# 2430RX-J2K-IP Series JPEG2000 to HDMI Converter User Manual

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# **IMPORTANT SAFETY INSTRUCTIONS**

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

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

#### WARNING

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

#### WARNING

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

#### WARNING

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

## WARNING

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

# **INFORMATION TO USERS IN EUROPE**

## NOTE

## **CISPR 22 CLASS A DIGITAL DEVICE OR PERIPHERAL**

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



EN60065 EN55103-1: 1996

Safety Emission EN55103-2: 1996 Immunity



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

# **INFORMATION TO USERS IN THE U.S.A.**

## NOTE

## FCC CLASS A DIGITAL DEVICE OR PERIPHERAL

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

## WARNING

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

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



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# **REVISION HISTORY**

#### **REVISION**

#### DESCRIPTION

<u>DATE</u>

0.1 Preliminary Release

July 2014

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Although every attempt has been made to accurately describe the features, installation and operation of this product in this manual, no warranty is granted nor liability assumed in relation to any errors or omissions unless specifically undertaken in the Evertz sales contract or order confirmation. Information contained in this manual is periodically updated and changes will be incorporated into subsequent editions. If you encounter an error, please notify Evertz Customer Service department. Evertz reserves the right, without notice or liability, to make changes in equipment design or specifications.



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# 1. OVERVIEW

The 2430RX-J2K-IP is a versatile JPEG2000 to HDMI/DVI/DisplayPort processing converter. The 2430RX-J2K-IP is used in applications where delivery of J2K encoded video is to be displayed on a DVI/HDMI monitor.

This self contained module accepts up to one JPEG2000 over IP streaming inputs. It decodes, processes and converts them on 1 output path to a DVI/ HDMI signal. With integrated auto scaling the 2430RX-J2K-IP device can drive resolutions up to WUXGA (1920x1200).

## Features & Benefits

- Full 4:2:2 10-bit pixel input resolution
- Full 24-bit RGB output pixel resolution
- Colour correction (requires +VPGC option)
- Ideal for use with high resolution LCD, plasma and projection screens
- Auto-rescaling
- Superior digital data transmission
- Compact form factor with optional VESA mount brackets
- Analog audio outputs supported
- In band control supported





Figure 1-1: Block Diagram



## 2. GETTING STARTED

## 2.1. FRONT & REAR PLATE DESCRIPTION



Figure 2-1: Front Plate

**POWER** The 2430RX-J2K-IP comes with an auto-ranging DC voltage adapter that automatically senses the input voltage. Power should be applied by connecting a 3-wire grounding type power supply cord to the power entry module on the DC voltage adapter. The power cord should be minimum 18 AWG wire size; type SST marked VW-1, maximum 2.5m in length. The DC cable of the voltage adapter should be connected to the DC power jack on the rear panel. A green LED located beside the DIP switch connector will be illuminated when there is power applied to the 2430RX-J2K-IP.

SDI OUT:

BNC per IEC 60169-8 Amendment 2

## 2.1.1. Video Connection



## Figure 2-2: Rear Plate

COM: Supported Resolution: Color Resolution:	DVI, VGA and Component cable VESA: VGA, SVGA, XGA, WXGA, SXGA, SXGA+, UXGA, WSXGA+, WUXGA, WQXGA (dual-link). CEA-861B: 480p, 576p, 720p, 1080i, 1080p 24 bits				
CONTROL:	Standard CAT5 cable (not included)				
AUDIO OUT:	1/8" Stereo (3.5mm) Male Mini to 2-RCA Male Audio Y-Cable (no included)				
HDMI OUT:	Standard HDMI Cable (not included)				

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## 2.2. HARDWARE INSTALLATION



## Note: SFP's must be ordered separately

To successfully install the 2430RX-J2K-IP the user will require the following:

- 1. Unused IP address on the network or a DHCP server.
- 2. VistaLINK<sub>®</sub> PRO Server IP address.

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

Ensure that the device is powered up and the green LED is on. Connect the device via the COM port using a 9-pin Serial Cable., Connect the Female end of the serial cable to the serial port of your PC. Connect the the opposing Male end to the 9-Pin connector on rear of unit. In order to begin configurations ensure the below settings are configured properly:

Baud: 115200 Data: 8-BIT Parity: none Stop Bits: 2 Flow Control: none

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

## 2.2.1. Inband Control Configuration

This sub-menu enables the user to configure the settings for unicast traffic forwarding. The user should be aware that once this has been enabled, the control port will not be active and all control will be made via Inband Data connection. The following steps should be followed to ensure proper confirguration:

- 1) Connect COM port to 2430RX-J2K-IP
- 2) Login when prompted: username customer password customer
- 3) Select Option (5) For inband control
- 3) Select (1) for Enable
- 4) Select (Y) to confirm
- 5) Select (X) to save and exit from the 2430RX-J2K-IP main menu

After the Inband control configurations have been enabled, wait for the unit to reboot.



## 2.3. CONFIGURING BASIC NETWORK SETTINGS

To make changes to the IP address select **Network Setup**. Set the IP address to the desired subnet as well as set the **Gateway**. Make the same changes for the IP address and Gateway of Port 2 as required. When done **Exit (X)** the Network Setup and **Save and Exit (X)** from the Main Menu to ensure all changes are saved.

Power Cycle the 2430RX-J2K-IP to ensure all changes are loaded to the card.

## 2.4. CONNECTING TO VLPRO

This chapter assumes that the VistaLINK<sub>®</sub> PRO server and client are already configured for your network and you have basic knowledge of the VistaLINK<sub>®</sub> PRO interface. It also assumes that the user or network administrator has already added the appropriate jar file to the server, and both the client and server applications have been restarted. Please refer to the VistaLINK<sub>®</sub> PRO manual for instructions on how to load a jar file.

Open VistaLINK<sub>®</sub> PRO and click on the refresh tree icon. Expand the hardware tree by clicking on the "+" button. Your card should appear as a newly listed device with the IP address used to configure the card. It may take up to a minute to appear while the card and switch negotiate network settings (this can be verified directly on the switch if necessary).



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

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



# 3. SPECIFICATIONS

## 3.1. TECHNICAL SPECIFICATIONS

- 3.1.1. Input
  - 2 x Female LC/UPC connectors supporting JPEG2000

## 3.1.2. Output

- 1 x JPEG2000 to HDMI Converter
- 2 x HDMI Output (mirror)
- Supported resolutions: 525, 624, 720p, 59.94/5 Hz and VESA up to WUXGA (1920x1200)

## 3.1.3. Serial Video Output

- 2 x BNC per IEC60 169-8 Amendment 2 (mirror of HDMI out)
- Supported standards: 525, 625, 720p, 59.94/50 Hz, 1080p 59.94/50 Hz

## 3.1.4. Audio Output

• 2 x RCA stereo pairs

## 3.1.5. Electrical

- Voltage 12V DC, Auto ranging 100-240V AC 50/60 Hz adapter included
- Power: 11W
- Physical Dimensions: 8.13"L x 9.28"W x 1.75"H
- Compliance
  - Electrical Safety: Power supply UL listed complies with CE Low Voltage Directive
  - EMI/RFI: Complies with FCC Part 15, Class A EU EMC directive



# 4. VISTALINK® PRO INTERFACE

## 4.1. CONTROL PORT CONTROL

100		192.168.194.170, 243	2430RX-J2K-IP: Configuration					_ 🗆 ×		
Refresh 😋 💲 1.0 Apply	👲 👲 Status Completed (10:11:3	1 2014-07-17)	×	Logger						
Control Port Control	Data Port Control Data Port Monitor	Product Features								
Control Port 1		Control Port 2								
IP Address	192.168.194.170	IP Address			192.168.	194.167				
Netmask	255.255.192.0	Netmask			255.255.	255.0				
Gateway	192.168.194.1	Gateway			192.168.	194.1				
1.1										

Figure 4-1: Control Port Tab



Note: There is only one physical control port on the unit, both IP's come from the same Network Interface Card (NIC). This allows the unit to be controlled via multiple subnets on this port.

**IP Address:** This parameter allows the user to set an IP address for the control port.

NetMask: This parameter allows the user to set the netmask (subnet) for the control port.

Gateway: This parameter allows the user to set the gateway address for the control port.

## 4.2. DATA PORT CONTROL

<b>10</b>		1	192.168.194.170, 243	ORX-J:	2K-IP:	Confi	juration			– 🗆 ×
Refresh 😋 💲 1.0 Apply	🛨 😻 Status	Completed (11:15:0	5 201 <b>4-0</b> 7-15)	×	Logger					
Control Port Control	Data Port Control	Data Port Monitor	Product Features							
Data Port 1			Data Port 2							
IP Address	10.20.50.56		IP Address				10.20.50.57			
Netmask	255.255.255.0		Netmask				255 255 255 0			
Gateway	10.20.50.1		Gateway				192.168.0.1			

Figure 4-2: Data Port Tab

- **IP Address:** This parameter allows the user to set an IP address.
- **IP NetMask:**This parameter allows the user to set the netmask (subnet).
- **IP Gateway:** This parameter allows the user to set the gateway address.



## 4.3. DATA PORT MONITOR

105	192.168.194.170, 2430RX-J2K-IP: Configuration							
Refresh 😋 💲 1.0 Apply 👲 봧 Status	Completed (11:15:05	2014-07-15) 🗙 Logger						
Control Port Control Data Port Control	Data Port Monitor	Product Features						
Data Port 1								
Port Link Status		Port Link Status						
Received Data Ethernet Total Bitrate		Total Ethernet Rx Bitrate						
Transmitted Data Ethernet Total Bitrate		Total Ethernet Tx Bitrate						

Figure 4-3: Data Port Monitor Tab

Port Link Status: This parameter returns the port status link, in either an 'UP' or 'DOWN' state.

Port Link Info: This parameter returns the port link status (i.e. speed, duplex).

**Received Data Ethernet Total Bitrate:** This field displays the bitrate received on this Ethernet port and is represented in kbps.

**Transmitted Data Ethernet Total Bitrate:** This field displays the bitrate transmitted on this output Ethernet port and is represented in kbps.

**Total Ethernet Rx Bit Rate:** This parameter displays the bit rate received on this Ethernet port is represented in kbps, and the value can range from 0 to 1000000000.

**Total Ethernet Tx Bit Rate:** This parameter displays the bit rate transmitted on this output Ethernet port is represented in kbps, and the value can range from 0 to 1000000000.

## 4.4. **PRODUCT FEATURES**



Figure 4-4: Product Features Tab

#### **Product License**

**Product License:** This field displays the product license key.

Product Serial Number: This field displays the card serial number.

**Product MAC Address:** This field displays the card MAC address.



# 5. DECODER CONFIGURATION

## 5.1. DECODER INPUT CONTROL

<b>11</b>		192.168.194.17	0, Decoder 1 [1]: Configurat	ion	
Refresh 🥵 💲 1.0 Apply	🔹 😻 Status Completed (09:47	:14 2014-07-15)	Logger		
Decoder Input Control	Decoder Output Control Video Pro	oc Input Mon	itor Program Monitor	Error Monitor Notify	
Input Port Control					
Input Stream Active	Active 🔽		Program Tuning Mode	Auto PID Select	
Input Port Select	Data Port 1 🔷 🔻		Auto Program Select Mode	First Program in PAT	<b>T</b>
Input IP Address	239.255.100.160		Program Number Select		(1 to 65535)
Input IP Port Number	1234	(1 to 65535)	PID Control		
Decoder Control			Video PID Select		(2 to 8190)
Decoder Up Time			Audio PID Select 1		
	Load Factory Config		Audio PID Select 2		
	Decoder Reboot		Audio PID Select 3		
			Audio PID Select 4		
			PCR PID Select		(2 to 8190)
			VANC PID Select		(2 to 8190)
			PID Configuration	Pre Assigned	<b>V</b>

Figure 5-1: Decoder Input Control Tab

#### Input Stream Active

**Input Stream State:** This parameter will activate or deactivate this stream. By default, all streams are inactive. Once this parameter is set to active, traffic can run through it.

**Input Port Select:** This parameter allows the user to set the physical interface to receive data from either data port 1 or data port 2.

**Input IP Address:** This parameter allows the user to define the IP address/ Multicast address from which data will be received.

**Input IP Port Number:** This parameter allows the user to select the input UDP/RTP port number, which can range from 1 to 65535.

#### Input Program Control

**Program Tuning Mode:** This parameter allows the user to select the program Tuning mode of the decoder. The user can select from two options:

- AutoPidSelect: automatically choose the PIDs for each audio stream, based on Auto Program Select Mode.
- ManualPidSelect: Manually select PIDs for each audio stream.



Auto Program Select Mode: This control allows the user to set how the decoder will select a program for decoding when Program Tuning Mode is set to auto.

- First Program in PAT: select audio PIDs from first program will be chosen.
- Lowest Program Num: select audio PIDs from lowest program will be used.
- **Specific Program Select:** will pick audio PIDs from specific program, specified by Program Number Select control, for decoding.

**Program Number Select:** This parameter allows the user to select the program which will be decoded. This control is applicable only when the *Program Tuning Mode* is set to *Auto PID Select*, value for this range can be set from 0 to 65535.

## PID Control



Note: 0, 1 and 8191 are reserved PID's in MPEG, so these values are not included.

Video PID Select: This control allows the user to select the Video PID that will be decoded. This control is only applicable when the *Program Tuning Mode* is set to *Manual PID Select*. Range for these values can be set from 2 to 8190.

**Audio PID Select 1 – 4:** This control allows the user to select up to four Audio PID's which the decoder will decode and embed into the output video. This control is only applicable when the Program Tuning Mode is set to manual PID select.

**PCR PID Select:** This parameter allows the user to select the PID for incoming PCR clock. This control is only applicable when the Program Tuning Mode is set to Manual PID Select. Range for these values can be set from 2 to 8190.

**VANC PID Select:** This control allows the user to select the VANC PID which will be decoded. This control is only applicable when the *Program Tuning Mode* is set to *Manual PID Select*. Range for these values can be set from 2 to 8190.

**PID Configuration:** This parameter configures the method in which PIDs are set. It can be user defined or pre-assigned, in which case all the PID controls will be greyed out.

### Decoder Control

**Decoder Up Time:** This controls returns a string representation of the time the decoder was last restarted. It is represented similar to '*xxxx* days *yy* hrs *zz* min *aa* sec'. Internally, it is a 31 bit unsigned integer, reflecting seconds which will provide for up to 3100 days of operation before it wraps around.

**Load Factory Config:** Part of the Input Control table, this variable allows the SNMP Manager to revert the decoder configuration to a known factory recommended setting. The manager should read the variable prior to setting, to ensure it is in the 'ready' state. Writing the 'load' command will cause the decoder to cease current operations and sources and load the factory default configuration settings. This will NOT include IP interface settings, to ensure network contact is maintained. When the variable returns to the 'ready' state, the operation is complete. The operator can then manually refresh configuration displays.



**Reboot:** Part of the decoder Output table, this variable allows the SNMP Manager to perform a remote reboot of the decoder. This is useful when the IP interface (and other) changes have been made, and a reset is needed to make them take affect. The manager should read the variable prior to resetting, to ensure it is in the 'ready' state. Writing the 'reboot' command will cause the decoder to perform a software restart of the decoder. VLPro will communicate with the operator to confirm the desire to reboot. If the decoder card is working with a companion card (IP-ASI), VLPro will also issue a coordinated reset command to that card as well.

This is done by issuing the following: commandEntryEntry: commandIndex = adminCommand, commandString = 'reset'.



Note: The decoder will react immediately to reboot command, and will not respond to the SNMP set command.

## 5.2. DECODER OUTPUT CONTROL

192.168.194.170, Decoder 1 [1]: Configuration								
Refresh 😋 😒 1.0 Appl	y 🛨 😻 Status	Completed (09:47:14 2014-07-	15) 🔀 Logger					
Decoder Input Control	Decoder Output Co	ntrol Video Proc Input	Monitor Program	Monitor	Error Monitor No	lify		
Output Video Color	Green	V						
SDI Audio Source					HDMI Audio Source			
SDI Audio Source 1	PID 1 / Pair 1 🗸 🔻	Analog Audio Source 1	PID 1 / Pair 1	-	HDMI Audio Source 1	PID 1 / Pair 1	v	
SDI Audio Source 2	PID 1 / Pair 1 🛛 🔽	Analog Audio Source 2	PID 1 / Pair 1	<b>V</b>	HDMI Audio Source 2	PID 1 / Pair 1	<b>v</b>	
SDI Audio Source 3	PID 1 / Pair 1 🛛 🔻	Analog Audio Source 3	PID 1 / Pair 1	<b>v</b>	HDMI Audio Source 3	PID 1 / Pair 1	<b>T</b>	
SDI Audio Source 4	PID 1 / Pair 1 🔷	Analog Audio Source 4	PID 1 / Pair 1	V	HDMI Audio Source 4	PID 1 / Pair 1	V	
SDI Audio Source 5	PID 1 / Pair 1 🛛 👻	Analog Audio Source 5	PID 1 / Pair 1	-	HDMI Audio Source 5	PID 1 / Pair 1	v	
SDI Audio Source 6	PID 1 / Pair 1 🛛 🔻	Analog Audio Source 6	PID 1 / Pair 1	<b>V</b>	HDMI Audio Source 6	PID 1 / Pair 1	-	
SDI Audio Source 7	PID 1 / Pair 1				HDMI Audio Source 7	PID 1 / Pair 1	<b>T</b>	
SDI Audio Source 8	PID 1 / Pair 1 🗸				HDMI Audio Source 8	PID 1 / Pair 1	<b>V</b>	
SDI Audio Source 9	PID 1 / Pair 1 🗸 🔻							
SDI Audio Source 10	PID 1 / Pair 1 🛛 🔻							
SDI Audio Source 11	PID 1 / Pair 1 🗸 🔻							
SDI Audio Source 12	PID 1 / Pair 1 🗸							
SDI Audio Source 13	PID 1 / Pair 1 🔷							
SDI Audio Source 14	PID 1 / Pair 1 🛛 🔽							
SDI Audio Source 15	PID 1 / Pair 1							
SDI Audio Source 16	PID 1 / Pair 1 🔷							

Figure 5-2: Decoder Output Control Tab

## General

**Output Video Color:** This control allows the user to select the output video color that will sent on the output when input ASI is missing and the Output Video Mode is set to continuous. The user can set this to *black, green,* and *freeze.* 



### SDI Audio Source

This control allows the user to enable or disable which audio service will be embedded into the audio group for SDI/HDSDI output. **NOTE:** This configuration is the same for SDI Audio Sources 1 through 16.

#### Analog Audio Source

This control allows the user to enable or disable the audio service which will be embedded into the audio group for Analog output. **NOTE:** This configuration is the same for Analog Audio Sources 1 through 6.

#### HDMI Audio Source

This control allows the user to enable or disable the audio service that will be embedded in to the audio group for HDMI output. **NOTE:** This configuration is the same for HDMI Audio Sources 1 through 8.

## 5.3. VIDEO PROC IF +VGPC OPTION IS LICENSED

1995		192.168.19	4.170, Decoder 1 [1]: Confi		_ 🗆 ×	
Refresh 😋 😒 1.0 Ap	opiy 🛃 😻 Status 🛛 (	Completed (09:47:14 2014-07-	-15) 🗙 Logger 🔳			
Decoder Input Control	Decoder Output Contro	I Video Proc Input	t Monitor Program Moni	tor Error Monitor Notify		
Enable Video Proc	Disable	<b>T</b>	B Offset			
Enable YCbCr Proc	Disable	V	Enable RGB Clip	Disable		
Y Gain	•	0.0 %	Enable RGB Gamma	Disable	V	
Y Offset	•		R Gamma	•		
Saturation Gain	•	0.0 %	G Gamma	•		
Hue	•	0.0 deg	B Gamma	•		
Luma Gamma Enable	Disable	T	Minimum R	•		
Luma Gamma Value	•		Maximum R			
Enable RGB Proc	Disable	T	Minimum G			
Video Gain	•	0.0 %	Maximum G			
R Gain	•	0.0 %	Minimum B		0	
G Gain	•	0.0 %	Maximum B	•	0	
B Gain	•	0.0 %	Low Knee Size	•	0	
R Offset			High Knee Size	•		
G Offset	•			Reset		

Figure 5-3: Video Processor Tab

Enable Video Proc: This control will Enable or Disable the video processor module.

Enable YCbCr Proc: This control will Enable or Disable the YCbCr processor block.

**Y Gain:** This control allows the user to adjust the gain for the Y component in the YCrCb domain. Range for this value can be set from -100% to 100%.

**Y Offset:** This control allows the user to adjust the DC offset of the Y component in =/- 200 quantization increments.

**Saturation Gain:** This control allows the user to set the saturation gain from -100% to 100%. **Hue:** This control allows the user to adjust the hue. Range for this value can be set from -180° to 180°.

Luma Gamma Enable: This control allows the user to Enable or Disable the luma gamma.

**Luma Gamma Value:** This control allows the user to adjust the gamma correction factor. Range for this value can be set from -100 to 100.

**Enable RGB Proc:** This control allows the user to *Enable* or *Disable* bypasses on the RGB processor block.

**Video Gain:** This control allows the user to adjust the gain of the RGB component in the RGB Domain. Range for this value can be set from -100% to 100%.

#### Gamma R/G/B

This control allows the user to adjust the gamma correction factor for the Red, Green, and Blue gamma levels. Range for this value can be set from -100 to 100.

#### Minimum R/G/B

This control allows the user to adjust the Red, Green, and Blue minimum levels. Range for this value can be set from -100 to 100.

#### Maximum R/G/B

This control allows the user to adjust the Red, Green, and Blue maximum levels. Range for this value can be set from -100 to 100.

**Low Knee Size:** This control allows the user to set the lowest knee size. Range for this value can be set from 0 to 31.

**High Knee Size:** This control allows the user to set the lowest knee size. Range for this value can be set from 0 to 31.

Video Processor Reset: This control resets the video processor.



## 5.4. INPUT MONITOR

	19	2.168.194.170, De	coder 1 [1]: Configuration	_ 🗆 ×
Refresh 😋 🗘 1.0 Apply 👲	Status Completed (09:14:55	2014-07-16)	🗶 Logger 🔳	
Decoder Input Control Dec	oder Output Control Video Proc	Input Monitor	Program Monitor Error Monitor Notify	
Input Stream				
Stream Type				
Received Ethernet Bandwidth				
Received IP Packets				
Received TS Packets				
Protocol Status				
TS Packet Per IP Packet				
TS Packet Size				
Clear Stats	Clear Stats			
Input Monitor				
Input State				
Num Programs				
Transport Stream ID				
Network ID				
PSD Service Type				
PSD Provider Name				
PSD Program Name				

Figure 5-4: Input Monitor Tab

#### Input Stream

Stream Type: This field displays the type of input stream as either *Multicast* or *Unicast*.

**Received Ethernet Bandwidth:** This parameter displays the Ethernet bandwidth for the input stream, and can range from 0 to 1000000000 bits.

**Received IP Packets:** This parameter displays the amount of IP packets that have been received on the input stream. Range for this value can be from 0 to 2147483647.

**Received Transport Stream (TS) Packets:** This parameter displays the amount of TS packets that have been received on the input stream. Range for this value can be from 0 to 2147483647.

**Protocol Status:** This parameter will verify if the stream is running on RTP, and if it is not the following values will be displayed:

**TS Packet Per IP Packet:** This field displays the amount os TS packets are within an IP packet. Range for this value can be from 1 to 7.

**TS Packet Size:** This field displays the TS packet size as either 188 bytes or 204 bytes per packet.

**Clear Status:** This control resets the stream monitor statistics.



Input Monitor

Input State: This field displays whether the card is currently receiving a feed on the input.

Num Programs: This field displays the number of programs detected within the input stream.

**Transport Stream ID:** This parameter control returns the transport stream ID that is being read from the PAT Table.

**Network ID:** This parameter returns the value of the network ID read from the transport stream, and can range from 0 to 65535.

**PSD Service Type:** This parameter returns the service type read from the Evertz private service descriptor (79) from the PMT. It provides an enumerated string as follows:

1 - Digital Tv9 - DMAC2 - Digital Radio10 - FM Radio3 - Teletext11 - NTSC Signal4 - NOVD Reference12 - Data Broadcast5 - NVOD Timeshifted6 - Mosaic7 - PAL Signal8 - SECAM SignalN/A -a valid service Type was not found, or there is no private descriptor.

**PSD Provider:** This parameter returns the provider name read from the Evertz Private service descriptor (79) from the PMT.

**PSD Program Name:** This parameter returns the program name read from the Evertz private service descriptor (79) from the PMT.



## 5.5. PROGRAM MONITOR

Refresen     C     1.0 Apply     Status     Completed (09:14:55:2014-07-16)     Logger       Decoder Input Control     Decoder Output Control     Video Proc     Input Monitor     Program Monitor     Error Monitor     Notify       Program Monitor     Program Video Monitor     Program Video Program Video Monitor     97	_ □ ×	ecoder 1 [1]: Configuration	192.168.194.170, Dec			5	125
Decoder Input Control         Decoder Output Control         Video Proc         Input Monitor         Program Monitor         Error Monitor         Notify           Program Monitor         Program Video Monitor         Program Video Monitor         97		🗙 Logger 🔳	leted (09:14:55 2014-07-16)	👲 😻 Status Complet	C 1.0 Apply	etresit 😋	Refre
Program Monitor Program Video Monitor Program Num in TS 1 Video PID Num 97		Program Monitor Error Monitor Notify	Video Proc Input Monitor	Decoder Output Control	nput Control	Decoder Ir	1
Program Num in TS 1 Video PID Num 97		n Video Monitor	Program V				
		PID Num 97	Video PID		lum in TS	Program N	
PMT PID 96 Video Bit Rate 0		Bit Rate 0	Video Bit			PMT PID	
PCR PID 400 Video Resolution 1080p59.94		Resolution 1080p59.94	Video Re			PCR PID	
Num Video Streams         Video Profile And Level         4.2		Profile And Level 4.2	Video Pro		o Streams	Num Video	
Num Audio Streams 4 Video Chroma Format 4:2:0		Chroma Format 4:2:0	Video Chi		o Streams	Num Audio	
Program Audio Moditor					utio Monitor	Program Å	
Audio PID Num Audio Bit Rate Audio Num Channels (0 to 8191) (0 to 10000000)		Audio Num Channels	Audio Bit Rate (0 to 10000000)	Audio PID Num (0 to 8191)	A		
Audio PID 1					й	Audio PID	
Audio PID 2 201 3000000					2	Audio PID	
Audio PID 3 202 3000000					3	Audio PID	
Audio PID 4 203 3000000					4	Audio PID	
							-

Figure 5-5: Program Monitor Tab

#### Program Monitor

**Program Num in TS:** This field displays the current program being decoded by the decoder. Range for this value can be from 0 to 65535.

**PMT PID:** This parameter returns the PID for the PMT, for the program being decoded. Range for this value can be from 0 to 8191. When in Manual PID Selection Mode no value will be displayed.

**PCR PID:** This parameter returns the PID which has the PCR information for the program being decoded. Range for this value can be from 0 to 8191. When in Manual PID Selection Mode no value will be displayed.

**Num Video Streams:** This parameter returns the number of Video Streams in the program which are being decoded. Range for this value can be from 0 to 100. When in Manual PID Selection Mode no value will be displayed. Also, it is assumed there is only one video stream in one program.

**Num Audio Streams:** This parameter returns the number of Audio Streams in the program which are being decoded. Range for this value can be from 0 to 100. When in Manual PID Selection Mode no value will be displayed.

#### Program Video Monitor

**Video PID Num:** This field displays the PID which carries the PES for Video. Range for this value can be from 0 to 8191.

Video Bit Rate: This field displays the bit rate for the video elementary stream.



**Video Resolution:** This field displays the current video resolution.

Video Profile and Level: This field displays the current profile and level of the video stream.

Video Chroma Format: This field displays the chroma format of video.

#### Program Audio Monitor

#### Audio PID Number

This field displays the current PID which is carrying the PES for this audio stream. Range for this value can be from 0 to 8191.

### Audio Bit Rate

This field displays the bit rate for the audio elementary stream.

#### Audio Number Channels

This field displays the number of current channels in the audio stream.

#### 5.6. ERROR MONITOR

<b>11</b>	19	2.168.194.170, Decoder 1 [1]: Configurati	ion	_ 🗆 ×
Refresh 🥵 💲 1.0 Apply	👲 😻 status Completed (09:14:55	2014-07-16) 🗙 Logger 🧮		
Decoder Input Control	Decoder Output Control Video Proc	Input Monitor Program Monitor	Error Monitor Notify	
Video Error Monitor				
Video CC Errors		Ancilliary CC Errors		
Video CRC Errors		PCR Error Monitor		
Audio CC Error Monitor		PCR Discontinuity Errors		
Audio PID 1		Reset Counters		
Audio PID 2		Reset All Error Counter	Reset All Error Counter	
Audio PID 3				
Audio PID 4				

Figure 5-6: Error Monitor Tab

## **Video Error Monitor**

**Video CC Errors:** This field displays the number of Continuity Counter error incidents for Video PID. Range for this value can be from 0 to 65535.

Video CRC Errors: This field displays the number of CRC error incidents for Video. Range for this value can be from 0 to 65535.

#### Audio CC Error Monitor

This field displays the number of Continuity Counter error incidents for Audio PIDs 1 through 4.



## **Ancillary Error Monitor**

This field displays the number of Continuity Counter error incidents for Ancillary PIDs.

#### PCR Error Monitor

This field displays the number of Discontinuity Error incidents for PCR PIDs.

## **Reset Counters**

This control will reset all the error counters.

## 5.7. NOTIFY

122	192.168.194.170, Decoder 1 [1]: Configuration						
Refresh	😋 💲 1.0 Apply 🛨 👲 stat	Completed (09:09:00 2014-07-17)	🗙 Logger 🧮				
Dec	oder Input Control Decoder Outp	ut Control Video Proc Input Monitor	Program Monitor Error Monitor	Notify			
	Send Trap	Input Fault Present		Audio Fault Present			
	TS Input Missing	TS Input Missing	🖌 Audio Pair 1	Audio Pair 1			
~	TS Sync Byte Missing	TS Sync Byte Missing	🖌 Audio Pair 2	Audio Pair 2			
~	Input PES Video CRC Error	Input PES Video CRC Error	🖌 Audio Pair 3	Audio Pair 3			
~	Input PES Audio CRC Error	Input PES Audio CRC Error	Audio Pair 4	Audio Pair 4			
~	Input PES Ancilliary CRC Error	Input PES Ancilliary CRC Error	🖌 Audio Pair 5	Audio Pair 5			
Z	Input PES Video CC Error	Input PES Video CC Error	🖌 Audio Pair 6	Audio Pair 6			
~	Input PES Audio PID1 CC Error	Input PES Audio PID1 CC Error	Audio Pair 7	Audio Pair 7			
~	Input PES Audio PID2 CC Error	Input PES Audio PID2 CC Error	🖌 Audio Pair 8	Audio Pair 8			
~	Input PES Audio PID3 CC Error	Input PES Audio PID3 CC Error	Audio 1 PID Missing	Audio 1 PID Missing			
~	Input PES Audio PID4 CC Error	Input PES Audio PID4 CC Error	Audio 2 PID Missing	Audio 2 PID Missing			
~	Input PCR Discontinuity Error	Input PCR Discontinuity Error	Audio 3 PID Missing	Audio 3 PID Missing			
	Input PES Ancilliary CC Error	Input PES Ancilliary CC Error	Audio 4 PID Missing	Audio 4 PID Missing			
		Fault Present					
~	Video Present	Video Present					
~	PID Preassigned	PID Preassigned					
1	Link Present	Link Present					

Figure 5-7: Notify Tab

The Notify tab allows the user to turn traps on or off, as well as the current status for all faults present.



# 6. WEB INTERFACE

## 6.1. SYSTEM

EVERIZ 2430RX-J2K-IP	Ç Refresh ★ Apply ★Dyr	namic Apply 🎄 Upgrade	Logout
Sustan	System		
Decoder Input Control	System		
Decoder niput Control	Control Port Control		
Video Bros Control			
	Control Port		
Program Monitor	IP Address	192.168.194.170	
Error Monitor	NetMask	255.255.192.0	
Notify	Gateway	192.168.194.1	
Product Features			
	Data Port Control		
	Data Port		
	IP Address	10.20.50.56	
	NetMask	255.255.255.0	
	Gateway	10.20.50.1	
	Data Port Monitor		
	Data Port		
	Port Link Status		Up
	Received Data Ethernet Total Bitrat	te	262600016
	Transmitted Data Ethernet Total Bit	rate	0

Figure 6-1: Web GUI System Tab

**NOTE:** Configuration options are identical for both Ports 1 & 2

Control Port IP Address: This parameter allows the user define the IP address for the control port

**Control Port NetMask/Subnet:** This parameter allows the user to define the Netmask/Subnet for the control port

**Control Port Gateway:** This parameter allows the user to define the gateway address for the control port

Data Port IP Address: This parameter allows the user define the IP address for the data port

Data Port NetMask/Subnet: This parameter allows the user to define the Netmask/Subnet for the data port

Data Port Gateway: This parameter allows the user to define the gateway address for the data port



**Port Link Status:** This parameter returns the status link for data port 1, in either an 'UP' or 'DOWN' state.

**Received Data Ethernet Total Bitrate:** This parameter displays the bit rate received on this Ethernet port is represented in kbps, and the value can range from 0 to 1000000000.

**Transmitted Data Ethernet Total Bitrate:** This parameter displays the bit rate transmitted on this Ethernet port is represented in kbps, and the value can range from 0 to 1000000000.

## 6.2. DECODER INPUT CONTROL

EVERIZ 2430RX-J2K-IP	🕻 Refresh 👲 Apply 🎍 Dynamic	: Apply 🏰 Upgrade	Logout		
System	Decoder Input C	ontrol			
Decoder Input Control					
Decoder Output Control	input Port Control				
Video Proc Control	Decoder				
Input Monitor	Input Stream State	Active	그렇는 데일 공격하는 것 같은 것 같이 많이 좋는 것이 .		
Program Monitor	Input Port Select	DataPort1			
Error Monitor		239.205.100.101	(4 to 65525)		
Notify	Input IP Port Number	1234	(1000000)		
Product Features	Input Program Control				
	Decoder				
	Program Tuning Mode	AutoPidSelect			
	Auto Program Sel Mode	FirstProgramInPAT			
	Program Number Select 1 (0 to 65535)				
	PID Control				
	Decoder				
	Video PID Select	97	(2 to 8190)		
		AudioPID			
	Audio PID Select	01 02 03 04			
		200			
	PCR PID Select	400	(2 to 8190)		
	VANC PID Select	300	(2 to 8190)		
	PID Configuration	PreAssigned 🔹			
	Becoder Control				
	Decoder				
	Decoder Up Time				
		Load Factory Config			
		Reboot			

Figure 6-2: Web GUI Decoder Input Control Tab

**Input Stream State:** This parameter will display whether or not the card is currently receiving anything on the input. The input stat of the card will be either Active or Inactive.

**Input Port Select:** This parameter allows the user to set the physical interface to receive data from either data port 1 or data port 2.



**Input IP Address:** This parameter allows the user to define the IP address/ Multicast address from which data will be received.

**Input IP Port Number:** This parameter allows the user to select the input UDP port number, which can range from 1 to 65535.

**Program Tuning Mode:** This parameter allows the user to select the program Tuning mode of the decoder. The user can select from two options:

- **AutoPidSelect:** automatically choose the PIDs for each audio stream, based on Auto Program Select Mode.
- ManualPidSelect: Manually select PIDs for each audio stream.

**Auto Program Select Mode:** This control allows the user to set how the decoder will select a program for decoding when Program Tuning Mode is set to auto.

- First Program in PAT: select audio PIDs from first program will be chosen.
- Lowest Program Num: select audio PIDs from lowest program will be used.
- **Specific Program Select:** will pick audio PIDs from specific program, specified by Program Number Select control, for decoding.

**Program Number Select:** This parameter allows the user to select the program which will be decoded. This control is applicable only when the **Program Tuning Mode** is set to **Auto PID Select**, value for this range can be set from 0 to 65535.

Video PID Select: This parameter allows the user to select the Video PID that will be decoded. This control is only applicable when the *Program Tuning Mode* is set to *Manual PID Select*. Range for these values can be set from 2 to 8190.



Note: 0, 1 and 8191 are reserved PID's in MPEG, so these values are not included.

Audio PID Select: This parameter allows the user to select the Audio PID which will be decoded. This control is only applicable when the Program Tuning Mode is set to *Auto/Manual* PID Select. Range for these values can be set from 2 to 8190.



Note: 0, 1 and 8191 are reserved PID's in MPEG, so these values are not included.

**PCR PID Select:** This parameter allows the user to select the PCR PID the decoder will use this PID for PCR clock reference. This control is only applicable when the Program Tuning Mode is set to *Auto/Manual* PID Select. Range for these values can be set from 2 to 8190.



Note: 0, 1 and 8191 are reserved PID's in MPEG, so these values are not included.



**VANC PID Select:** This control allows the user to select the VANC PID which will be decoded. This control is only applicable when the *Program Tuning Mode* is set to *Manual PID Select*. Range for these values can be set from 2 to 8190.



Note: 0, 1 and 8191 are reserved PID's in MPEG, so these values are not included.

**PID Configuration:** This parameter configures the method in which PIDs are set. It can be user defined or pre-assigned, in which case all the PID controls will be greyed out.

**Decoder Up Time:** This controls returns a string representation of the time the decoder was last restarted. It is represented similar to '*xxxx* days *yy* hrs *zz* min *aa* sec'. Internally, it is a 31 bit unsigned integer, reflecting seconds which will provide for up to 3100 days of operation before it wraps around.

## 6.3. DECODER OUTPUT CONTROL

EVERIZ 2430RX-J2K-IP	🕻 Refresh 👲 Apply	±Dynamic Apply			
System	Decoder Output Control				
Decoder Input Control	Deceder Output (				
Decoder Output Control	Decoder Output C	Control			
Video Proc Control	Decoder				
Input Monitor	Output Video Color On	Green			
Program Monitor		EmbeddedAudioChannel			
Error Monitor		01 02 03 04 05 06 07 08 09 10 11 12 13 14 15			
Notify	SDI Audio Source	16			
Product Features		AudioPid1Channel1			
		OutputChannel			
	Analog Audio Source	01 02 03 04 05 06			
		AudioPid1Channel1			
		EmbeddedAudioChannel			
	HDMI Audio Source	01 02 03 04 05 06 07 08			
		AudioPid1Channel1			

Figure 6-3: Web GUI Decoder Output Control Tab

**Output Video Color:** This parameter allows the user to select the output video color that will be sent when J2K input is missing and the output VideoMode is set to continuous. Options can be set to ether Black, Green, Blue or Freeze.

**SDI Audio Source:** This parameter allows the user to enable or disable the audio service which will be embedded into the audio group of the SDI/HDSDI output.

**HDMI Audio Source:** This parameter allows the user to enable or disable the audio service which will be embedded into the audio group of the HDMI output.



## 6.4. VIDEO PROC CONTROL WHEN +VPGC OPTION IS LICENSED

everiz 2430RX-J2K-IP	<b>Q</b> Refresh ★ Apply	👲 Dynamic Apply	48 Upgrade		Logout
System	Video Proc	: Control			
Decoder Input Control					
Decoder Output Control	Video Proc Cont	rol			
Video Proc Control	Decoder				
Input Monitor	Enable Video Proc		Disable	<b></b>	
Program Monitor	Enable Y Cb Cr Proc		Disable		
Error Monitor	Y Gain			0 %	
Notify	Y Offset				
Product Features	Saturation Gain				
				0 %	
	Hue			0 *	
	Luma Gamma Enable		Disable	<b></b>	
	Luma Gamma Value			0	
	Enable RGB Proc		Disable		
	Video Gain			0.%	
	R Gain				
				0 %	
	G Gain			0.%	
	B Gain				
	D Offect			0.70	
	r Oliset			0	
	G Offset			0	
	B Offset				
	Enable RGB Clip		Disable	-	
	Enable RGB Gamma		Disable		
	R Gamma				
	G Gamma				
	Ganina			0	
	B Gamma			0	
	Min R			0	

Figure 6-4: Web GUI Video Proc Control (1)

Max R	
Min G	
Max G	0
Min B	
Max B	
Low Knee Size	0
High Knee Size	0
	Vid Proc Reset

Figure 6-5: Web GUI Video Proc Control (2)



Enable Video Proc: This control will *Enable* or *Disable* the video processor module.

Enable YCbCr Proc: This control will *Enable* or *Disable* the YCbCr processor block.

**Y Gain:** This control allows the user to adjust the gain for the Y component in the YCrCb domain. Range for this value can be set from -100% to 100%.

**Y Offset:** This control allows the user to adjust the DC offset of the Y component in =/-200 quantization increments.

Saturation Gain: This control allows the user to set the saturation gain from -100% to 100%.

Hue: This control allows the user to adjust the hue. Range for this value can be set from -180° to 180°.

Luma Gamma Enable: This control allows the user to *Enable* or *Disable* the luma gamma.

**Luma Gamma Value:** This control allows the user to adjust the gamma correction factor. Range for this value can be set from -100 to 100.

**Enable RGB Proc:** This control allows the user to *Enable* or *Disable* bypasses on the RGB processor block.

**Video Gain:** This control allows the user to adjust the gain of the RGB component in the RGB Domain. Range for this value can be set from -100% to 100%.

**Gamma R/G/B:** This control allows the user to adjust the gamma correction factor for the Red, Green, and Blue gamma levels. Range for this value can be set from -100 to 100.

**Minimum R/G/B:** This control allows the user to adjust the Red, Green, and Blue minimum levels. Range for this value can be set from -100 to 100.

**Maximum R/G/B:** This control allows the user to adjust the Red, Green, and Blue maximum levels. Range for this value can be set from -100 to 100.

**Low Knee Size:** This control allows the user to set the lowest knee size. Range for this value can be set from 0 to 31.

**High Knee Size:** This control allows the user to set the lowest knee size. Range for this value can be set from 0 to 31.

Video Processor Reset: This control resets the video processor.



### 6.5. INPUT MONITOR

System	Input Monitor			
Decoder Input Control Decoder Output Control	Input Stream			
Video Proc Control	Decoder			
Input Monitor	Stream Type	Multicast		
Program Monitor	Received Ethernet Bandwidth	249997888		
Error Monitor	Received IP Packets	1740235903		
Notify	Received TS Packets	-703306644		
Product Features	Protocol Status Rtp	Rip		
	TS Packet Per IP Packet	7		
	TS Packet Size	Packet188bytes		
		Clear Status		
	Input Monitor			
	Decoder			
	Input State	Active		
	Num Programs			
	Transport Stream ID	0		
	Network ID	0		
	PSD Service Type	0		
	PSD Provider Name			
	PSD Program Name			

Figure 6-6: Input Monitor Tab

Stream Type: This parameter will display whether or not the current input stream is multicast or unicast.

**Received Ethernet Bandwidth:** This parameter displays the Ethernet bandwidth for the input stream, and can range from 0 to 1000000000 bits.

**Received IP Packets:** This parameter displays the amount of IP packets that have been received on the input stream. Range for this value can be from 0 to 2147483647.

**Received Transport Stream (TS) Packets:** This parameter displays the amount of TS packets that have been received on the input stream. Range for this value can be from 0 to 2147483647.

**Protocol Status:** This parameter will verify if the stream is running on RTP, and if it is not the following values will be displayed: UDPor Unknown.

**TS Packet Per IP Packet:** This parameter displays how many TS packets are contained within each IP Packet/Ethernet frame. Range for this value can be from 1 to 7.

**TS Packet Size:** This parameter diplays the current TS packet size in bytes. The packet size will be either 188 bytes or 204 bytes.

**Input State:** This parameter will display whether or not the card is currently receiving anything on the input. The input stat of the card will be either Active or Inactive.



**Num Programs:** This parameter returns the number of programs detected in the input stream, and can range from 0 to 100.

**Transport Stream ID:** This parameter control returns the transport stream ID that is being read from the PAT Table.

**Network ID:** This parameter returns the value of the network ID read from the transport stream, and can range from 0 to 65535.

**Network Name:** This parameter returns the network name read from the transport stream.

**PSD Service Type:** This parameter returns the service type read from the Evertz private service descriptor (79) from the PMT. It provides an enumerated string as follows:

1 - Digital Tv9 - DMAC2 - Digital Radio10 - FM Radio3 - Teletext11 - NTSC Signal4 - NOVD Reference12 - Data Broadcast5 - NVOD Timeshifted6 - Mosaic7 - PAL Signal8 - SECAM SignalN/A -a valid service Type was not found, or there is no private descriptor.

**PSD Provider:** This parameter returns the provider name read from the Evertz Private service descriptor (79) from the PMT.

**PSD Program Name:** This parameter returns the program name read from the Evertz private service descriptor (79) from the PMT.



### 6.6. PROGRAM MONITOR

System	Program Mc	onitor				
Decoder Input Control	Program Monitor					
Decoder Output Control						
Video Proc Control	Decoder					
Input Monitor	Program Num In TS		1			
Program Monitor	PMT PID		96			
Error Monitor	PCR PID		400			
Notify	Num Video Streams		1			
Product Features	Num Audio Streams		4			
Program Video Monitor						
	Decoder					
	Video PID Num		97			
	Video Bit Rate		0			
	Video Resolution		1080p59.94			
	Video Profile And Level		4.2			
	Video Chroma Format		4:2:0			
	Program Audio Mo	nitor				
	Decoder			Audia Dis Data		
	Audio PID Num (0 to 8191)			(0 to 10000000)	Audio Num Channels	
	Audio PID 1	200		3000000		
	Audio PID 2	201		3000000		
	Audio PID 3	202		3000000		
	Audio PID 4	203		3000000		

Figure 6-7: Program Monitor Tab

**Program Num In TS:** This parameter returns the actual program number that is being decoded. Range for this value can be from 0 to 65535. When in *Manual PID Selection Mode* no value will be displayed.

**PM TPID:** This parameter returns the PID for the PMT, for the program being decoded. Range for this value can be from 0 to 8191. When in *Manual PID Selection Mode* no value will be displayed.

**PCR PID:** This parameter returns the PID which has the PCR information for the program being decoded. Range for this value can be from 0 to 8191. When in *Manual PID Selection Mode* no value will be displayed.

**Num Video Streams:** This parameter returns the number of Video Streams in the program which are being decoded. Range for this value can be from 0 to 100. When in *Manual PID Selection Mode* no value will be displayed. Also, it is assumed there is only one video stream in one program.

**Num Audio Streams:** This parameter returns the number of Audio Streams in the program which are being decoded. Range for this value can be from 0 to 100. When in *Manual PID Selection Mode* no value will be displayed.



**Video PID Num:** This parameter displays the PID which carries the PES for Video. Range for this value can be from 0 to 8191.

**Video Bit Rate:** This parameter displays the bit rate for the video elementary stream. Range for this value can be from 0 to 270000000.

Video Resolution: This parameter displays the current video resolution setting.

Video Profile and Level: This parameter displays the current video profile and level setting.

**Video Chroma Format:** This parameter displays the PID which carries the PES for this audio. Range for this value can be from 0 to 8191.

Audio PID Num for Audio: This parameter displays the PID which carries the PES for this Audio stream. Range for this value can be from 0 to 8191.

Audio Bit Rate for Audio: This parameter displays the audio elementary stream. Range for this value can be from 0 to 100000000.

Audio Num Channels for Audio: This parameter displays the number of channels in Audio.



#### 6.7. ERROR MONITOR

EVERIZ 2430RX-J2K-IP	C Refresh ★ Apply ★ Dynamic Apply	🏠 Upgrade	Logout		
System	Error Monitor				
Decoder Input Control	Video Error Monitor				
Decoder Output Control					
Video Proc Control	Decoder				
Input Monitor	Video CC Errors	0			
Program Monitor	Video CRC Errors	0			
Error Monitor					
Notify	Audio CC Error Monitor				
Product Features	Decoder				
	Audio PID 1		1		
	Audio PID 2		1		
	Audio PID 3				
	Audio PID 4		2		
	Ancillary Error Monitor				
	Decoder				
	Ancillary CC Errors	0			
	PCR Error Monitor				
	Decoder				
	PCR Discontinuity Errors	0			
	Reset Counters				
	Decoder				
	Reset All Error Counter				

#### Figure 6-8: Error Monitor Tab

#### Video Error Monitor

**Video CC Errors:** This field displays the number of Continuity Counter error incidents for Video PID. Range for this value can be from 0 to 65535.

**Video CRC Errors:** This field displays the number of CRC error incidents for Video. Range for this value can be from 0 to 65535.

**Audio CC Error Monitor:** This field displays the number of Continuity Counter error incidents for Audio PIDs 1 through 4.

Ancillary Error Monitor: This field displays the number of Continuity Counter error incidents for Ancillary PIDs

**PCR Error Monitor:** This field displays the number of Discontinuity Error incidents for PCR PIDs.

**Reset Counters:** This control will reset all the error counters.



## 6.8. NOTIFY

everlz 2430RX-J2K-IP	C Refresh ★ Apply ★Dynamic Apply #Upgrade	Logout					
	Notify						
System	Noury						
Decoder Input Control	Input Sand Tran						
Decoder Output Control	input sent inap						
Video Proc Control	Decoder						
Input Monitor	Ts Input Missing						
Program Monitor	Ts Sync Byte Missing						
E	Input PES Video CRC Error						
Error Monitor	Input PES Audio CRC Error						
Notify	Input PES Ancilliary CRC Error						
Product Features	Input PES Video CC Error						
	Input PES Audio PID 1 CC Error						
	Input PES Audio PID 2 CC Error						
	Input PES Audio PID 3 CC Error						
	Input PES Audio PID 4 CC Error						
	Input PCR Discontinuity Error						
	Input PES Ancilliary CC Error True						
	Input Fault Present						
	Decoder						
	Ts Input Missing						
	Ts Sync Byte Missing						
	Input PES Video CRC Error	1월 5일 - 2011년 - 2011년 - 2011년 - 2011년 					
	Input PES Audio CRC Error						
	Input PES Ancilliary CRC Error						
	Input PES Video CC Error						
	Input PES Audio PID 1 CC Error	and the second					
	Input PES Ancilliary CC Error						
		a state of the second					

Figure 6-9: Notify Tab (1)





Audio Send Trap	
Decoder	
Audio Pair 1	True
Audio Pair 2	True 💌
Audio Pair 3	True 🗾
Audio Pair 4	True
Audio Pair 5	True
Audio Pair 6	True
Audio Pair 7	True
Audio Pair 8	True
Audio 1 PID Missing	True
Audio 2 PID Missing	True
Audio 3 PID Missing	True
Audio 4 PID Missing	True
Decoder	
Audio Pair 1	
Audio Pair 2	
Audio Pair 3	
Audio Pair 4	
Audio Pair 5	
Audio Pair 6	
Audio Pair 7	
Audio Pair 8	
Audio 1 PID Missing	
Audio 2 PID Missing	
Audio 3 PID Missing	
Audio 4 PID Missing	



Send Trap			
Decoder			
Video Present	True	•	
PID Preassigned	True	-	
Link Present	True		
Fault Present			
Decoder			
Video Present			
PID Preassigned			
Link Present			

Figure 6-11: Notify Tab (3)

The Notify tab allows the user to turn traps on or off, as well as the current status for all faults present.



## 6.9. **PRODUCT FEATURES**

EVERIZ 2430RX-J2K-IP	Ç Refresh ★ Apply ★	Dynamic Apply 🌼 Upgrade	Logout					
	Product Fost	uroc						
System								
Decoder Input Control	Decoder Input Control							
Decoder Output Control	Output Control Product License							
Video Proc Control	Product License	YRr7hEsfC1Ys9Ly5C/gzE+vvUUT	YRr7hEsfC1Ys9Ly5C/gzE+vvUUTU					
Input Monitor	Product Serial Number	7105670004						
Program Monitor	Product Mac Address	35-63-63-63-09-09						
Error Monitor		00.00.00.20						
Notify								
Product Features								

Figure 6-12: Product Features Tab

**Product License:** This parameter will display the product licence key.

**Product Serial Number:** This parameter displays the card's serial number, which is identical to the MIB control number. This value is also required to access this device via Evertz Product Support Services Webpage.

**Product MAC Address:** This value displays the MAC address for this specific device.



## 7. FIRMWARE UPGRADE PROCEDURES

## 7.1. VISTALINK PRO UPGRADE

Ensure that the 2430RX-J2K-IP is running the latest firmware, to check this simply right click on the cards address in VLPro Client and select *Version Information*.



Figure 7-1: Version Information Drop-down menu

This will open a window that displays all of the current version information loaded onto the 2430RX-J2K-IP.



## Figure 7-2: Version Information Menu

## 2430RX-J2K-IP JPEG2000 to HDMI Converter User Manual



To upgrade the firmware, locate the latest .jar files which can be found on the Evertz website. Open VLPro Client and navigate to the top tool bar. Locate the *Help* drop down menu and select *Apply Update*. Another drop down menu should appear at this point, select *Product*. When the window opens you want to select the latest .jar file for the 2430RX-J2K-IP, from its saved location on the computer and select *Open*.



Figure 7-3: Apply Update Drop-down Menu



💆 Оре	en									x
Look Ir	n: 📃 l	Desktop			7	ß	6	<b>1</b>		
👰 c	computer			\mu Product Folders						
N 🕂 🔋	letwork			Projects						
📴 L	ibraries.			🛃 SMT John Lucas						
js 📑	silgardo			퉬 Training Tutorials						
🛃 A	ssembly_	Drawings (zappa								
🛃 в	uild Shee	t Templates								
🛃 в	Buildsheet	(zappa)								
l 🛃 d	lrafting (jir	ni)								
🛃 M	lechanica	l Purchasing								
🛃 M	A MechanicalDepartment (burlington.evertz.tv)									
File Na	ame:	Product Folders								
Files o	of Type:	jar directory, *.ja	r, *.zip							•
							0	pen	Cano	cel

Figure 7-4: JAR File Selection

When the window opens you want to select the latest .jar file for the 2430RX-J2K-IP, from its saved location on the computer and select **Open**.

At this point the VLPro Server will send a message asking to Restart, select **Yes**. This will apply the update firmware to the 2430RX-J2K-IP.



Figure 7-5: Alarm Server Restart



## 7.2. WEB INTERFACE UPGRADE

On the top of the web page for the 2430RX-J2K-IP, there is a tab labeled **Upgrade**. Select this tab and ensure that the latest firmware is running on the 2430RX-J2K-IP card. If it is not upgrade the firmware using the latest .jar files which can be found on the Evertz website. Select **Browse** and locate the .jar file on the computer. Then select **Upgrade**, when the upgrade is complete the 2430RX-J2K-IP will Reboot to apply the firmware upgrades.

<b>EVERIZ</b> 2430RX-J2K-IP	C Refresh 👲 Apply	👳 Dynamic Apply	Logout			
System	Firmware l	Jpgrade				
Decoder Input Control						
Decoder Output Control	Upgrade					
Video Proc Control	Control Einnware Ungrade					
Input Monitor						
Program Monitor	Name	Current version	Progress			
Error Monitor	2430RX-J2K-IP	V100B20140710-0443				
Notify						
Product Features	Firmware		Browse			
			Upgrade			

Figure 7-6: WEB GUI Upgrade