5782DEC Professional H.264 and MPEG-2 Decoder 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

<u>NOTE</u>

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.



EN60065 EN55103-1: 1996 EN55103-2: 1996

Safety Emission 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.

<u>NOTE</u>

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

1.0 Initial Release

Dec 2016

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1. OVERVIEW

The 5782DEC is a professional high quality 3G/HD/SD-SDI H.264/MPEG-2 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 5782DEC is perfect for monitoring applications or decoding for downstream baseband video and audio processing.

The 5782DEC can reconstruct in the most flexible way all VANC & HANC data in the baseband outputs.

The 5782DEC 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
- 2x 3G/HD/SD-SDI outputs
- Selection of decoded service
- Baseband outputs with embedded audio and ancillary data
- Fully integrated with the industry leading VistaLINK® PRO system
- Control via 570 Frame Controller or integrated HTTP interface



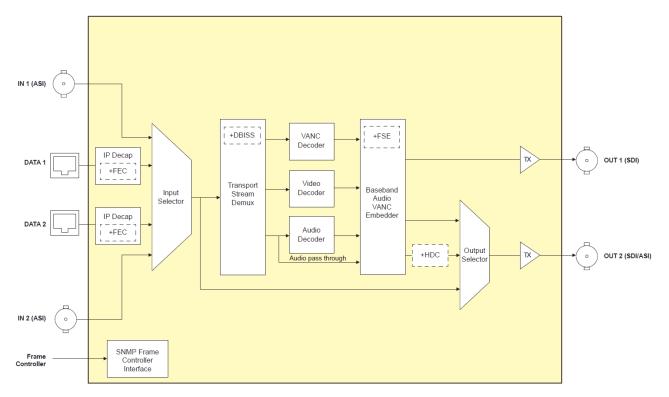


Figure 1-1: 5782DEC Block Diagram



2. GETTING STARTED

The 5782DEC module comes with a rear plate that occupies one slot in a frame.

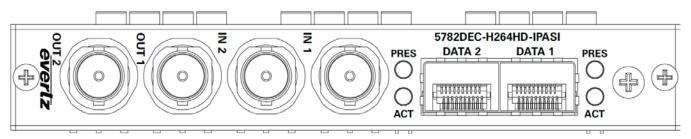


Figure 2-1: 5782DEC-H264HD-IPASI Rear Plate

2.1. CONNECTIONS

- **IN 1-2:** BNC connectors used to input ASI MPEG2 Transport Streams.
- **OUT 1-2:** Two BNC connectors with re-clocked serial component video outputs, compatible with the SMPTE 259M, SMPTE 292M, and SMPTE 424M (+3G) standards. OUT 2 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.

2.2. HARDWARE INSTALLATION

To successfully install the 5782DEC, 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 5782DEC 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 5782DEC 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 – 5782DEC

- 1. Connect the Evertz serial upgrade cable (ribbon cable) to the 2x3 header at the front edge of the 5782DEC.
- 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>

| (X) Save and Exit (W) Exit without Saving > w Changes are disc Welcome to Netra Platform itxe-n-platform login: customer Password: #### ################################## |
|--|
| <pre>(W) Exit without Saving > w Changes are disc Welcome to Netra Platform itxe-n-platform login: customer Password:</pre> |
| <pre>> w Changes are disc Welcome to Netra Platform itxe-n-platform login: customer Password:</pre> |
| Changes are disc Welcome to Netra Platform itxe-n-platform login: customer Password: |
| Changes are disc Welcome to Netra Platform itxe-n-platform login: customer Password: |
| Changes are disc Welcome to Netra Platform itxe-n-platform login: customer Password: |
| <pre>Welcome to Netra Platform itxe-n-platform login: customer Password:</pre> |
| <pre>itxe-n-platform login: customer Password:</pre> |
| Password: |
| <pre>####</pre> |
| <pre></pre> |
| <pre></pre> |
| :####: .,,, ,,, :####: .,,,,,, ####: .,,,,,,,, :############################# |
| <pre>:########: #### ##### :##########: ######</pre> |
| <pre>#### :###.`### ####: #### :###. #########: ####: :####I ###############</pre> |
| <pre>####################################</pre> |
| <pre>:###^^^^^^ ###=#### :###^^^^^^ ####: ####: ####; :###: :####: #######: :###::##### :#####: ########</pre> |
| <pre>:###: :###: #######: :###: :###::##### :######</pre> |
| :##########: ######################### |
| :#####: #### :#####: :#### ### :######## |
| Evertz Microsystems Ltd. 2012 |
| <pre>Save and Exit Exit without Saving ss are disc te to Netra Platform t-platform login: customer rd:</pre> |
| <pre> **** Main Menu **** (1) Network Setup (2) SNMP Setup</pre> |
| (1) Network Setup (2) SNMP Setup |
| (1) Network Setup (2) SNMP Setup |
| (1) Network Setup (2) SNMP Setup |
| (2) SNMP Setup |
| (2) SNMP Setup |
| |
| (3) Engineering Debug Tool |
| |
| |
| (X) Save and Exit |
| (W) Exit without Saving |
| |
| |
| |

Figure 2-2: 5782DEC 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.

| | 11 - PuTTY | | |
|--------------------------|---|-------|--|
| 1 | | | |
| * * * * | ***************** | * * * | |
| * WA | RNING: | * | |
| * Im | proper changes to IP addresses may affect | * | |
| * ne | twork configuration. Incorrect IP addresses | * | |
| * co | uld potentially affect other devices on the | * | |
| * ne | twork. It is good practice to confirm | * | |
| * va | lidity of all IP addresses with your IT/IS | * | |
| * de | partments prior to configuration. | * | |
| * * * * | *************************************** | * * * | |
| | | | |
| | | | |
| * | *** Network Setup **** | | |
| * | *** Network Setup **** | | |
| | *** Network Setup **** IP Address [192.168.75.185] | | |
| (1) | | | |
| (1) (2) | - IP Address [192.168.75.185] | | |
| (1) (2) (3) | - IP Address [192.168.75.185] Netmask [255.255.255.0] | | |
| (1) (2) (3) | - IP Address [192.168.75.185] Netmask [255.255.255.0] Gateway [192.168.75.1] | | |
| (1) (2) (3) (X) | - IP Address [192.168.75.185] Netmask [255.255.255.0] Gateway [192.168.75.1] | | |

Figure 2-3: 5782DEC COM Network Setup



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3. TECHNICAL SPECIFICATIONS

3.1. VIDEO SPECIFICATIONS

- Number of Inputs/Outputs: BNC:
- 2x 3G/HD/SD/ASI Outputs IP: 2x GbE Data Ports (Optional SFP) SMPTE 425M/292M/259M Standard: 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 1920x1080 @ 25, 29.97, 30, 59.94 and 60Hz Video Resolution: 1280x720 @ 50, 59.94 and 60Hz 720x576 @ 25Hz (ITU-R BT.656-4) 720x480 @ 29.97Hz (SMPTE 125M) H.264/MPEG-2 4:2:0 Video Decompression: . H.264/MPEG-2 4:2:0 8bit (Optional) H.264 4:2:2 10 bit (Optional) Profile/Level: MP@ML up to Hi422P@4.1

2x ASI Inputs

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

1

- Power: <48W
- EMI/RFI: Complies with FCC regulations for class-A devices Complies with EU EMC directive

3.7. PHYSICAL (NUMBER OF SLOTS)

• 570FR:



4. VISTALINK_® PRO INTERFACE

This chapter assumes that the VistaLINK $_{\odot}$ PRO server and client are already configured for your network and you have basic knowledge of the VistaLINK $_{\odot}$ 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 5782DEC and VistaLINK_® PRO.

1. 570FC Frame Controller and 5782DEC with appropriate JAR file. Ethernet connection is made to the 570FC control port from VistaLINK_® PRO.

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 570FC should show up and the number of 5782DEC cards installed after it in the tree formation.

2. Using the 570FC control port and WebEASY UI for direct web access control (discussed further in Section 5).

Open VistaLINK $_{\odot}$ PRO and click on the refresh tree icon. Select 5782DEC and right click to **View Configuration...**

| System Product Features | Input Control Decoder Monitor | Decoder Audio Monitor 0 | Output Control ANC Data Control | ANC Monitor Input Faults |
|-------------------------|-------------------------------|-------------------------|---------------------------------|--------------------------|
| | | | | |
| | Decoder Reset | IP Address | 192.168.4.31 | |
| | Decoder Reboot | Netmask | 255.255.255.0 | |
| | Load Factory Configuration | Gateway | 192.168.4.1 | |
| | | | | |
| IP Address | 192.168.10.21 | IP Address | 192.168.10.21 | |
| Netmask | 255.255.255.0 | Netmask | 255.255.255.0 | |
| Gateway | 192.168.10.1 | Gateway | 192.168.10.1 | |
| | | | | |
| SFP Part Number | | SFP Part Number | | |
| Port Link Status | | Port Link Status | | |
| Port Link Info | | Port Link Info | | |
| Receive Bandwith | | Receive Bandwith | | |
| Transmit Bandwith | | Transmit Bandwith | | |
| | | | | |
| External syslong | Disable 🗸 🗸 | Temperature Monitor | | |
| Syslog Server IP | | | | |

4.1. SYSTEM TAB

Figure 4-1: 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: Currently unused on 5782DEC platform.

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 5782DEC 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.

| 10 | | | |
|-------------------------|-----------------------------|--|------------|
| Full Refresh | status Completed (17:) | 44:35 2016-07-04) | 🗙 Logger 🔳 |
| System Product Features | Input Control Decoder Monit | naanaa ka k | |
| Product License | | | |
| Product License | /5aZzoUyJdO3hrtK3rD9vW2NeA | | |
| Product Serial Number | | | |
| Product Features | | | |
| | Name | Support | |
| Product Feature 1 | | | |
| Product Feature 2 | | | |
| Product Feature 3 | | | |
| Product Feature 4 | | | |
| Product Feature 5 | | | |
| Product Feature 6 | | | |
| Product Feature 7 | | | |
| Product Feature 8 | | | |

Figure 4-2: 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 5782DEC.

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

| Full Refresh 🚱 🖒 1.0 Apply | | pleted (17:44:35 2016- | | | | Y | | Y |
|-----------------------------|------------------|------------------------|-------------------------------|-----------------|------------------|-------------|--------------|-------|
| System Product Features | Input Control De | coder Monitor De | coder Audio Monitor Output | Control 4 | ANC Data Control | ANC Monitor | Input Faults | SFP-A |
| Input Port Control | | | | | | | | |
| Input Source Select | ASI 1 | T | Program Tuning Mode | Auto PID S | elect | V | | |
| Input IP Address | | | Auto Program Select Mode | First Progra | am In PAT | v | | |
| Destination UDP Port Number | | (1 to 65535) | Program Number Select | | | | V | |
| Gratuitous ARP | Disable | V | Service Name Select | | | | T | |
| Gratuitous ARP Address | 192.168.192.100 | | Unicast Source Filter Control | | | | | |
| IGMPv3 Mode | | T | Unicast Source Filter | | Disable | v | | |
| IGMPv3 SSM Source 1 | | | Unicast Source IP Address | | 192.168.245.100 | | | |
| IGMPv3 SSM Source 2 | | | Unicast Source UDP Port Numb | per(1 to 65535) |) 1234 | | | |
| IGMPv3 SSM Source 3 | | | | | | | | |
| IGMPv3 SSM Source 4 | | | Manual PID Control Video PID | | | | | |
| IGMPv3 SSM Source 5 | | | PCR PID | | | | | |
| IGMPv3 SSM Source 6 | | | Private Data PID | | | | | |
| SMPTE302 Mode | Auto | V | VANC PID 1 | | | | | |
| Adaptive Latency | On | V | VANC PID 2 | | | | | |
| Delay Control | | | | | | | | |
| Video Delay | • | 0 ms | VANC PID 3 | | | | | |
| Audio Delay 1 | • | 0 ms | VANC PID 4 | | | | | |
| Audio Delay 2 | • | 0 ms | Audio PID 1 | | | | | |
| Audio Delay 3 | • | 0 ms | Audio PID 2 | | | | | |
| Audio Delay 4 | • | 0 ms | Audio PID 3 | | | | | |
| Audio Delay 5 | • | 0 ms | Audio PID 4 | | | | | |
| Audio Delay 6 | • | 0 ms | Audio PID 5 | | | | | |
| Audio Delay 7 | • | 0 ms | Audio PID 6 | | | | | |
| Audio Delay 8 | • | 0 ms | Audio PID 7 | | | | | |
| | | | Audio PID 8 | 100 | | | | |

Figure 4-3: 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.

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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 5782DEC 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.



| AC3/Doby E Audio 2 Mode AC3/Doby E Audio 2 Mode AC3/Doby E Audio 3 Mode AC3/Doby E Audio 4 Mode AC3/Doby E Audio 5 Mode AC3/Doby E Audio 6 Mode AC3/Doby E Audio 8 Mode | Switch Over Control | | | Audio Mode | |
|---|--|-------------|----------|--------------------------|---------|
| nput Source Select DATA 2 AC3/Dolby E Audio 3 Mode AC3/Dolby E Audio 3 Mode AC3/Dolby E Audio 4 Mode AC3/Dolby E Audio 5 Mode AC3/Dolby E Audio 5 Mode AC3/Dolby E Audio 5 Mode AC3/Dolby E Audio 6 Mode AC3/Dolby E Audio 6 Mode AC3/Dolby E Audio 6 Mode AC3/Dolby E Audio 7 Mode AC3/Dolby E Audio 7 Mode AC3/Dolby E Audio 7 Mode AC3/Dolby E Audio 8 | User Redundancy Mode | Disable | T | AC3/Dolby E Audio 1 Mode | |
| Input Source Search DATA 2 A C3/Dolby E Audio 4 Mode B AC3/Dolby E Audio 4 Mode B AC3/Dolby E Audio 5 Mode B AC3/Dolby E Audio 6 Mode B AC3/Dolby E Audio 6 Mode B AC3/Dolby E Audio 6 Mode B AC3/Dolby E Audio 7 Mode B AC3/Dolby E Audio 8 Mode B | Active Source | | | AC3/Dolby E Audio 2 Mode | B |
| Active State Active State < | ackup Input Source Select | DATA 2 | T | AC3/Dolby E Audio 3 Mode | 🔵 Вура |
| Jestmanon UDP Port Number 1234 GMPv3 Mode nolude AC3/Dolby E Audio 6 Mode Bypas GMPv3 SSM Control 1 192.168.0.1 GMPv3 SSM Control 2 192.168.0.1 GMPv3 SSM Control 3 192.168.0.1 GMPv3 SSM Control 4 192.168.0.1 GMPv3 SSM Control 5 192.168.0.1 GMPv3 SSM Control 6 192.168.0.1 GMPv3 SSM Control 6 192.168.0.1 | ackup Input IP Address | 239.0.0.10 | | AC3/Dolby E Audio 4 Mode | 🔵 Bypas |
| Sinu Calification Include Active System GMPV3 SSM Control 1 192.168.0.1 Active Bypass GMPv3 SSM Control 2 192.168.0.1 Active Bypass GMPv3 SSM Control 3 192.168.0.1 Bypass Active Bypass GMPv3 SSM Control 4 192.168.0.1 Bypass Active Bypass GMPv3 SSM Control 5 192.168.0.1 Bypass Buppass Active Bypass GMPv3 SSM Control 6 192.168.0.1 Bypass Buppass Buppass Buppass GMPv3 SSM Control 5 192.168.0.1 Buppass Buppass Buppass Buppass GMPv3 SSM Control 6 192.168.0.1 Buppass Buppass Buppass Buppass GMPv3 SSM Control 6 192.168.0.1 Buppass Buppass Buppass Buppass | ackup Destination UDP Port Number | | | AC3/Dolby E Audio 5 Mode | Bypass |
| GMPV3 SSM Control 2 192.168.0.1 AC3/Doby E Audio 8 Mode Bypass GMPv3 SSM Control 3 192.168.0.1 AC3/Doby E Audio 8 Mode Bypass GMPv3 SSM Control 4 192.168.0.1 GMPv3 SSM Control 5 192.168.0.1 GMPv3 SSM Control 6 192.168.0.1 GMPv3 SSM Control 6 192.168.0.1 GMPv3 SSM Control 6 192.168.0.1 1 | ackup IGMPv3 Mode | Include | T | AC3/Dolby E Audio 6 Mode | Bypass |
| GMPV3 SSM Control 2 12:168.0.1 GMPv3 SSM Control 3 192:168.0.1 GMPv3 SSM Control 4 192:168.0.1 GMPv3 SSM Control 5 192:168.0.1 GMPv3 SSM Control 6 192:168.0.1 GMPv3 SSM Control 6 192:168.0.1 Control 6 192:168.0.1 | Backup IGMPv3 SSM Control 1 | 192.168.0.1 | | AC3/Dolby E Audio 7 Mode | Bypass |
| GMPv3 SSM Control 4 192.168.0.1 GMPv3 SSM Control 5 192.168.0.1 GMPv3 SSM Control 6 192.168.0.1 ch Time after Loss of Primary Input 1 | Backup IGMPv3 SSM Control 2 | 192.168.0.1 | | AC3/Dolby E Audio 8 Mode | Bypass |
| GMPv3 SSM Control 5 192.168.0.1 GMPv3 SSM Control 6 192.168.0.1 tch Time after Loss of Primary Input 1 | Backup IGMPv3 SSM Control 3 | 192.168.0.1 | | | |
| GMPv3 SSM Control 6 192.168.0.1 | Backup IGMPv3 SSM Control 4 | 192.168.0.1 | | | |
| itch Time after Loss of Primary Input | Backup IGMPv3 SSM Control 5 | 192.168.0.1 | | | |
| | Backup IGMPv3 SSM Control 6 | 192.168.0.1 | | | |
| tch Time after Loss of Backup Input | Wait Switch Time after Loss of Primary Input | • | | | |
| | Wait Switch Time after Loss of Backup Input | • | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Figure 4-4: 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

| System Product Features | Input Control De | ecoder Monitor | Decoder Audio Monitor Outp | out Control A | NC Data Control | ANC Mor |
|--|------------------|--|----------------------------|---------------|-----------------------|---------|
| nput Monitor | | | Demux Video Monitor | | | |
| Input Status | | | Program Name | | | |
| Input Bitrate | | | Program Number | | | |
| Input Packet Framing | | | PMT PID | | | |
| | | | PCR PID | | | |
| | | | Video PID | | | |
| | | | Video Bitrate | | | |
| | | | Video Compression Type | | | |
| | | | Video Chroma Format | |) = 1.000 DP 8-bit | |
| | | | Video Resolution | | | |
| | | | | | | |
| | | | Video Frame Rate | | | |
| | | | | | | |
| Continuity Counter Error | | | | | | |
| | Count | Reset Count | Threshold | Status | Trap Enable | |
| | Count 2 | Reset Count Reset | Threshold | Status | Trap Enable | |
| Continuity Counter Error Video Audio 1 | | | | Status | | |
| Video | | Reset | 1 | Status | | |
| Video Audio 1 | | Reset | 1 | Status | | |
| Video Audio 1 Audio 2 | | Reset Reset Reset | 1 | Status | | |
| Video Audio 1 Audio 2 Audio 3 | | Reset Reset Reset Reset | | Status | | |
| Video Audio 1 Audio 2 Audio 3 Audio 4 Audio 5 | | Reset Reset Reset Reset Reset | | Status | | |
| Video Audio 1 Audio 2 Audio 3 Audio 4 | | Reset Reset Reset Reset Reset Reset | | | | |

Figure 4-5: 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

| System Product Features | Input Control Decoder Monito | or Decoder Audio Monitor Or | utput Control ANC Data Control | ANC Moni |
|-------------------------|------------------------------|-----------------------------|--------------------------------|----------|
| | | | | |
| Audio PID Number | | Audio PID Number | | |
| Audio Bitrate | | Audio Bitrate | | |
| Audio Type | | Audio Type | | |
| Sampling Rate | | Sampling Rate | | |
| Number of Channels | | Number of Channels | | |
| | | | | |
| Audio PID Number | | Audio PID Number | | |
| Audio Bitrate | | Bitrate | | |
| Audio Type | | Audio Type | | |
| Sampling Rate | | Sampling Rate | | |
| Number of Channels | | Number of Channels | | |
| | | | | |
| Audio PID Number | | Audio PID Number | | |
| Audio Bitrate | | Audio Bitrate | | |
| Audio Type | | Audio Type | | |
| Sampling Rate | | Sampling Rate | | |
| Number of Channels | | Number of Channels | | |
| | | | | |
| Audio PID Number | | Audio PID Number | | |
| Audio Bitrate | | Audio Bitrate | | |
| Audio Type | | Audio Type | | |
| Sampling Rate | | Sampling Rate | | |
| Number of Channels | | Number of Channels | | |

Figure 4-6: VistaLINK_® – Decoder Audio Monitor Tab

The 5782DEC 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

| stem Product Features | Input Control | Decoder Monitor Deco | der Audio Monitor Output Co | ntrol ANC Data Control | ANC Monitor |
|--------------------------|---------------|----------------------|-----------------------------|------------------------|-------------|
| | | | | | |
| utput Video Standard | Auto | T | Channel 1 Source Select | Audio Decoder 1 Ch 1 | V |
| oss of Video Output | Freeze | T | Channel 2 Source Select | Audio Decoder 1 Ch 2 | V |
| | | | Channel 3 Source Select | Audio Decoder 1 Ch 1 | v |
| vate Data Output Control | | | Channel 4 Source Select | Audio Decoder 1 Ch 2 | v |
| ata Output | Disable | - | Channel 5 Source Select | Audio Decoder 5 Ch 1 | T |
| estination IP Address | 239.1.1.1 | | Channel 6 Source Select | Audio Decoder 5 Ch 1 | v |
| estination Port | 1234 | (1 to 65535) | Channel 7 Source Select | Audio Decoder 5 Ch 1 | v |
| E Data PID | | | Channel 8 Source Select | Audio Decoder 5 Ch 1 | v |
| PE Data PID Output | Disable | - | Channel 9 Source Select | Audio Decoder 5 Ch 1 | T |
| | | | Channel 10 Source Select | Audio Decoder 5 Ch 1 | V |
| | | | Channel 11 Source Select | Audio Decoder 5 Ch 1 | - |
| | | | Channel 12 Source Select | Audio Decoder 5 Ch 1 | V |
| | | | Channel 13 Source Select | Audio Decoder 5 Ch 1 | T |
| | | | Channel 14 Source Select | Audio Decoder 5 Ch 1 | V |
| | | | Channel 15 Source Select | Audio Decoder 5 Ch 1 | T |
| | | | Channel 16 Source Select | Audio Decoder 5 Ch 1 | - |

Figure 4-7: 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

| System Product Features | Input Control | Decoder Monito | | Decoder Audio Monitor Ou | tput Control | ANC Data Control | ANC Mo | nito |
|-------------------------|---------------|----------------|----|-------------------------------|--------------|------------------|--------|------|
| | | | | | | | | |
| CC Selection | Auto | T | | | | | | |
| CC708 Insert Line | -• | | 9 | | | | | |
| | | | | | | | | |
| AFD SD Insert Line | | -• | | | | | | |
| AFD SD Embed Enable | Enable | - | | OP47 Insert Line | -• | | | |
| AFD SD Embed Mode | AFD On VANC | T | | OP47 Embed Enable | Disable | ~ | | |
| AFD HD Insert Line | | | 18 | WST Embed | Disable | T | | |
| AFD HD Embed Enable | Disable | ~ | | WSS Embed | Disable | T | | |
| | | | | WSS Embed Mode | Video AR | V | | |
| VBI Data Embed | Disable | T | | | | | | |
| | | | | Timecode SD Embed Mode | УЛС | • | | |
| VANC VPTS | Disable | - | | Timecode SD VITC Insert Line | | | | |
| | | | | Timecode SD VITC Insert Line2 | | | | |
| | | | | Timecode Embed Enable | Disable | T | | |

Figure 4-8: 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.

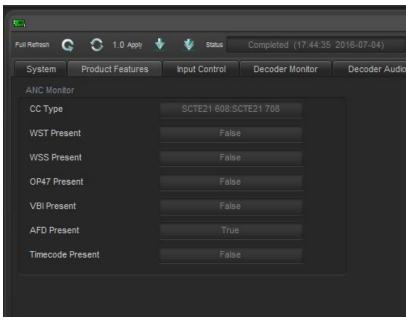
WSS Embed Mode: This parameter allows the user to select the embedding mode for WSS. The two options available include AR mode and PID mode. If the user selects AR mode, WSS is generated based on the video display aspect ratio extracted from the elementary stream. If the user selects PID mode, WSS is 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 4-9: 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

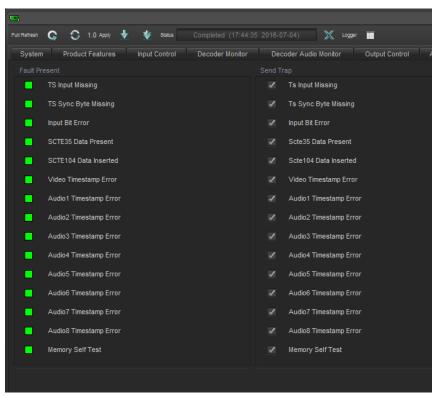


Figure 4-10: VistaLINK_® – Input Faults Tab

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

| i Refresh 😋 😋 1.0 Appy | 🐨 🐨 566 🔹 C | Completed (17:44:35 | 2016-07-04) |
|-------------------------|-----------------|---------------------|--------------|
| System Product Features | s Input Control | Decoder Monitor | Decoder Audi |
| SFP-ASI Transmit | | | |
| SFP Transmit Output | Disable | Ŧ | |
| SFP Output IP address | 239.0.0.4 | | |
| SFP Output IP Port | 1234 | | |
| PID Filter | Disable | Ŧ | |
| Remove NULL Packets | Disable | - | |
| Packet Rate Control | Disable | - | |
| Packet Bêrate | 80000 | | |
| BNC 4 Output | Video | T | |
| | | | |
| | | | |

Figure 4-11: 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 4 Output: This parameter allows the user to select the BNC <3,4> output type.

4.11. INBAND CONTROL

| System Product Feature | s Input Control D | ecoder Monitor Decode |
|-------------------------|-------------------|-----------------------|
| Inband Control | | |
| Time Source Select | Local Time | T |
| Boot Image Number | | (1 to 3) |
| Overwrite Image Number | | (1 to 3) |
| Current Image Number | | |
| Time Zone Offset | | (-12 to 13) |
| Daylight Savings Enable | Off | - |
| Group ID | | |
| Upgrade Status | | |
| Upgrade Time | | |
| Image Name 1 | | |
| Image Name 2 | | |
| Image Name 3 | | |

Figure 4-12: 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.



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5. WEB INTERFACE

After the 5782DEC has been installed and the 570FC has been configured with the required network addresses for the control port, the 5782DEC can be completely configured using the web interface via the 570FC WebEASY UI. To do this, simply type in the IP address of the 570FCcontrol port in a web browser (Chrome or Firefox are preferred).

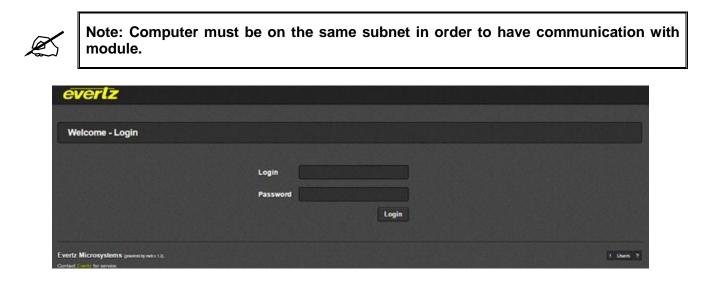


Figure 5-1: WebEASY_® – Login Menu

For login and password, type in "**root**" and "**evertz**" respectively. Then from the Frame FC menu, choose the 5782DEC from one of the installed slots.



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

| EVERIZ 5782DEC | 🕻 Refresh 👲 Apply 🎍 Dynamic Apply | 🏠 Upgrade | Logout |
|--------------------------|-----------------------------------|------------------|--------|
| | Sustam | | |
| Frame | System | | |
| System | Control Port | | |
| Product Features | | | |
| Decoder Input Control | IP Address | 192.168.4.31 | |
| Decoder Monitor | Netmask | 255.255.255.0 | |
| Decoder Audio Monitor | Gateway | 192.168.4.1 | |
| Decoder Output Control | Data Port Control | | |
| Decoder ANC Data Control | | | |
| Decoder ANC Monitor | Data Port | | |
| SFP-ASI Transmit Control | 1 2 | | |
| Inband Control | IP Address | 192.168.10.21 | |
| CDP | Netmask | 255.255.255.0 | |
| Faults | Gateway | 192.168.10.1 | |
| | Data Port Monitor | | |
| | Data Port | | |
| | 1 2 | | |
| | SFP Part Number | SFPTR-RJ45-SGM-A | |
| | Port Link Status | Down | |
| | Port Link Info | Unknown | |
| | Receive Bandwith | 0 | |
| | Transmit Bandwith | 0 | |

Figure 5-2: WebEASY_® – System Tab

Control Port: Currently unused on 5782DEC platform.

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.

| Decoder Control | | |
|-----------------------|----------------------------|----------|
| | Decoder Reset | |
| | Reboot | |
| | Load Factory Config | |
| Syslog Configuration | | |
| External syslog | Disable 🗸 | |
| Syslog Server IP | 0.0.0.0 | |
| Temperature | | |
| Temperature Monitor | 53 Celtaire | |
| Configuration Manager | nent | |
| Export Configure File | | Download |
| Import Configure File | Choose file No file chosen | Upload |
| | | |

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 5782DEC has the ability to enable features by adding/updating applicable licenses.

| evertz | 5782DEC | C Refresh | 👲 Apply | 👲 Dy | namic Apply | | 🍄 Up | ograde | | | | | | | | | | | Logout |
|--|---------------------------|-----------|-----------------|----------|-------------|---|--------|---------|---------|--------|----|----|----|----|----|----|----|---------|-----------------|
| Frame | | Pr | oduct | Fea | atures | S | | | | | | | | | | | | | |
| System | | F | Product Lic | ense | | | | | | | | | | | | | | | |
| Product Features | | | | | | | | | | | | | | | | | | | |
| Decoder Input Cont | trol | Pro | duct License Fi | le | | | Choos | se file | No file | chosen | | | | | | | | | Upload |
| Decoder Monitor | | Pro | duct Serial Nun | ıber | | | 71709 | 20006 | | | | | | | | | | | |
| Decoder Audio Mor | nitor | - | Product Fea | itures | Supporte | d | | | | | | | | | | | | | |
| Decoder Output Co | ntrol | | Toddott of | | apporto | | | | | | | | | | | | | | |
| Decoder ANC Data | Control | Prod | Feature | | | | | | | | | | | | | | | | |
| Decoder ANC Monit | tor | 1 | 2 3 | 4 5 | 6 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | |
| SFP-ASI Transmit C | Control | Pro | duct Feature N | ame | | | 8B422 | | | | | | | | | | | | |
| Inband Control | | Pro | duct Feature S | upported | | | Disabl | led | | | | | | | | | | | |
| CDP | | | | | | | | | | | | | | | | | | | |
| Faults | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| Evertz Microsystems Contact Evertz for service. | (powered by ewb v.1.4). | | | | | | | | | | | | | | | | | ! Info/ | Logging Users ? |
| Faults Evertz Microsystems | (powered by evilo 1.1.4). | | | | | | | | | | | | | | | | | I Info/ | Logging Us |

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 5782DEC.

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

| | EVERIZ 5782DEC | 🛱 Refresh 👲 Apply 🎍 Dynamic Apply | 🏟 Upgrade | Logout |
|--|----------------|------------------------------------|--------------------|--------|
| System Polacic Failures Decoder faulties Decoder fa | Frame | Decoder Input Co | ontrol | |
| Poduct Features Product Features < | System | | | |
| Peckel right Control ippil Padras 239 2 30 10 ippil Padras 239 2 30 10 ippil Padras | | input of conuci | | |
| bcoder Audo Monitor Decider Audo Monitor Distribution UCP Profer Number 12.3 + + - + - + - + - + - + - + - | | Input Source Select | ASI 1 🗸 | |
| Decoder Aufait Montion Defaultious ARP Deable Grainbus ARP Adderess 19:148.19:0 Decoder ANC Maionion Service SPA AST annotation Service Brando Control Decoder ANC Marian Decoder ANC Marian Service Brando Control Service Decoder ANC Marian Decoder ANC Marian Brando Control Service Decoder ANC Marian Decoder ANC Marian Brando Control Decoder ANC Marian Decoder ANC Marian Decoder ANC Marian Brando Control Decoder ANC Marian Decoder ANC Marian Decoder ANC Marian Brando Control Decoder ANC Marian Decoder ANC Marian Decoder ANC Marian Brando Control Decoder ANC Marian Decoder ANC Marian Decoder ANC | | Input IP Address | 239.4.28.100 | |
| Decoder ANC Data Control Galutous ARP Address 19:2:10:12:0 Becoder ANC Monitor FMP/3 Mode 19:2:10:12:0 SPP AST Inament Control Imamo Control Imamo Control Or OC Imamo Control Imamo Control Core Imamo Control Imamo Control Imamo Control Teams Imamo Control Imamo Control Imamo Control Core Imamo Control Image Source Filer Image Source Filer Image Source Filer Notes Source Filer Image Source Filer Image Source Filer Image Source Filer Image Source Filer Market Source Filer Image Source Filer Image Source Filer Image Source Filer Image Source Filer Switch Over Control Image Source Filer Image Source Filer Image Source Filer Image Source Filer Beckop Input Source Solece Image Source Image Source Image Source Image Source Beckop Input Source Solece Image Source Image Source Image Source Image Source Beckop Input Source Solece Image Source Image Source Image Source Image Source Beckop Input Source Solece Image Source | | Destination UDP Port Number | 1,234 (1 to 65535) | |
| Decoder ANC Data Control Gauliaus ARP Address 192 108 192 100 SPP ASI Transmit Control Index Source Filter | | Gratuitous ARP | Disable 🗸 | |
| Decoder ANC Monitor FGMPV3 Mode FGMPV3 SSM Control FGMPV3 SSM Cont | | Gratuitous ARP Address | 192.168.192.100 | |
| SP-ASI Transmit Control 01 02 03 04 05 06 CDP 192 r68 0.1 Fails Unicast Source Filter 192 r68 0.1 | | IGMPV3 Mode | Exclude 🗸 | |
| Inhand Control Image: Control Image: Control Image: Control Image: Control Image: Control Faults Unlead Source (DP Port Number) 12 124 25 000 Image: Control Image: Co | | | | |
| CDP Fauts Unicast Source Piller Unicast Source IP address 12:162:245:100 Unicast Source UP Port Number 12:34 Unicast Source UP Port Number 12:34 Adaptvo Latency On Fourball Switch Over Control User Redundancy Mode Adaptvo Source Primary Backup Input IP Address 239:0.10 Backup Destination UDP Port Number 10:000 Control (no essate) (no essate) RIMPY3 SSM Control Image: Control (no for 20) (no | | IGMPV3 SSM Control | 01 02 03 04 05 06 | |
| Fails Unicat Source Filter Disable • Unicat Source IIP Port Number 1,234 • • Adaptive Latency On • • SWCht Over Control • • Liker Rodundancy Mode Disable • • Active Source Pirmary • • Backup Input IP Address 239 0.0 10 • • Backup Input IP Address 239 0.0 10 • • Backup Input IP Roduces • • • Backup Input IP Address 239 0.0 10 • • Backup Input IP Address 239 0.0 10 • • Backup Input IP Address 1.234 • • • Backup Input IP Address 239 0.0 10 • • • • Backup Input IP Address 1.234 • | | | 192.168.0.1 | |
| Unicast Source IP address 192.168.245.100 Unicast Source UDP Port Number 1,234 SMPTE 302 Mode Auto Adaptive Latency On | | Unicast Source Filter | Disable 🗸 | |
| SMPTE 302 Mode Auto Adaptive Latency On Switch Over Control User Redundancy Mode Desable Active Source Primary Backup Input Pource Select DATA 2 Backup Destination UDP Port Number 1,234 Include Include Include Include Imput Include Imput Include Imput Imput Vait Switch Time after Loss of Primary Input Imput Imput Imput Vide Control Imput Imput | rauns | Unicast Source IP address | 192.168.245.100 | |
| Adaptive Latency On Switch Over Control User Redundancy Mode Active Source Backup Input Source Select Backup Input Poddress 239.0.10 Backup Destination UDP Port Number 1234 IGMP V3 Mode Include IGMP V3 SSM Control Vatit Switch Time after Loss of Backup Input Input Input Input Input Imput Imput <td></td> <td>Unicast Source UDP Port Number</td> <td>1,234 (1 to 65535)</td> <td></td> | | Unicast Source UDP Port Number | 1,234 (1 to 65535) | |
| Switch Over Control User Redundancy Mode Active Source Primary Backup Input IS Address 239.0.10 Backup Destination UDP Port Number 1234 rt te 65339 IGMPV3 Mode Include Vart Switch Time after Loss of Primary 1 1 1 </td <td></td> <td>SMPTE 302 Mode</td> <td>Auto 🗸</td> <td></td> | | SMPTE 302 Mode | Auto 🗸 | |
| User Redundancy Mode Disable Active Source Primary Backup Input Source Select DATA 2 Backup Input IP Address 239 0.0.0 Backup Destination UDP Port Number 1,234 IGMPV3 Mode 1,234 IGMPV3 Mode Include Include Include Include Igmps Frc IGMPV3 SSM Control Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 Igp1 02 03 04 05 06 Igp2 168 0.1 I | | Adaptive Latency | On 🗸 | |
| Active Source Primary Backup Input Source Select DATA 2 Backup Input IP Address 239 0 0 10 Backup Destination UDP Port Number 1,234 Include Include KMP Src KMP Src IGMPV3 SSM Control 1 Wait Switch Time after Loss of Primary Input 1 Wait Switch Time after Loss of Primary Input 0 to 128) see Video Control 0 to 128) see | | Switch Over Control | | |
| Active Source Primary Backup Input Source Select DATA 2 Backup Input IP Address 239 0 0 10 Backup Destination UDP Port Number 1,234 Include Include KMP Src KMP Src IGMPV3 SSM Control 1 Wait Switch Time after Loss of Primary Input 1 Wait Switch Time after Loss of Primary Input 0 to 128) see Video Control 0 to 128) see | | User Redundancy Mode | Disable 🗸 | |
| Backup Input Source Select DATA 2 Backup Input IP Address 239 0.0.10 Backup Destination UDP Port Number 1.234 IGMPV3 Mode Include IGMPV3 SSM Control 01 02 03 04 05 06 Ig2.168.0.1 192.168.0.1 Wait Switch Time after Loss of Primary Input Video Control Video Control | | | | |
| Backup Input IP Address 239.0.0 Backup Destination UDP Port Number 1.234 IGMPV3 Mode Include IGMP Src Imput IGMPV3 SSM Control 0 Vait Switch Time after Loss of Primary Input 1 Vait Switch Time after Loss of Backup Input 1 Video Control 0 Imput | | Backup Input Source Select | | |
| IGMPV3 Mode Include In | | Backup Input IP Address | 239.0.0.10 | |
| IGMPV3 SSM Control 01 02 03 04 05 06 192.168.0.1 192.168.0.1 06 06 06 06 Wait Switch Time after Loss of Primary Input 1 00 to 128) see 06 Wait Switch Time after Loss of Backup Input 1 00 to 128) see 00 to 128) see Video Control 00 to 128) see 00 to 128) see 00 to 128) see | | Backup Destination UDP Port Number | 1,234 (1 to 65535) | |
| IGMPV3 SSM Control 01 02 03 04 05 06 192.168.0.1 192.168.0.1 00 to 128) sec 00 to 128) sec Wait Switch Time after Loss of Primary Input 1 00 to 128) sec 00 to 128) sec Vaiteo Control 00 to 128) sec 00 to 128) sec 00 to 128) sec | | IGMPV3 Mode | Include ~ | |
| IGMPV3 SSM Control 192.168.0.1 Wait Switch Time after Loss of Primary Input 1 (0 to 128) sec Wait Switch Time after Loss of Backup Input 1 (0 to 128) sec Video Control 1 (0 to 128) sec | | | IGMP Src | |
| Wait Switch Time after Loss of Primary Input 1 (0 to 128) sec Wait Switch Time after Loss of Backup Input 1 (0 to 128) sec Video Control 1 (0 to 128) sec | | IGMPV3 SSM Control | 01 02 03 04 05 06 | |
| Input | | | 192.168.0.1 | |
| Video Control | | | 1 (0 to 128) sec | |
| Input 1 (0 to 128) see | | | | |
| | | | (0 to 128) sec | |
| Vídeo Delay 0 (0 to 200) ms | | Video Control | | |
| | | Video Delay | 0 (0 to 200) ms | |

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.

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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.

| Audio Control | | |
|--------------------------|----------------------|---------------|
| Audio | | |
| 1 2 3 4 5 6 | 7 8 | |
| Audio Delay | 0 | (0 to 200) ms |
| Audio Mode | Decode | |
| Audio DownMix Mode | Full Decode | • |
| Input Program Control | | |
| Program Tuning Mode | Auto PID Select | |
| Auto Program Select Mode | First Program In PAT | |
| Program Select | View List | |
| Manual PID Control | | |
| Video PID Select | 10 | (2 to 8190) |
| PCR PID Select | 30 | (2 to 8190) |
| Private Data PID | 50 | (2 to 8190) |
| | VANC 01 02 03 04 | |
| VANC PID Select | | |
| | 40 | |
| Manual Audio PID Select | t | |
| Audio PID 1 | View List | |
| Audio PID 2 | View List | |
| Audio PID 3 | View List | |
| Audio PID 4 | View List | |
| Audio PID 5 | View List | |
| Audio PID 6 | View List | <u>·</u> |
| Audio PID 7 | View List | |
| Audio PID 8 | View List | • |

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

| evertz 5782DEC G | 🕽 Refresh 👲 Apply 🎍 Dynamic App | ly 🎄 Upgrade | Logout |
|--|---------------------------------|-------------------|------------------------|
| Frame | Decoder Monito | - | |
| | Decoder monito | | |
| System | Input Monitor | | |
| Product Features | | | |
| Decoder Input Control | Input Status | Present | |
| Decoder Monitor | Input Bitrate | 19,392 | Kbps |
| Decoder Audio Monitor | Input Packet Framing | UDP | |
| Decoder Output Control | Video Monitor | | |
| Decoder ANC Data Control | | | |
| Decoder ANC Monitor | Program Number | 3 | |
| SFP-ASI Transmit Control | Program Name | Unknown | |
| Inband Control | PMT PID | 48 | |
| CDP | PCR PID | 49 | |
| Faults | Video PID | 49 | |
| | Video Bitrate | 15,242 | КЪрз |
| | Video Compression Type | Mpeg-2 Video | |
| | Video Chroma Format | 420P 8-bit | |
| | Video Resolution | 1280 x 720 | |
| | Video Frame Rate | 59.94 FPS | |
| | Continuity Counter Errors | | |
| | | | |
| | Video Count | 2 | |
| | | Video Reset Count | |
| | Video Threshold | 1 | (1 to 65500) |
| | Audio Continuity Counter | Errors | |
| | Audio | | |
| | 1 2 3 4 5 6 7 | 8 | |
| | Audio Count | 2 | |
| | | Audio Reset Count | |
| | Audio Threshold | | (1 to 65500) |
| | | | |
| | | | |
| Evertz Microsystems (powered by earb v.1.4). | | | ! Info/Logging Users ? |
| Contact Eventz for service. | | | |

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.

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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

| Frame | De | 900 | bde | er / | Au | dic | | IC | onitor | |
|--------------------------|------------------|----------|-------|-------|----|-----|---|----|-----------|------|
| System | A | udio | Mor | nitor | | | | | | |
| Product Features | | | | | | | | | | |
| Decoder Input Control | Audio | | | | | | | | | |
| Decoder Monitor | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | |
| Decoder Audio Monitor | Audio PID Number | | | | | 52 | | | | |
| Decoder Output Control | | lio Bitr | | | | | | | 402 | Kbps |
| Decoder ANC Data Control | | lio Typ | | | | | | | AC3 Audio | |
| Decoder ANC Monitor | San | npling | Rate | | | | | | 48000 Hz | |
| SFP-ASI Transmit Control | Nun | nber O | fChan | nels | | | | | 6 | |
| Inband Control | | | | | | | | | | |
| CDP | | | | | | | | | | |

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

| Frame | Decoder Output Control | | | | | | |
|--------------------------|-----------------------------|--------------------------|--|--|--|--|--|
| System | Video Output Control | | | | | | |
| Product Features | | | | | | | |
| Decoder Input Control | Output Video Standard | Auto | | | | | |
| Decoder Monitor | Loss Of Video Output | Freeze | | | | | |
| Decoder Audio Monitor | Audio Output Control | | | | | | |
| Decoder Output Control | | | | | | | |
| Decoder ANC Data Control | Channel Destination Select | | | | | | |
| Decoder ANC Monitor | 1 2 3 4 5 6 7 8 | B 9 10 11 12 13 14 15 16 | | | | | |
| Descrambler Control | Channel Source Select | Mute | | | | | |
| SFP-ASI Transmit Control | Private Data Output Control | | | | | | |
| FEC Control | Filvate Data Culput Colluci | | | | | | |
| Genlock Control | Data Output | Disable | | | | | |
| Inband Control | Destination IP address | 192.168.192.100 | | | | | |
| Downconversion | Destination Port | 1,234 (1 to 65535) | | | | | |
| CDP | | | | | | | |
| AVM Control | MPE Data PID | | | | | | |
| AVM Faults | MPE Data PID Output | Disable | | | | | |
| Faults | | | | | | | |

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

| EVERIZ 5782DEC & Ref | fresh 👲 Apply 🎍 Dynamic Apply | 🏟 Upgrade | Logout |
|--------------------------|--------------------------------|---------------|--------|
| | Deceder ANO De | | |
| Frame | Decoder ANC Dat | ta Control | |
| System | CC Controls | | |
| Product Features | | | |
| Decoder Input Control | CC Selection | Auto 🗸 | |
| Decoder Monitor | CC 708 Insert Line | 9 | |
| Decoder Audio Monitor | AFD Controls | | |
| Decoder Output Control | | | |
| Decoder ANC Data Control | AFD SD Insert Line | 18 | |
| Decoder ANC Monitor | AFD SD Embed Enable | Enabled • | |
| SFP-ASI Transmit Control | AFD SD VANC Or VI | AFD On VANC • | |
| Inband Control | AFD HD Insert Line | 18 | |
| CDP | AFD HD Embed Enable | Disabled ~ | |
| Faults | AFD Mode | Sticky 🗸 | |
| | VBI Controls | | |
| | | | |
| | VBI Data Embed | Disable 🗸 | |
| | WSS WST and OP 47 Contro | ls | |
| | | | |
| | OP 47 Insert Line | 9 | |
| | OP 47 Embed Enable | Disable • | |
| | WST Embed | Disable • | |
| | WSS Embed | Disable | |
| | WSS Embed Mode | Video AR 🗸 | |
| | Timecode Controls | | |
| | Time Code SD Embed Mode | упс 🗸 | |
| | Time Code SDVITC Insert Line 1 | 9 | |
| | Time Code SDVITC Insert Line 2 | | |
| | Time Code Embed Enable | 9 Disable | |
| | VANC Controls | | |
| | | | |
| | VANC VPTS | Disable • | |
| | | | |

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

| Frame | Decoder ANC Monitor | | | | | | | | |
|--------------------------|---------------------|-----------------------|--|--|--|--|--|--|--|
| System | Decoder ANC Monitor | | | | | | | | |
| Product Features | | | | | | | | | |
| Decoder Input Control | СС Туре | SCTE21 608:SCTE21 708 | | | | | | | |
| Decoder Monitor | WST Present | False | | | | | | | |
| Decoder Audio Monitor | WSS Present | False | | | | | | | |
| Decoder Output Control | OP 47 Present | False | | | | | | | |
| Decoder ANC Data Control | VBI Present | False | | | | | | | |
| Decoder ANC Monitor | AFD Present | True | | | | | | | |
| SFP-ASI Transmit Control | Timecode Present | False | | | | | | | |
| Inband Control | | | | | | | | | |
| CDP | | | | | | | | | |

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

| Frame | SFP-ASI Trans | smit Control | | |
|--------------------------|-----------------------------|----------------------|---|---------------------|
| System | SFP and ASI Transmit | Control | | |
| Product Features | Self Contract Manhan States | THE REAL PROPERTY OF | | 38282091391 |
| Decoder Input Control | SFP Transmit Output | Disable | - | |
| Decoder Monitor | SFP Output IP address | 239.0.0.4 | | |
| Decoder Audio Monitor | SFP Output IP Port | 1,234 | | (1 to 65535) |
| Decoder Output Control | PID Filter | Disable | * | |
| Decoder ANC Data Control | Remove NULL Packets | Disable | • | |
| Decoder ANC Monitor | Packet Rate Control | Disable | * | |
| SFP-ASI Transmit Control | Packet Bitrate | 80,000 | | (0 to 1000000) Kbps |
| Inband Control | BNC 4 Output | Video | * | |
| CDP | | | | |

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



5.10. INBAND CONTROL

| Frame | Inband Control | | |
|--------------------------|------------------------|------------|-------------|
| System | Inband Control | | |
| Product Features | | | 600555 |
| Decoder Input Control | Time Source Select | Local Time | ~ |
| Decoder Monitor | Boot Image Number | 1 | (1 to 3) |
| Decoder Audio Monitor | Overwrite Image Number | 1 | (1 to 3) |
| Decoder Output Control | Current Image Number | 1 | |
| Decoder ANC Data Control | Time Zone Offset | 0 | (-12 to 13) |
| Decoder ANC Monitor | Daylight Savings Time | Off | ~ |
| SFP-ASI Transmit Control | Group ID | 0 | |
| Inband Control | Upgrade Status | Idle | |
| CDP | Upgrade Time | NA | |
| Faults | | 01 02 03 | |
| | Image Names | 12.544 | |

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

The 5782DEC 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.

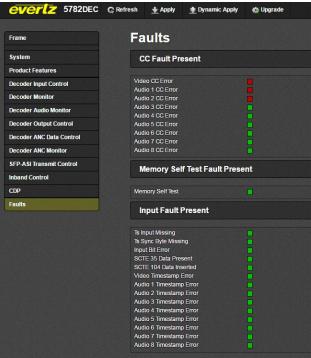


Figure 5-14: WebEASY® – Faults Tab

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.



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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.

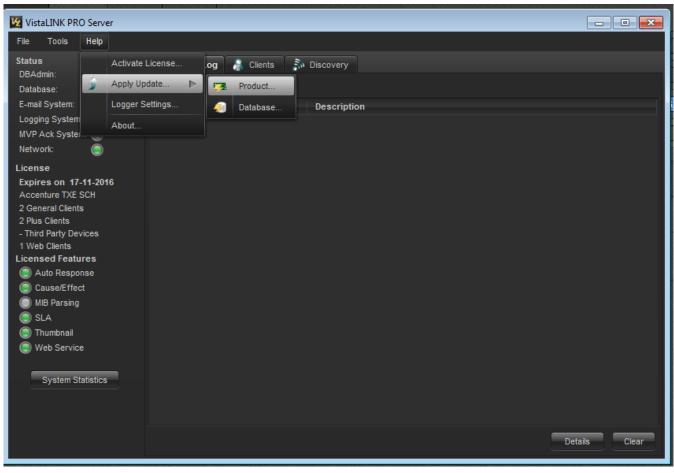


Figure 6-1: VistaLINK_® PRO Server Help Menu

5782DEC Professional H.264 and MPEG-2 Decoder



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.

| 🧏 VistaLINK PRO S | erver | | | | | | | |
|---|----------------|-----------------------------|-------------|---|-----|-----|--------|----------|
| File Tools H | elp | | | | | | | |
| Status DBAdmin: Database: | 🦉 Open | Server Log 🛛 🛔 Clients | S Discovery | | | | 8 | |
| E-mail System: Logging System: MVP Ack System: | _ | 7882DEC Firmware | | • | Ø 6 | 8 | | |
| Network: License Expires on 17-1 Accenture TXE Si 2 General Clients 2 Plus Clients - Third Party Devin 1 Web Clients Licensed Feature Cause/Effect | ☑ VLProProc | 1_7882DEC-H264HD jar | | | | | | |
| MIB Parsing SLA | File Name: | E:\7882DEC Firmware | | | | | | |
| Thumbnail Web Service | Files of Type: | jar directory, *.jar, *.zip | | | | | 7 | |
| System Sta | | | | | 0 | pen | Cancel | |
| | | | | | | | Detai | ls Clear |

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 5782DEC.

- 1. WebEASY $_{\ensuremath{\mathbb{R}}}$
- 2. VistaLINK $_{\ensuremath{\mathbb{R}}}$ with the 570FC

Using the WebEASY $_{\ensuremath{\mathbb{B}}}$ on a web interface is the fastest and recommended procedure to load firmware onto the 5782DEC.

6.2.1. Firmware Upgrade Using WebEASY®

When first visiting the 5782DEC 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 5782DEC, there is a tab labelled Upgrade. The Upgrade tab is used to check current firmware version and upload the latest firmware.

| everlz | C Refresh | 😋 Auto Refre | sh 🏶 Upgrade | | | Logout |
|-------------------|-----------|--------------|----------------------|------------------|-------|---------|
| Menu | | FC | Menu | | | |
| Frame | | | | | | |
| Product Location | | Proc | lucts | | | |
| Hardware | | Slot | Name | Family | Alias | Version |
| Software | | 1 | FC | Frame Controller | | |
| Time Management | | | | | | |
| SNMPV 1 Community | | | | | | |
| SNMPV 1 Trap | | 3 | | | | |
| TRAP Mgmt Fault | | 4 | 5782ENC-H264HD-IPASI | ENC7882H264HDFC | | 2.0.933 |
| Certificate | | | | | | |

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.



| Upgrade Firmware Upgrade Stot Upgrade 1 Upgrade 2 Not Available 3 Not Available 4 10 5782ENC-H204H 5 Not Available 6 Not Available | Alias Current Version Frame Controller 0.0.0 0.0.0 ICJIPASI 2.0.933 | Progress |
|---|---|----------|
| Stot Upgrade Name 1 Upgrade 1 2 Not Available 1 3 Not Available 1 4 U 5782ENC-H22HH 5 Not Available 1 | Frame Controller 0 0 0 0 0 | Progress |
| Stot Upgrade Name 1 Upgrade 1 2 Not Available 1 3 Not Available 1 4 U 5782ENC-H22HH 5 Not Available 1 | Frame Controller 0 0 0 0 0 | Progress |
| I Upprade 2 Not Available 3 Not Available 4 5782ENC-H284H 6 Not Available | Frame Controller 0 0 0 0 0 | Progress |
| 2 Not Available 3 Not Available 4 5782ENC-H264H 5 Not Available | 0.0.0 | |
| 3 Not Available 4 III 5732ENC-H264H 5 Not Available | 0.0.0 | |
| 4 to 5782ENC-H264H 5 Not Available | | |
| 5 Not Available | ID-IPASI 2.0.933 | |
| | | |
| 8 Not Available | 0.0.0 | |
| Not Available | | |
| 7 Not Available | 0.0.0 | |
| 8 Not Available | | |
| 9 Not Available | 0.0.0 | |
| 10 Not Available | 0.0.0 | |
| 11 Not Available | | |
| 12 Not Available | | |
| 13 Not Available | 0.0.0 | |
| 14 Not Available | | |
| 15 Not Available | 0.0.0 | |
| 16 M Not Available | | |
| 17 🖬 Not Available | 0.0.0 | |
| 18 🔟 Not Available | 0.0.0 | |
| 19 19 Not Available | 0.0.0 | |
| 20 Not Available | 0.0.0 | |
| 20 Not Available | 0.0.0 | |
| Firmware Browse No file selected | d. | |

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.



| File Upload | ; ▶ 7882ENC-H264HD-IPASI ▶ images ▶ test_im | nage 🕨 V200T3GB2016 | 50818-0933 | 👻 🍫 Searc | h V200T3GB20160 | X818-0933 |
|---|--|---------------------|---------------|------------|-----------------|-----------|
| Organize 🔻 New fold | ler | | | | | |
| ☆ Favorites | Name | Date modified | Туре | Size | | |
| 🧮 Desktop | enc7882-enc5782-V200T3GB20160818-09 | 8/18/2016 11:23 AM | CIU File | 56,173 KB | | |
| 〕 Downloads 注 Recent Places | ReadMe | 8/19/2016 3:52 PM | Text Document | 3 KB | | |
| ➢ Libraries ➢ Documents J Music ➢ Pictures ☑ Videos | | | | | | |
| Normal Computer | | | | | | |
| Network | | | | | | |
| Filer | ame: enc7882-enc5782-V200T3GB20160818-0933.c | iu | | - All File | 5 | • |
| | | | | Step 2 | pen (| Cancel |
| 20 | Not Available | | 0.0.0 | | | |
| Firmware | Browse No file selected. | | | | | |
| | Step 1 | | | | Step 3 | Upgrade |

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.



6.2.2. Firmware Upgrade using VistaLINK $_{\odot}$ with the 570FC

Upgrading the firmware using VistaLINK $_{\odot}$ can be accomplished using the 570FC frame controller and the 5782DEC.

Ensure that the 5782DEC 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.

| 📾 192.168.71.123 | | |
|--|-----------------------------------|--|
| 🕮 🛲 192.168.71.128 | • | |
| International Englishing Technology (1997) | View Alarm | |
| — 192.168.71.16 | | |
| - 192.168.71.16 🤹 | View <u>C</u> onfiguration | |
| | Purge Selected | |
| 102.100.11.11 | Furge Selected | |
| 192.168.71.17 🦽 | Configure Alarms | |
| 192.168.71.17 | | |
| | Assign Community/Context Names | |
| ····· 🛲 192.168.71.17 | Display Physical/Virtual Port(s) | |
| | Load | |
| Image: 192.168.71.19 | | |
| | <u>S</u> ave | |
| 192.168.71.20 | | |
| 192.168.71.22 | Inhibit | |
| 192.168.71.22 | Sleep | |
| | 0 | |
| | Create Service | |
| 🕀 🔤 192.168.87.66 🍱 | <u>C</u> lone | |
| 192.168.87.68 | Nine Diseases Descertion | |
| 192.168.87.10 | Misc Discovery <u>P</u> roperties | |
| 🕀 🧰 192.168.87.16 🔊 | <u>R</u> efresh | |
| 🛲 192.168.100.1 📃 | Update Description | |
| SER Services | | |
| | Update Tooltip | |
| | Version Information | |
| | | |

Figure 6-6: 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 5782DEC 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 5782DEC module will reboot automatically and return online in normal "run" mode.