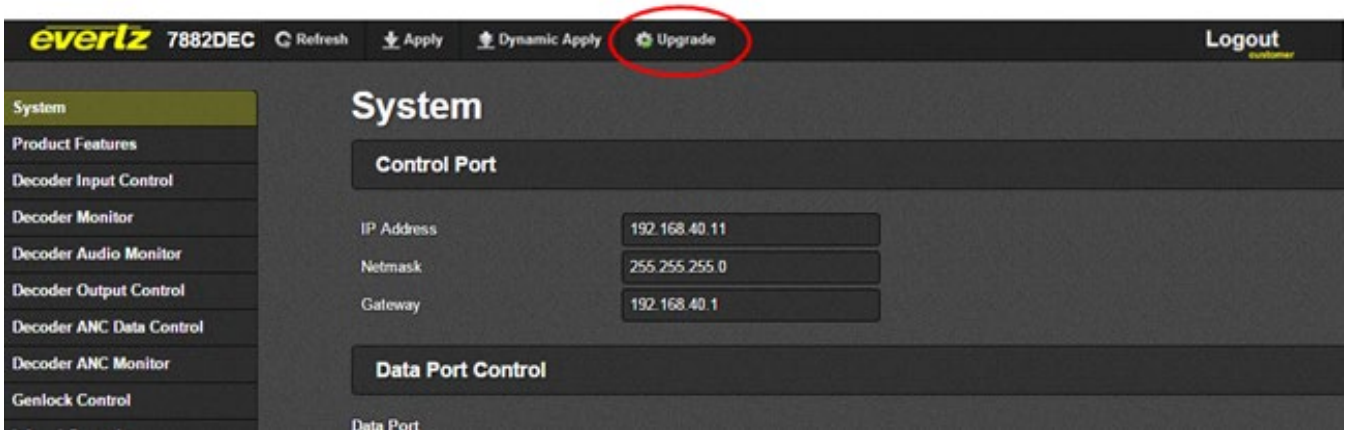


Figure 6-3: WebEASY® - Upgrade Button on Top Menu Bar

Selecting the Upgrade tab will take you to Figure 6-4 where the current firmware version is shown. Should the firmware be outdated, you will need to download the firmware image file.

NOTE: Contact Evertz get the latest firmware file.

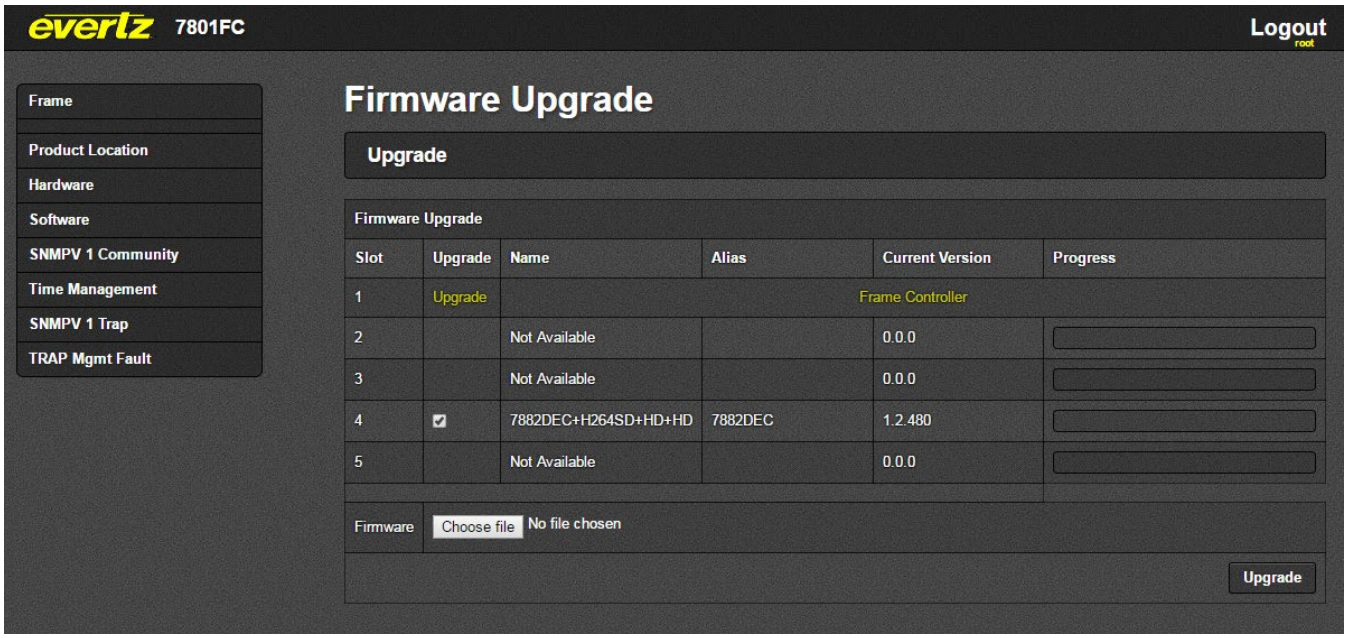


Figure 6-4: WebEASY® - Firmware Upgrade Menu

Check the box under the Upgrade column, and click Choose File to locate the image file. Once selected, click Open to advance to the next step.

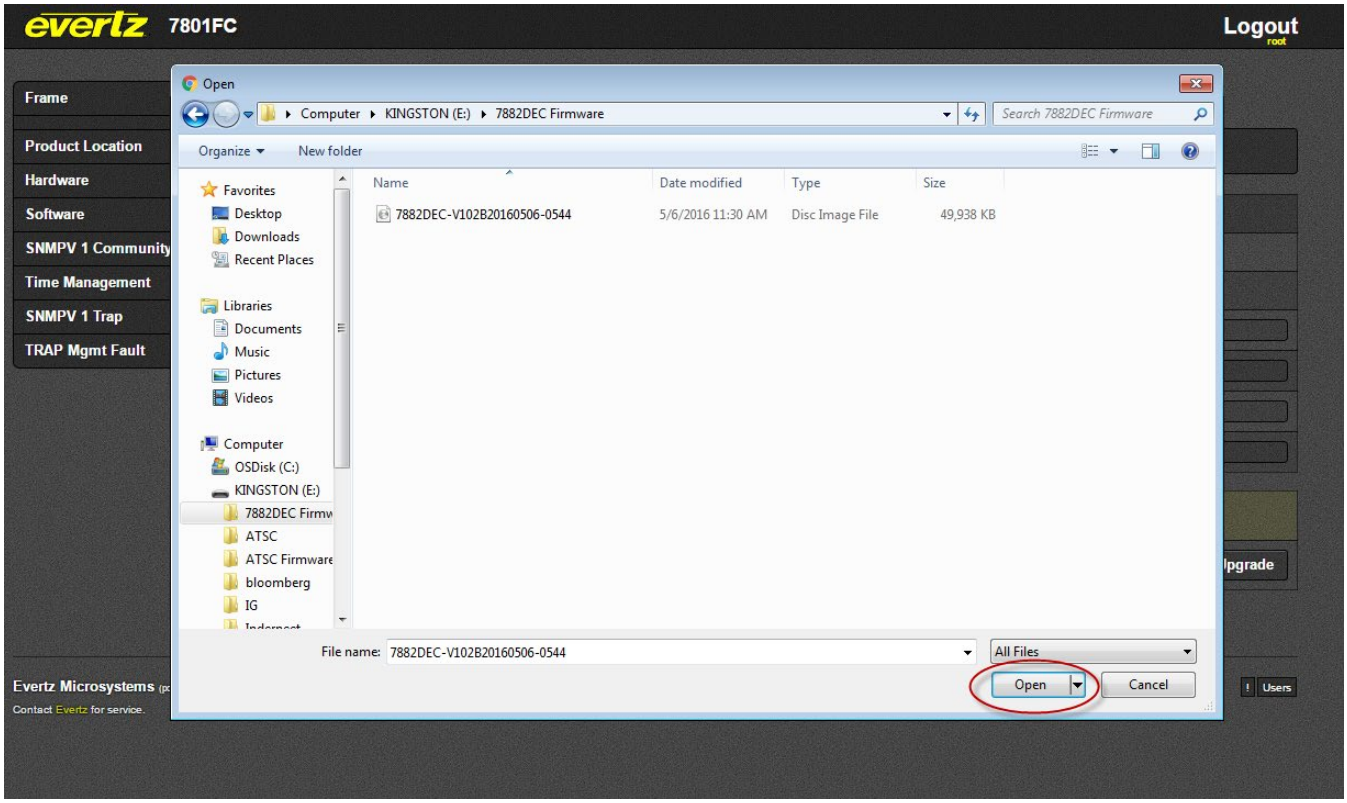


Figure 6-5: WebEASY® - Locating the Image File

Click Upgrade and watch the progress bar for the status. Once completed, the device will automatically restart.

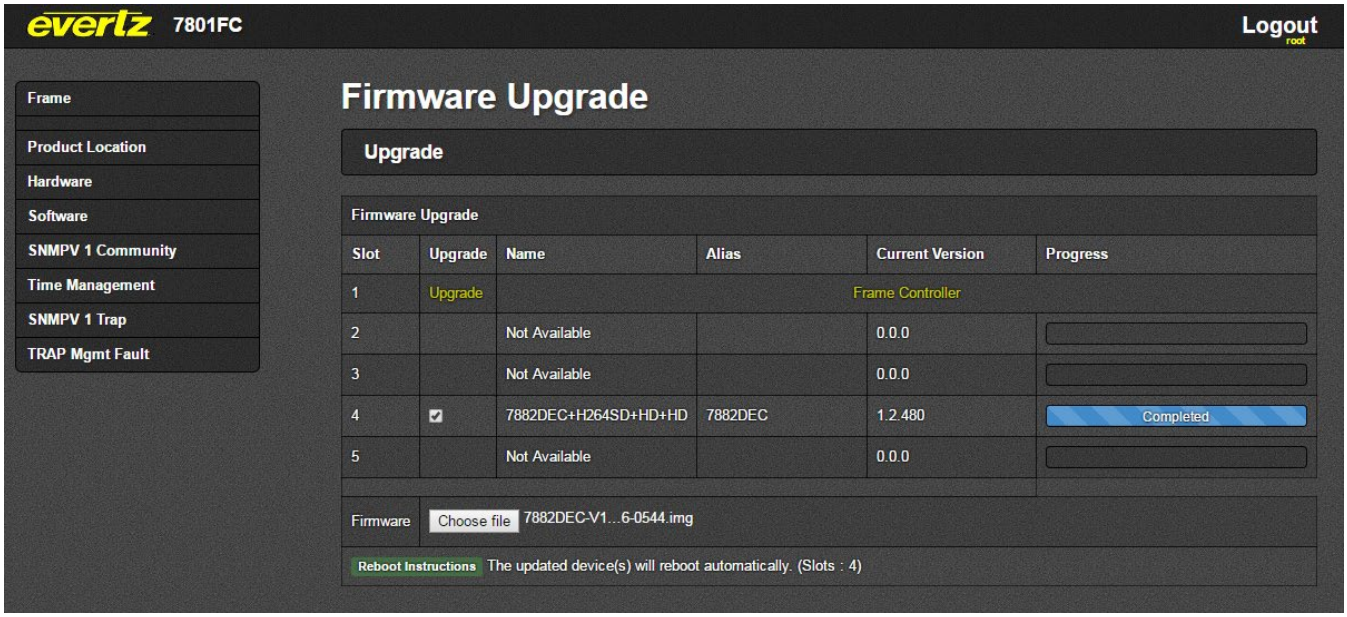


Figure 6-6: WebEASY® - Firmware Upgrade Complete

6.2.2. Firmware Upgrade using VistaLINK® with the 7800FC

Upgrading the firmware using VistaLINK® can be accomplished using the 7800FC frame controller and the 7882DEC-H264HD-IPASI. It is recommended to use the 7800FC over the 7700FC when upgrading. If the 7700FC is present, it is recommended to upgrade via direct web interface (see Section 6.2.1 of this manual). Upgrading using the 7700FC will take over 30 minutes per card versus 2-4 minutes with the 7800FC or direct web interface.

Ensure that the 7882DEC-H264HD-IPASI is running the latest firmware, to check this simply right click on the card's address in VLPro Client and select Version Information as shown in Figure 6-7.

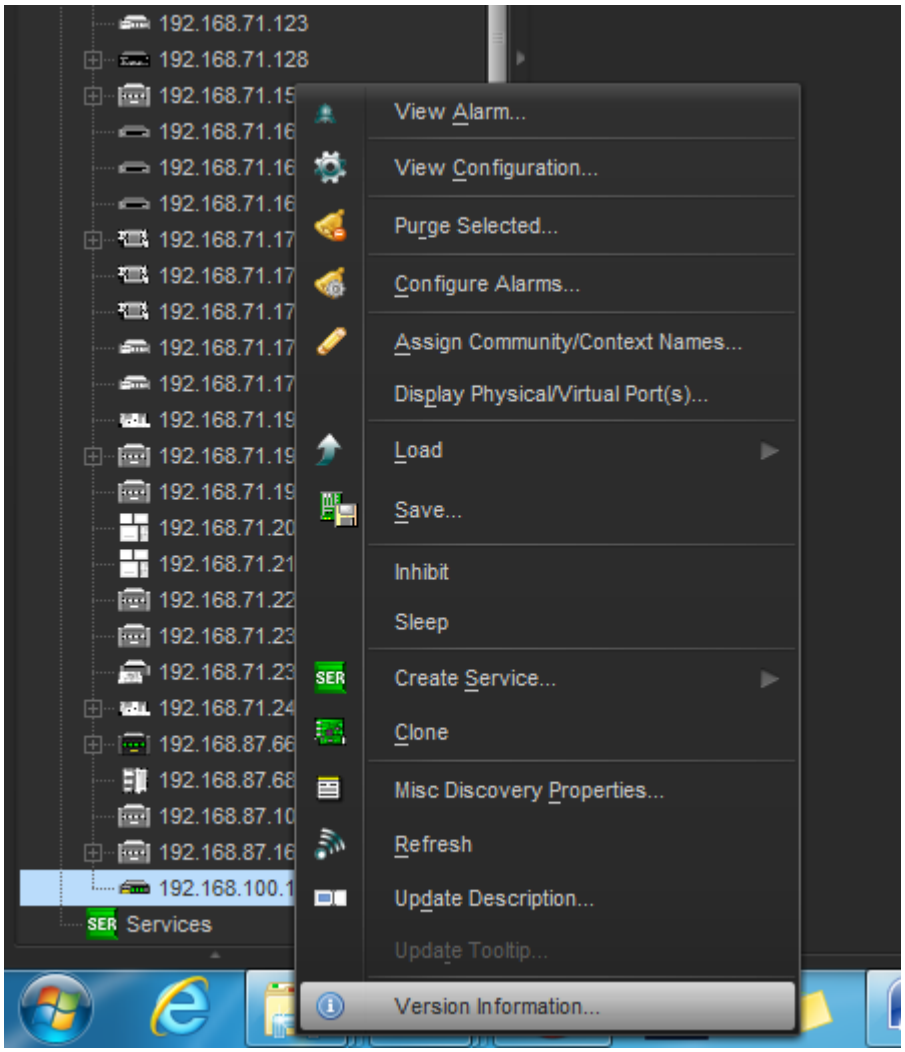


Figure 6-7: VistaLINK® - Selecting Version Information

Once Version Information is clicked, the module will be able to be selected for upgrading.

1. Open the Hardware Tree and select the card to be upgraded.
2. Check the box beside the card to be upgraded.
3. Click the Upgrade button on the bottom right corner.
4. Click the Browse button to select the 7882DEC-H264HD-IPASI image file.
5. Click the Upgrade button and wait for the upload to complete. This will take approximately 5 to 10 minutes depending on network traffic. The progress bar will provide feedback on the status of the upgrade.
6. Upon completion, the 7882DEC-H264HD-IPASI module will reboot automatically and return online in normal “run” mode.