570REM-RX8-10GE
8x J2K Decoders Driving 2x UHD or 8x 3G SDI Inputs, 4x 10GbE SFP Cages

User Manual

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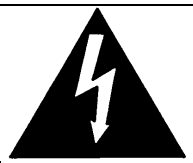
IMPORTANT SAFETY INSTRUCTIONS

	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 this information
- 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

This equipment with the CE marking complies with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European standards:

- EN60065 Product Safety
- EN55103-1 Electromagnetic Interference Class A (Emission)
- EN55103-2 Electromagnetic Susceptibility (Immunity)

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

INFORMATION TO USERS IN THE U.S.A.

NOTE

FCC CLASS A DIGITAL DEVICE OR PERIPHERAL

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

WARNING

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

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

REVISION HISTORY

REVISION	DESCRIPTION	DATE
1.0	First Release	Dec 2018

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FIGURES

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1. OVERVIEW

The 570REM-RX8-10GE is a high performance multi-channel JPEG2000 decoding platform. The exceptional density of the 570REM-RX8-10GE enables up to 8x channels of 3G, HD/SDI, SD/SDI or up to 2x channels of UHD JPEG2000 decoding. The 570REM-RX8-10GE provides 2x SDI outputs for every JPEG2000 decode.

The 570REM-RX8-10GE incorporates patent-pending multi-path, multi-flow packet merge base network bit error resilience for 100% QoS.

The 570REM-RX8-10GE can be managed via integrated HTTP web interface as well as SNMP management via Frame Controller.

Features & Benefits

- 8x 3G/HD/SD or 2x UHD JPEG2000 decodes with 2xSDI decoded outputs per JPEG2000 decode
- Standards supported: 3840x2160p/59.94/50 (Quad Division or 2SI), 1080p/59.94/50 Level A, 1080i/59.94/50, 720p/59.94/50, 625i/50 and 525i/59.94
- Support VSF TR-01 v2
- 4x groups of audio on SDI output
- Full VANC de-encapsulation and embedding on SDI outputs
- Modules support control over frame controller or direct Ethernet interface. SNMP control from VISTALINK PRO or MAGNUM Unified Control
- Built-in frame sync to lock output video to Genlock

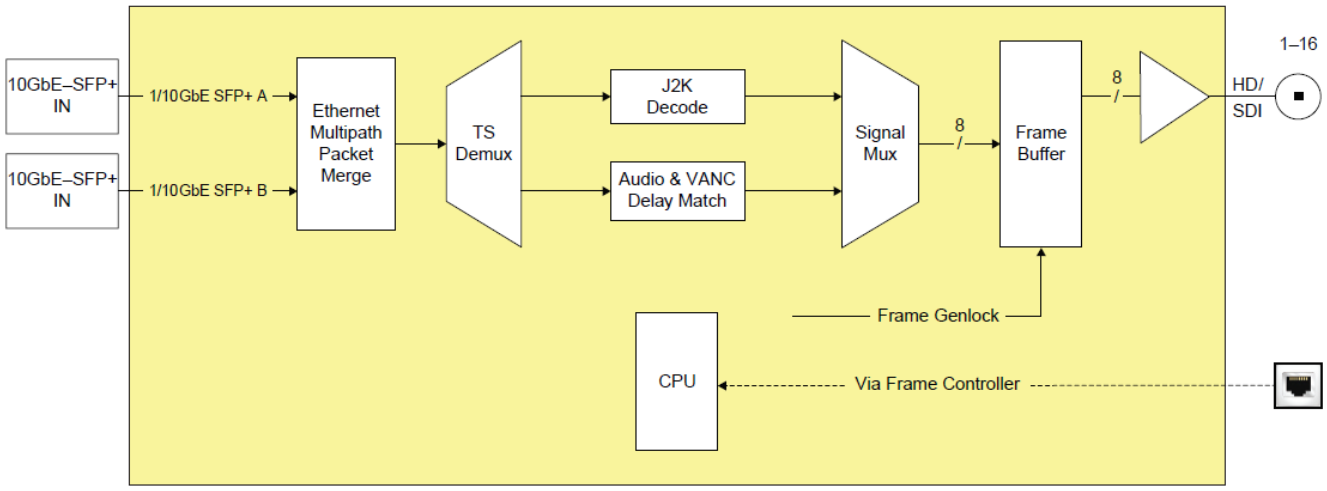

Figure 1-1 : 570REM-RX8-10GE Block Diagram

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2. GETTING STARTED

The 570REM-RX8-10GE modules come with a companion rear plate and occupy two slots in 570FR.

2.1. REAR AND FRONT PLATE

The rear plate of 570REM-RX8-10GE is equipped with 20 Mini-Din connectors.

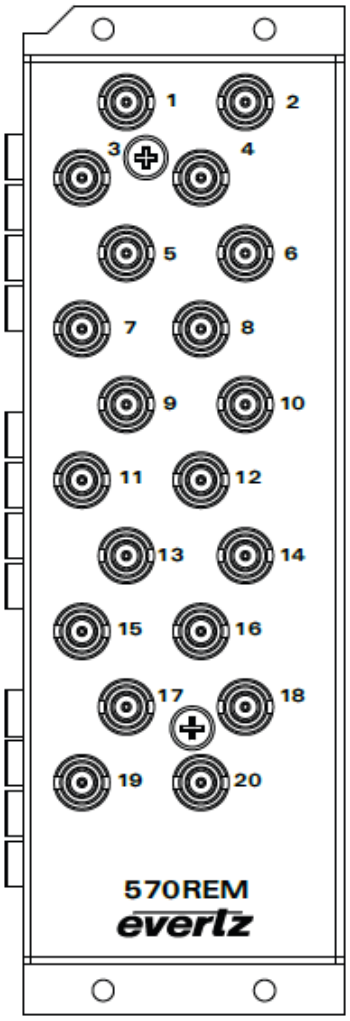


Figure 2-1 : 570REM Rear Plate

The front plate of 570REM-RX8-10GE has 12 available SFP slots. These SFP slots can be populated with SFP10G-TR13-A.

2.2. CARE AND HANDELING OF OPTICAL FIBER

The transmission characteristics of the fiber are dependent on the shape of the optical core and therefore care must be taken to prevent fiber damage due to heavy objects or abrupt fiber bending. Evertz recommends that the user maintains a minimum bending radius of 5 cm to avoid fiber-bending loss that will decrease the maximum attainable distance of the fiber cable. The Evertz fiber optic modules come with cable lockout devices, to prevent the user from damaging the fiber by installing a module into a slot in the frame that does not have a suitable I/O module.

NOTE: Never touch the end face of an optical fiber. Always keep dust caps on optical fiber connectors when not connected and always remember to properly clean the optical end face of a connector before making a connection.

2.3. HARDWARE INSTALLATION

To successfully install the 570REM-RX8-10GE, the following is required:

1. 570 Series Frame
2. 570 Frame Controller
3. WebEASY® using the 570FC frame controller with 570REM-RX8-10GE installed in frame.

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 the chassis 2 adjacent vacant slots. Unpack the 570REM-RX8-10GE and separate the rear panel from the main card. Locate on the rear of the rack the two slots and remove the blanking panels. Insert the rear panel into the back of the chassis and secure using the four screws provided.

Now insert the 570REM-RX8-10GE card into the corresponding front slots ensuring the card lines up with the slot runners on the bottom and the top of the chassis. Push the card **firmly** into the slot ensuring that when it mates with the rear card it has been firmly pushed into a seated position. Do not connect any cables to the rear card (failure to do this could cause unwanted network issues) until the initial configuration has been completed.

This procedure can be completed to all the other modules and is hot swappable allowing for the frame to be powered on while installing.

3. SPECIFICATIONS

3.1. SERIAL DIGITAL VIDEO

Standards:

- SMPTE 424M (3Gb/s)
- SMPTE 292M (1.5Gb/s)
- SMPTE 259M (270Mb/s)

3.2. SERIAL VIEDO INPUTS

Number of Inputs	Not Applicable
Input Equalization	NA
Return Loss	NA

3.3. SERIAL VIDEO OUTPUT

Number of Outputs	16x SDI
Connector	DIN
Rise and Fall Time	Per SMPTE spec

3.4. IP INPUT

Ethernet Interface	4 x 10GE SFP/SFP+
Ethernet/IP Signaling	Multicast IGMP V2/V3 (SSM Support)

3.5. EMBEDDING OF HANC & VANC

- 4x Groups Audio Pass-through per encoder
- All type of VANC data pass-through

3.6. ELECTRICAL

Power	90W
Voltage	12VDC
EMI/RFI	Complies with FCC Part 15, Class A, EU EMC directive

3.7. PHYSICAL (NUMBER OF SLOTS)

570FR	2
S570FR	2

3.8. ENCLOSURES

570FR	3RU Chassis
S570FR	1RU Chassis

Ordering Information

570REM-RX8-10GE: 8x J2K Decoders driving 2x UHD or 8x 3G/HD/SD SDI output, 4x 10GbE SFP Cages (SFP+ sold separately)

SFP Modules:

- **SFP10G-TR13-A** 10GbE Optical SFP+
- **SFP10G-TR85-A** SFP+ Optical Transceiver, 10Gbs, 850nm, MMF

4. WEB INTERFACE

The 570REM-RX8-10GE series of products are controlled using Web Interface. WebEasy operates using Ethernet and SNMP control protocols.

Login

After the card has been installed and configured with the required network addresses, it can be completely configured using the web interface. For doing this, simply type the IP address of the control port of the 570REM-RX8-10GE module in the web browser.

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

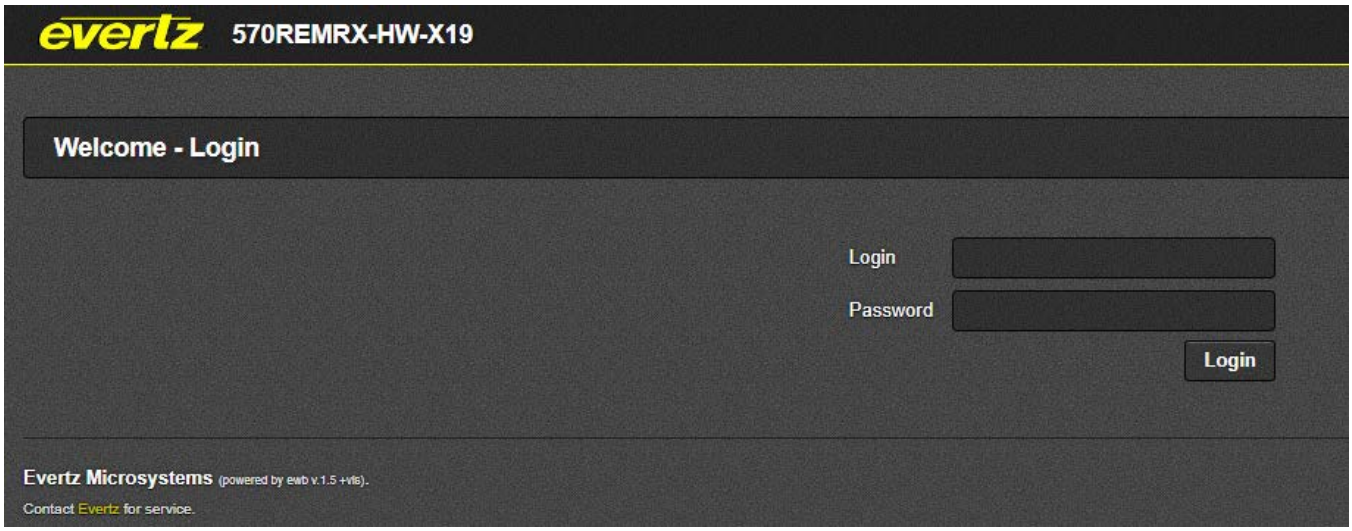


Figure 4-1 : WebEASY® - Login Menu

Login and password is “root” and “evertz” respectively.

On the web interface there are several different types of menus highlighted in Figure 4-2.

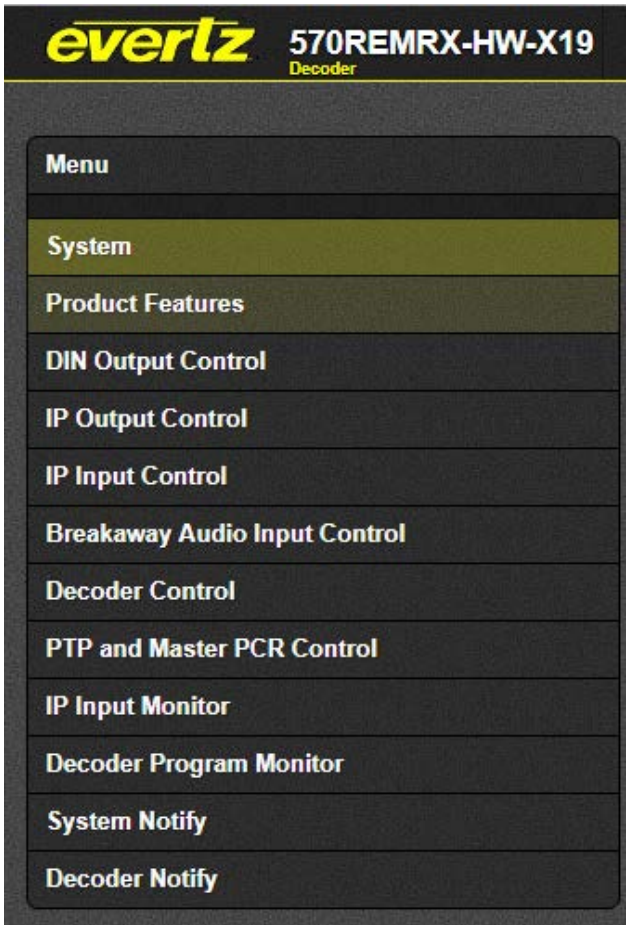


Figure 4-2 : WebEASY® - 570REM-RX8-10GE Main Menu

4.1. SYSTEM

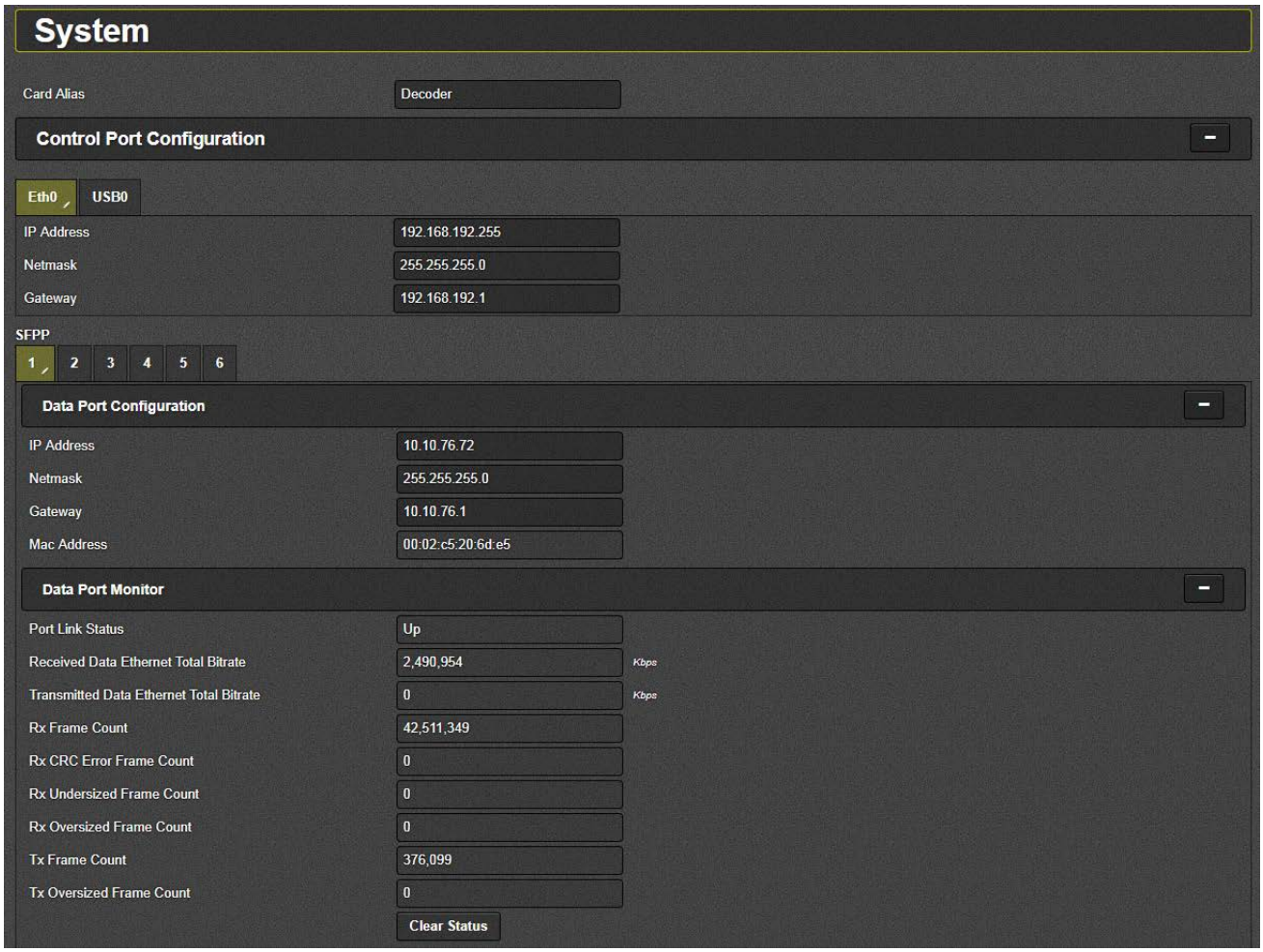


Figure 4-3 : WebEASY® - System (Part 1)

Card Alias: This parameter indicates the card alias string.

4.1.1. Control Port Configuration

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

Netmask: This parameter allows the user to set Netmask for control port.

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

4.1.2. Data Port Configuration

For SFPP 1-6:

IP Address: This parameter allows the user to set the IP address for Data port.

Netmask: This parameter allows the user to set the Netmask for Data Port.

Gateway: This parameter allows the user to set the Gateway for Data Port.

Mac Address: This parameter reflects the Mac address for Data Port.

4.1.3. Data Port Monitor

Port Link Status: This parameter indicates the link status for Data port.

Received Data Ethernet Total Bitrate: This parameter indicates bitrate which is received on this Ethernet port, unit is kbps.

Transmitted Data Ethernet Total Bitrate: This field indicates bitrate transmitted on this output Ethernet port, unit is kbps.

Rx Frame Count: This parameter indicates received Rx frames on this Ethernet port.

Rx CRC Error Frame Count: This field indicates received Rx frames with CRC errors on this Ethernet port.

Rx Undersized Frame Count: This field indicates received Rx undersized frames on this Ethernet port.

Tx Frame Count: This parameter indicates received Tx frames on this Ethernet port.

Tx Oversized Frame Count: This field indicates received Tx oversized frames on this Ethernet port.

Clear Status: This button allows the user to clear all the status of Data Port monitor.

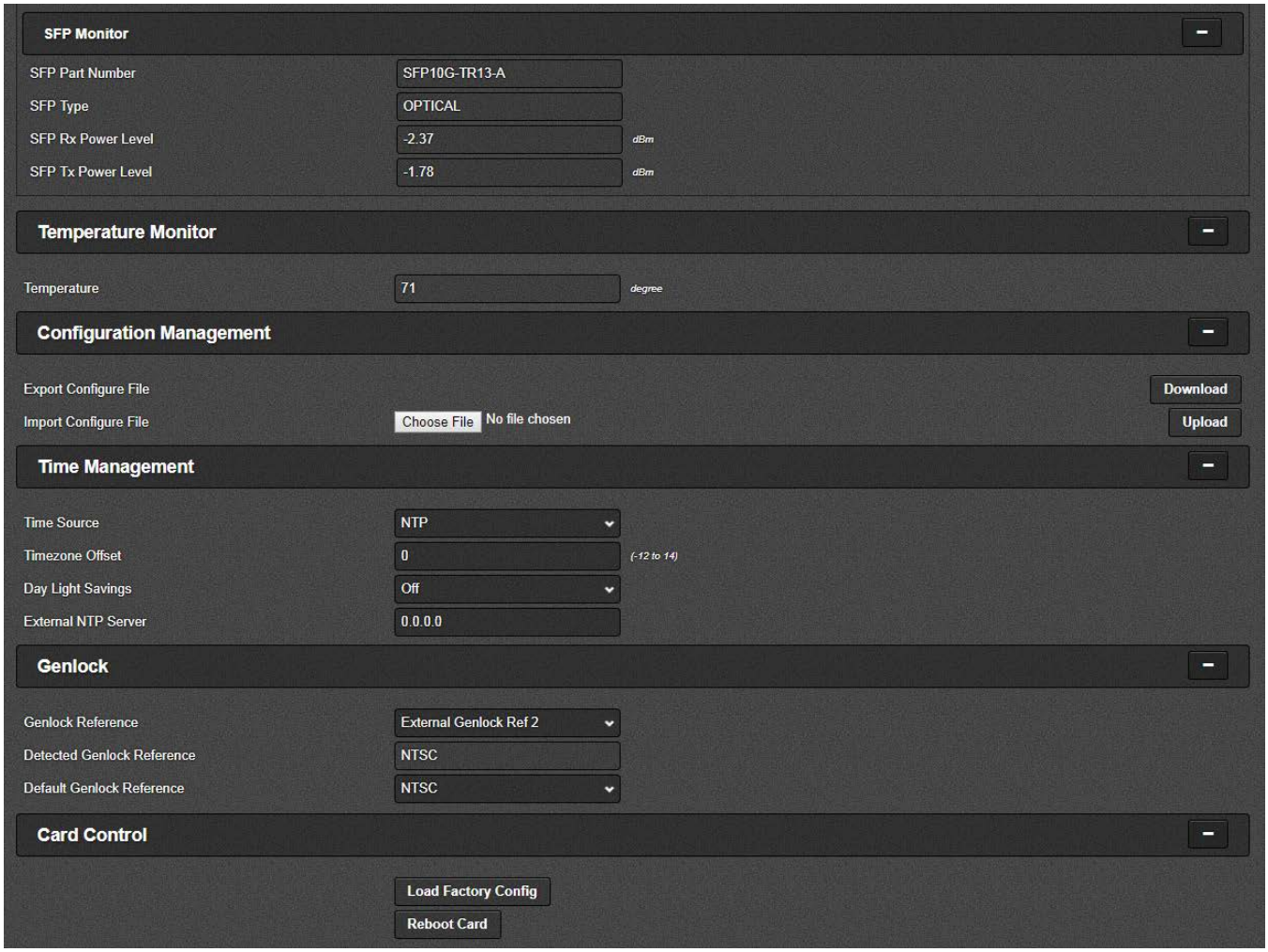


Figure 4-4 : WebEASY® - System (Part 2)

4.1.4. SFP Monitor

SFP Part Number: This parameter indicates the part number of SFP.

SFP Type: This field indicates the type of SFP.

SFP Rx Power Level: This field indicates the received power level of SFP.

SFP Tx Power Level: This field indicates the transmitted power level of SFP.

4.1.5. Temperature Monitor

Temperature: This field shows the FPGA temperature.

4.1.6. Configuration Management

Export Configure File: The download button allows the user to download a configuration file and export it.

Import Configure File: The Choose file section allows the user to select and upload a configuration file.

4.1.7. Time Management

Time Source: This dropdown allows the user to select the system time source which can be NTP or Local time.

If NTP:

Timezone Offset: This control allows the user to define timezone offset.

Day Light Savings: This dropdown allows the user to select whether to apply Day Light savings or not.

External NTP Server: This control allows the user to define an external NTP server.

4.1.8. Genlock

Genlock Reference: This dropdown allows the user to select lock to Genlock reference 1 or 2.

Detected Genlock Reference: This parameter indicates the detected Genlock reference.

Default Genlock Reference: This dropdown allows the user to select the default Genlock reference which can be NTSC or PAL.

4.1.9. Card Control

Load Factory Config: This control is used to load factory configuration.

Reboot Card: This button allows the user to perform a soft reboot on the card.

4.2. PRODUCT FEATURES

Figure 4-5 : WebEASY® - Product Features

4.2.1. License Control

Product Serial Number: This parameter displays the card serial number same as the card MIB control. This is needed for the webpage.

Product Mac Address: This parameter displays the card MAC address.

4.2.2. Product Features Supported

Product feature Name: This parameter indicates the product features supported on this card.

Product feature Supported: This parameter indicates the product support enabled/disabled status.

4.3. DIN OUTPUT CONTROL

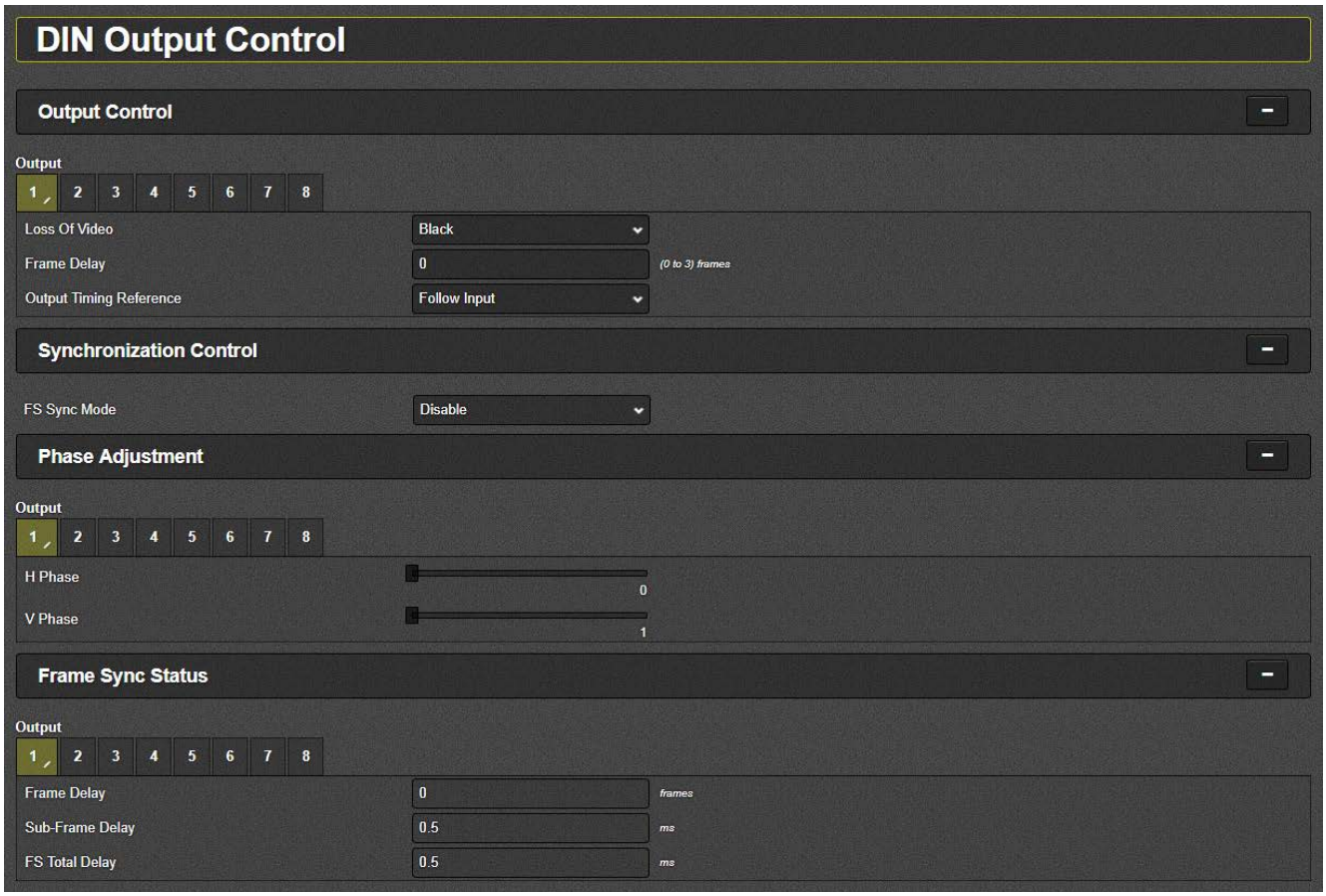


Figure 4-6 : WebEASY® - DIN Output Control

4.3.1. Output Control

Loss Of Video: This dropdown allows the user to select the output video color that will be sent on output when input ASI is missing and the output video mode is set to continoues.

Frame Delay: This control allows user to adjust the frame delay for the SDI outputs.

Output Timing Reference: This feature is reserved for future use.

4.3.2. Synchronization Control

FS Sync Mode: This dropdown allows the user to select whether or not the FS sync mode is enabled for 4K alignment.

4.3.3. Phase Adjustment

H Phase: This parameter allows the user to set the H Phase, the default is 0.

V Phase: This parameter allows the user to set the V phase, the default is 1.

4.3.4. Frame Sync Status

Frame Delay: This field displays the frame delay for this channel.

Sub-Frame Delay: This field displays the sub frame delay time for this channel.

TS Total Delay: This field displays the frame delay time for this channel.

4.4. IP OUTPUT CONTROL

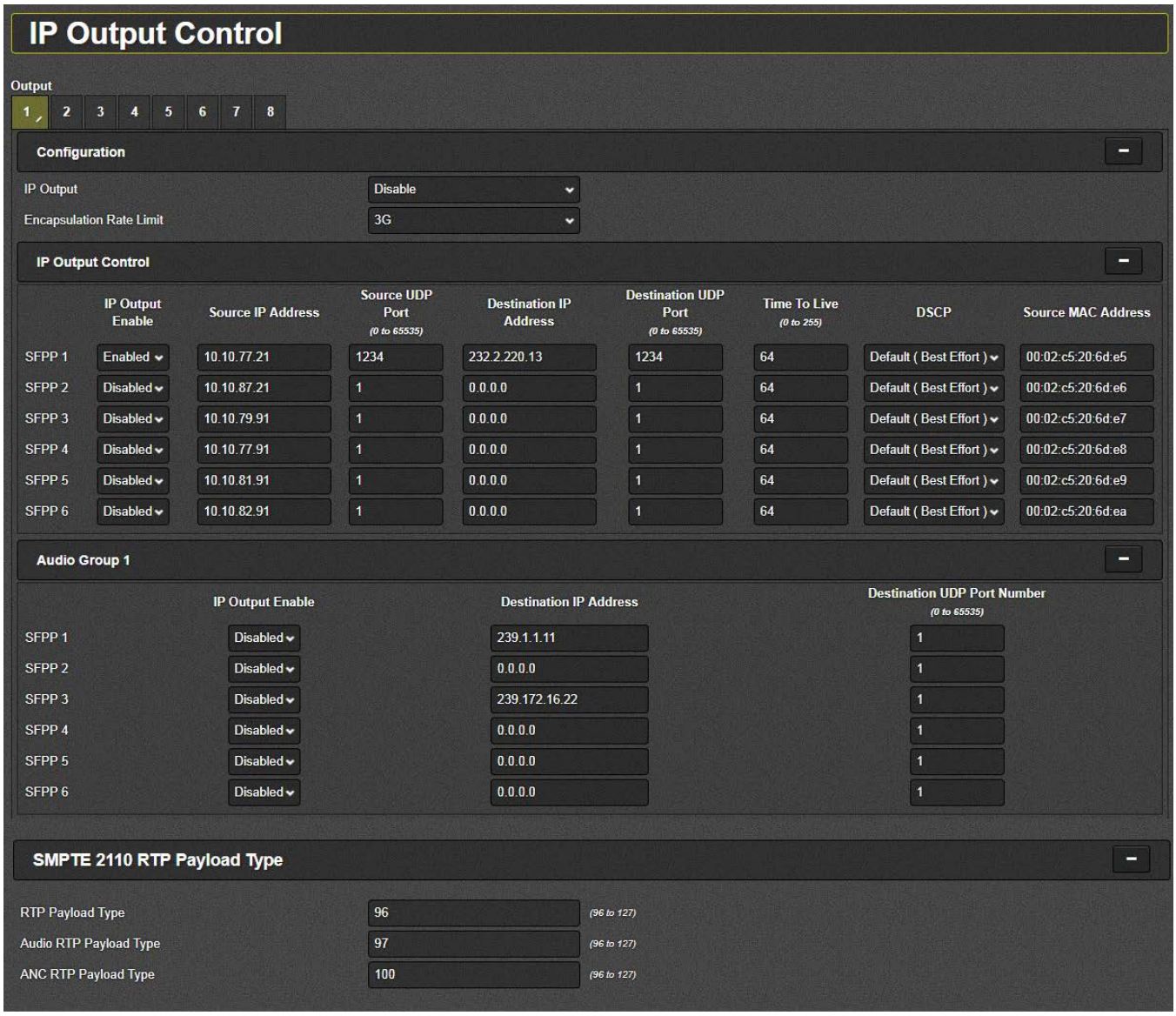


Figure 4-7 : WebEASY® - IP Output Control

4.4.1. Configuration

IP Output: This dropdown allows the user to configure how to process the incoming streams into the outgoing streams.

Encapsulation Rate Limit: This dropdown allows the user to set the bandwidth limit for SMPTE 2110 or 2022-6 IP output.

4.4.2. IP Output Control

For SFPP 1 to 6:

IP Output Enable: This is for enable/disable output.

Source IP Address: This parameter allows the user to define source IP address.

Source UDP Port: This parameter allows the user to define source UDP port.

Destination IP Address: This parameter allows the user to define destination IP address.

Destination UDP Port: This parameter allows the user to define destination UDP port.

Time To Live: This parameter allows the user to define time to live.

DSCP: This parameter allows the user to define DSCP.

Source MAC Address: This parameter allows the user to define source MAC address.

4.4.3. Audio Group 1-4 / ANC

IP Output Enable: This parameter allows the user to enable the SMPTE 2110 audio.

Destination IP Address: This parameter allows the user to set output IP address/multicast address.

Destination UDP Port Number: This parameter allows the user to set the output UDP port number.

4.4.4. SMPTE 2110 RTP Payload Type

RTP Payload Type: This field allows the user to set the RTP payload type.

Audio RTP Payload Type: This parameter allows the user to set the Payload Type for audio RTP header.

ANC RTP Payload Type: This parameter allows the user to set the Payload Type for ANC RTP header.

4.5. IP INPUT CONTROL

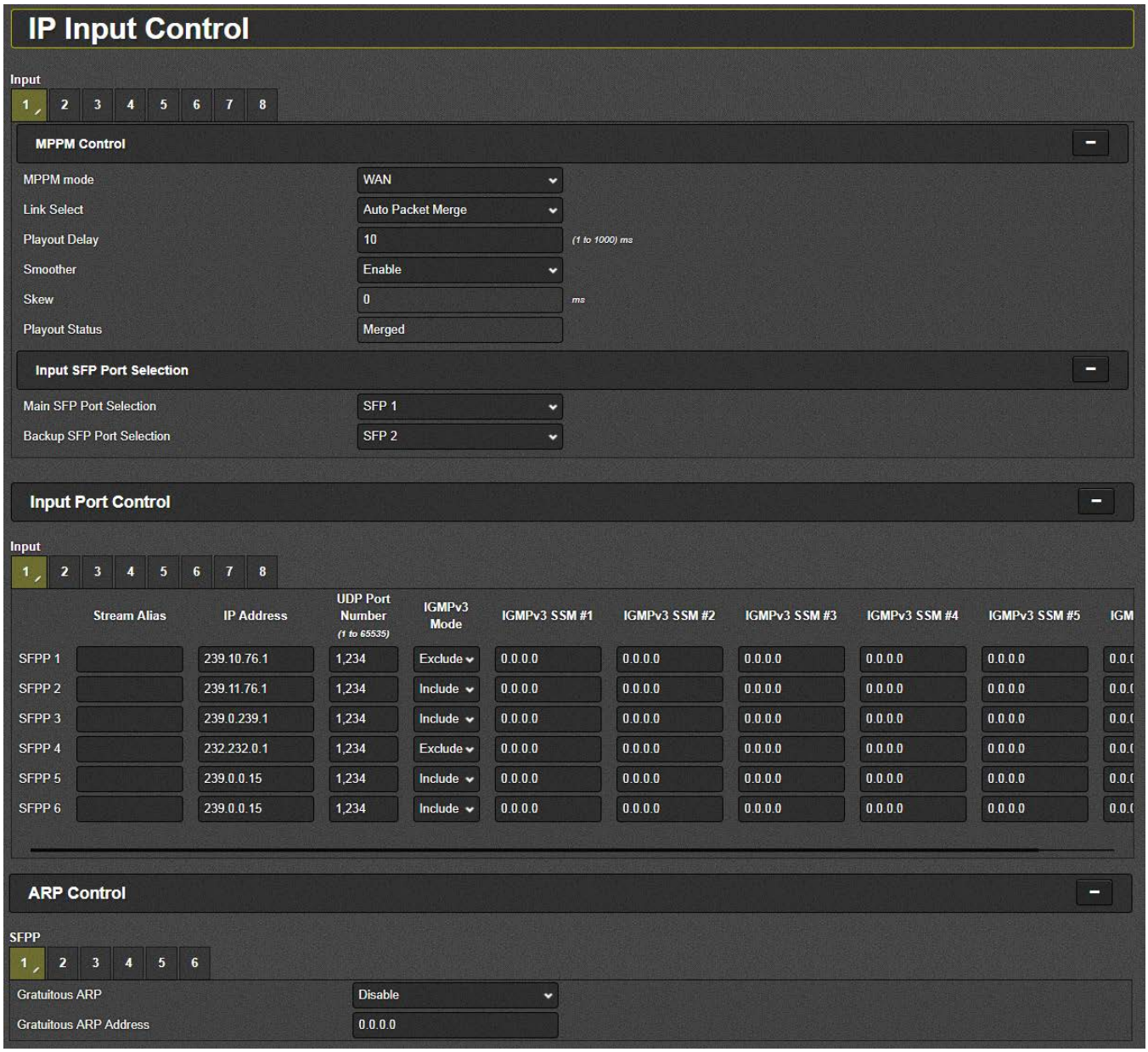


Figure 4-8 : WebEASY® - IP Input Control

4.5.1. MPPM Control

MPPM Mode: This parameter allows the user to set the MPPM mode. Possible options are WAN and LAN.

WAN is used for wide area networks where link jitter and skew between networks needs to be compensated. LAN is used for local area networks where there is small jitter and skew.

Link Select: This dropdown allows the user to either enable auto packet merging, failover mode or select the port from which to receive data.

Playout Delay: This parameter allows the user to see the playload delay. Playout delay should double the network skew.

Smoother: This parameter allows the user to enable the MPPM smoother for jitter tolerance.

Skew: This parameter indicates the delay difference between the main and backup streams.

Playout Status: This field indicates the Playout status. It reflects "Merged" when patches we have taken are from Main and backup networks. It reflects "Main" or "Backup" if patches are only received from main and backup respectfully.

4.5.2. Input SFP Port Selection

Main SFP Port Selection: This dropdown allows the user to select the SFP from which each channel will obtain their main stream. This will contain video stream.

Backup SFP Port Selection: This dropdown allows the user to select the SFP from which each channel will obtain their backup stream. This will contain video stream.

4.5.3. Input Port Control

Stream Alias: This field allows the user to set the input alias name.

IP Address: This parameter allows the user to set the input IP address/multicast address that they want to receive.

UDP Port Number: This parameter allows the user to set the input UDP port number.

IGMPv3 Mode: This parameter allows the user to select the IGMP V3 mode to use.

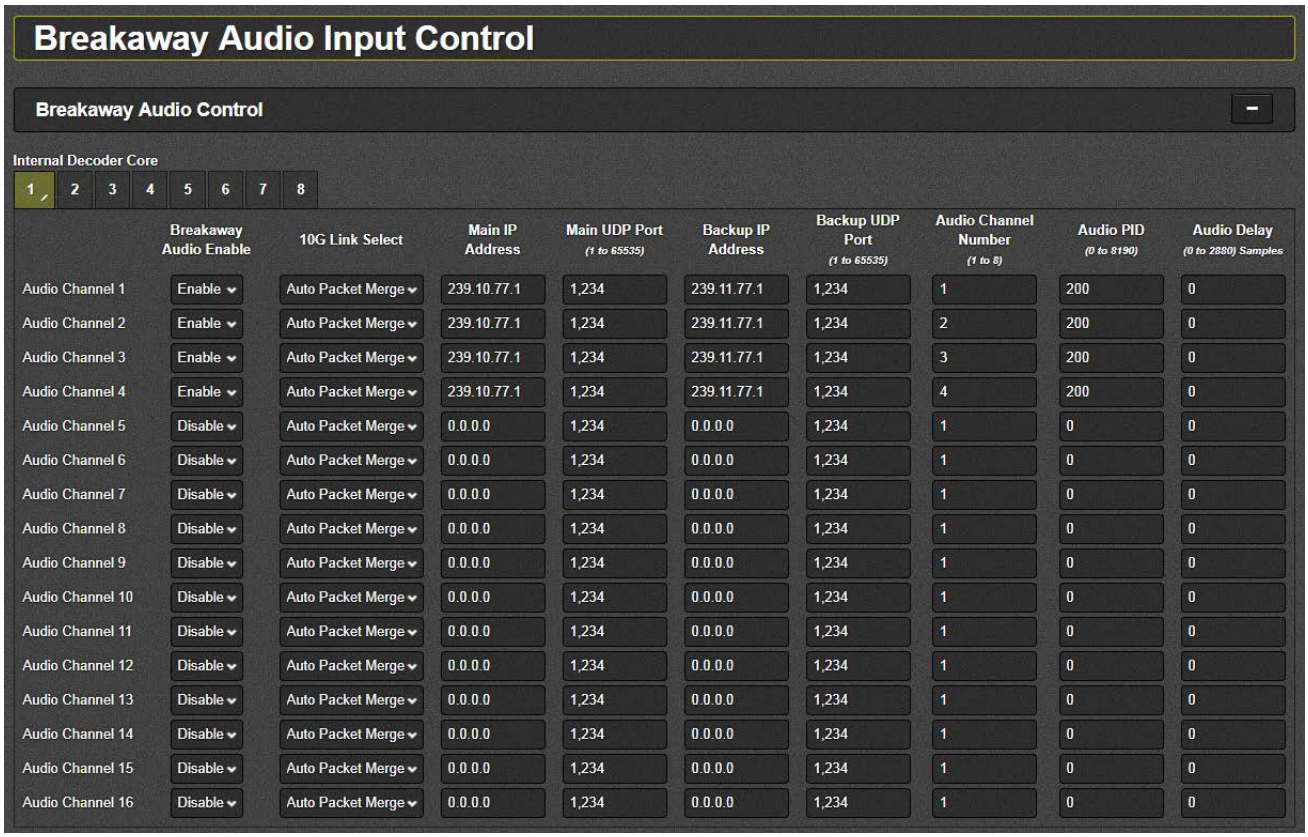
IGMPv3 SSM #1-#6: This parameter allows the user to set IP addresses which is to be used while forming the source filter for IGMPv3 communications.

4.5.4. ARP Control

Gratuitous: This dropdown allows the user to set if the Gratuitous ARP mode is enabled or disabled.

Gratuitous ARP Address: This parameter allows the user to set IP address used for Gratuitous ARP.

4.6. BREAKWAY AUDIO INPUT CONTROL



	Breakaway Audio Enable	10G Link Select	Main IP Address	Main UDP Port (1 to 65535)	Backup IP Address	Backup UDP Port (1 to 65535)	Audio Channel Number (1 to 8)	Audio PID (0 to 8190)	Audio Delay (0 to 2880) Samples
Audio Channel 1	Enable	Auto Packet Merge	239.10.77.1	1,234	239.11.77.1	1,234	1	200	0
Audio Channel 2	Enable	Auto Packet Merge	239.10.77.1	1,234	239.11.77.1	1,234	2	200	0
Audio Channel 3	Enable	Auto Packet Merge	239.10.77.1	1,234	239.11.77.1	1,234	3	200	0
Audio Channel 4	Enable	Auto Packet Merge	239.10.77.1	1,234	239.11.77.1	1,234	4	200	0
Audio Channel 5	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 6	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 7	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 8	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 9	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 10	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 11	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 12	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 13	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 14	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 15	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0
Audio Channel 16	Disable	Auto Packet Merge	0.0.0.0	1,234	0.0.0.0	1,234	1	0	0

Figure 4-9 : WebEASY® - Breakaway Audio Input Control

4.6.1. Breakaway Audio Control

Breakaway Audio Enable: This field allows the user to enable/disable the breakaway audio decoding.

10G Link Select: This control allows the user to select auto merge, main or backup for breakaway audio decoding.

Main IP Address: This parameter allows the user to set up the main breakaway IP address.

Main UDP Port: This parameter allows the user to set up the main breakaway port number.

Backup IP Address: This control allows the user to set up the backup breakaway IP receive address.

Backup UDP Port: This parameter allows the user to set up the backup breakaway receive port number.

Audio Channel Number: This control allows the user to assign an audio receive port number.

Audio PID: This parameter allows the user to assign an audio PID to decode breakaway audio.

Audio Delay: This control allows the user to delay breakaway audio.

4.7. DECODER CONTROL

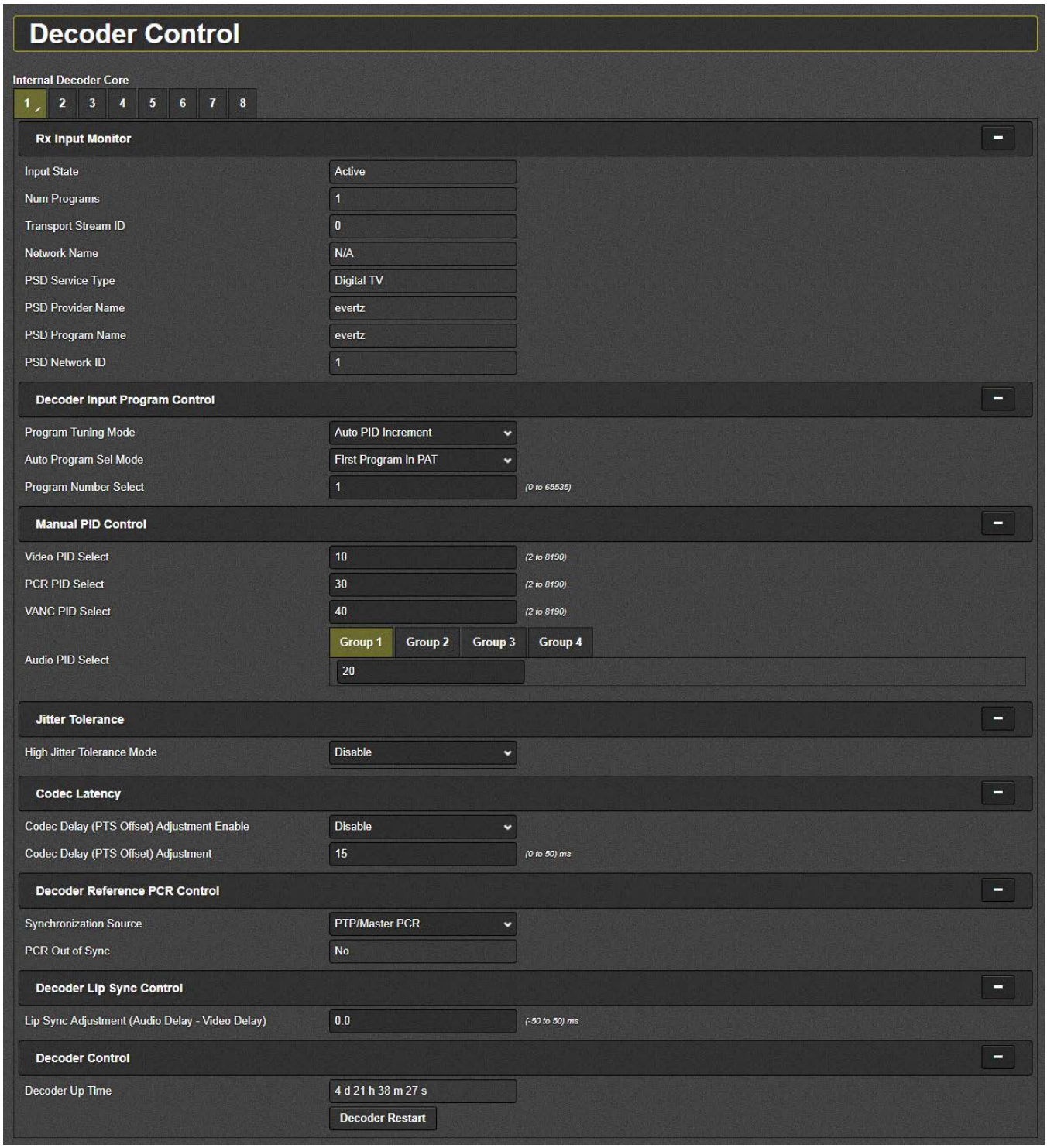


Figure 4-10 : WebEASY® - Decoder Control

For Internal Decoder Core 1-8:

4.7.1. Rx Input Monitor

Input State: This parameter indicates whether the card is receiving anything on the input or not.

Num Programs: This parameter indicates the number of programs detected in the input stream.

Transport Stream ID: This parameter indicates the transport stream ID that is being read from the PAT table.

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

PSD Service Type: This parameter indicates the service type read from Evertz private service descriptor (79) from the PMT. It provides an enumerated string as follows: 1- Digital TV, 2- Digital Radio, 3- Teletext, 4- NOVD Reference, 5- NOVD Timeshifted, 6-Mosaic, 7- PAL Signal, 8-SECAM Signal, 9- DMAC, 10- FM Radio, 11-NTSC, 12- Data Broadcast, N/A- means that a valid service type was not found or there is no private descriptor.

PSD Provider Name: This parameter indicates the provider name read from the Evertz private service descriptor (79) from the PMT.

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

PSD Network ID: This parameter indicates the network ID read from the Evertz private service descriptor (79) from the PMT.

4.7.2. Decoder Input program Control

Program Tuning Mode: This dropdown allows the user to select the program Tuning mode of the decoder. “Auto PID Increment” automatically chooses the PIDs for each audio stream in the order in PMT table based on auto program select mode. “Manual PID Select” manually selects PIDs for each audio stream. “Auto Channel ID” uses channel identification in PES header to know the order.

Auto Program Sel 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.

- In *First Program In PAT* mode, audio PIDs will be chosen from the first program.
- In *Lowest Program Num,* audio PIDs will be selected from lowest program.
- In *Specific Program Select* mode, audio PIDs will be selected from specific program, specified by *Program Number Select* control, for decoding.

Program Number Select: This control allows selecting the program which the decoder will decode. This control is only applicable when the *Program Tuning Mode* is set to Auto PID Select

4.7.3. Manual PID Control

NOTE: 0, 1 and 8191 are reserved PID in MPEG so these are not included.

Video PID Select: This control allows user to configure the Video PID which decoder will decode. This control is only applicable when the ***programTuningMode*** is set to ***manualPidSelect***.

PCR PID Select: This control allows the user to configure the required PCR PID. This control is only applicable when the ***programTuningMode*** is set to ***manualPidSelect***.

VANC PID Select: This control allows the user to select the VANC PID which decoder will decode. This control is only applicable when the ***programTuningMode*** is set to ***manualPidSelect***.

Audio PID Select (1-4): This control allows the user to select the required Audio PIDs which the decoder will embed into the output video. This control is only applicable when the ***programTuningMode*** is set to ***manualpidSelect***.

4.7.4. Jitter Tolerance

Consult Evertz Service before configuring this control. When the network jitter is in access of 30ms, Jitter tolerance adds further resilience to the input detection.

4.7.5. Codec Latency

This is reserved for future use.

4.7.6. Decoder Reference PCR Control

Synchronization Source: This dropdown allows the user to select a source from which to synchronize PCR.

PCR Out of Sync: This parameter indicates if the PCR is synchronized for a decoder or not.

4.7.7. Decoder Lip Sync Control

Lip Sync Adjustment (Audio Delay – Video Delay): This control allows the user to set Lip Sync Adjustment.

4.7.8. Decoder Control

Decoder Up time: This control returns a string representation of the time from last restarting the decoder. It is represented similar to '*xxxx* day's *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.

4.8. RTP AND MASTER PCR CONTROL

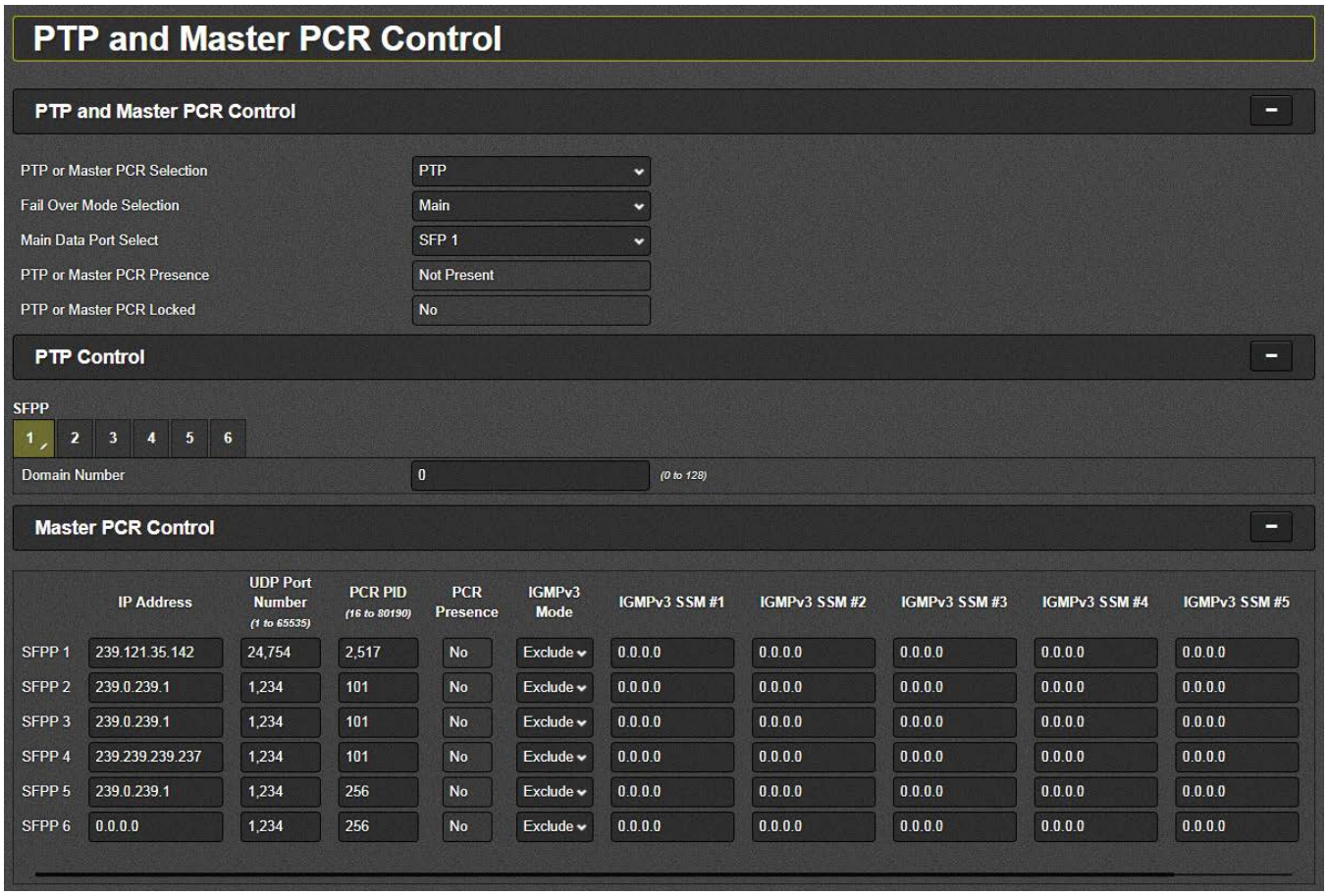


Figure 4-11 : WebEASY® - RTP and Master PCR Control

4.8.1. PTP and Master PCR Control

PTP or Master PCR Selection: This parameter allows the user to select the decoder master PCR reference as either PTP or PCR.

Fail Over Mode Selection: This dropdown allows the user to select the failover mode for the received master PCR stream.

Main Data Port Select: This dropdown allows the user to select a data port for Master PCR time reference.

PTP or Master PCR Presence: This parameter indicates whether a valid Master PCR is present or a valid PTP is present.

PTP or Master PCR Locked: This parameter indicates whether the card is locked to Master PCR or PTP.

4.8.2. PTP Control

Domain Number: This control allows the user to set the domain number.

4.8.3. Master PCR Control

IP Address: This field allows the user to set the IP address from which to obtain the Master PCR time reference.

UDP Port Number: This field allows the user to set the UDP port number from which to obtain the Master PCR time reference.

PCR PID: This parameter allows the user to set the expected PCR PID.

PCR: This field indicates whether PCR presence is detected on this data port or not.

IGMPv3 Mode: This field allows the user to select the Master PCR IGMP V3 mode.

IGMPv3 SSM #1-#6: This parameter allows the user to set Master PCR IP addresses which are used when forming the source filter for IGMPv3 communications.

4.9. IP INPUT MONITOR

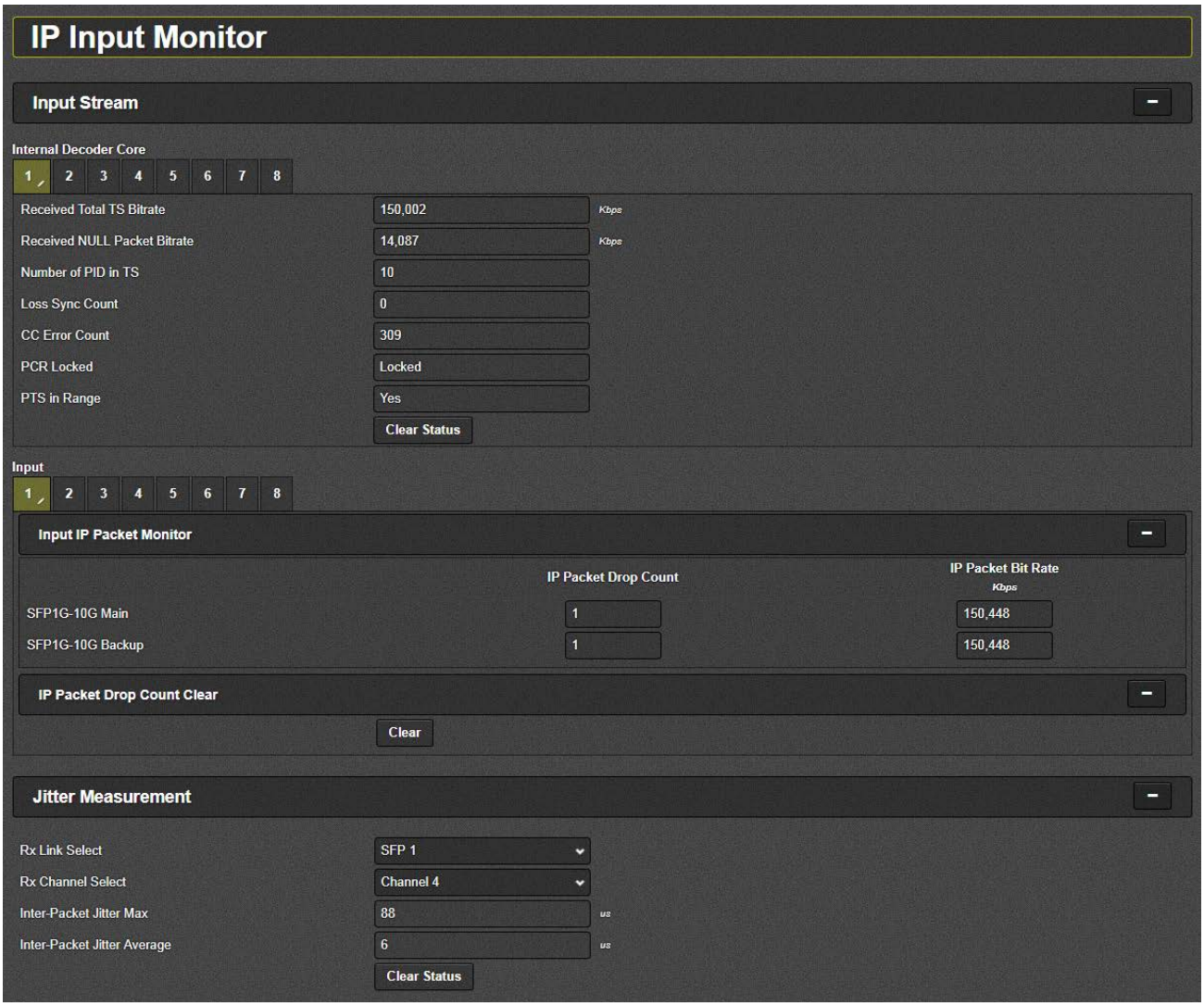


Figure 4-12 : WebEASY® - IP Input Monitor

4.9.1. Input Stream

Received Total TS Bitrate: This field indicates the total bitrate for the multicast stream specified.

Received Null Packet Bitrate: This parameter shows total NULL packet bitrate for multicast stream specified.

Number of PID in TS: This parameter indicates the total number of PIDs in the TS stream specified.

Loss Sync Count: This parameter shows the total count of sync loss.

CC Error Count: This monitor shows the total count of continuity counter (CC) error.

PCR Locked: This monitor shows if the input is locked on the program clock reference (PCR).

PTS in Range: A free run mode will be enabled if PTS is out of range of the PCR. This mode only occurs if the difference is far enough apart that it affects the video output.

Clear Input Stream Status: This control allows the user to reset the Ethernet monitoring status.

4.9.2. Input IP Packet Monitor

For SFP1G-10G Main & Backup

IP Packet Drop Count: This parameter shows the IP packet drop event count.

IP Packet Bit Rate: This parameter shows the IP packet bit rate.

4.9.3. IP Packet Drop Counter Clear

Clear: This control allows the user to clear the IP packet drop count.

4.9.4. Jitter Measurement

Rx Link Select: This dropdown allows the user to select a link for performing inter-packet jitter measurement.

Rx Channel Select: This dropdown allows the user to select a channel for performing inter-packet jitter measurement.

Inter-Packet Jitter Max: This parameter displays the maximum inter-packet jitter.

Inter-Packet Jitter Average: This parameter displays an average of the inter-packet jitter.

4.10. DECODER PROGRAM MONITOR

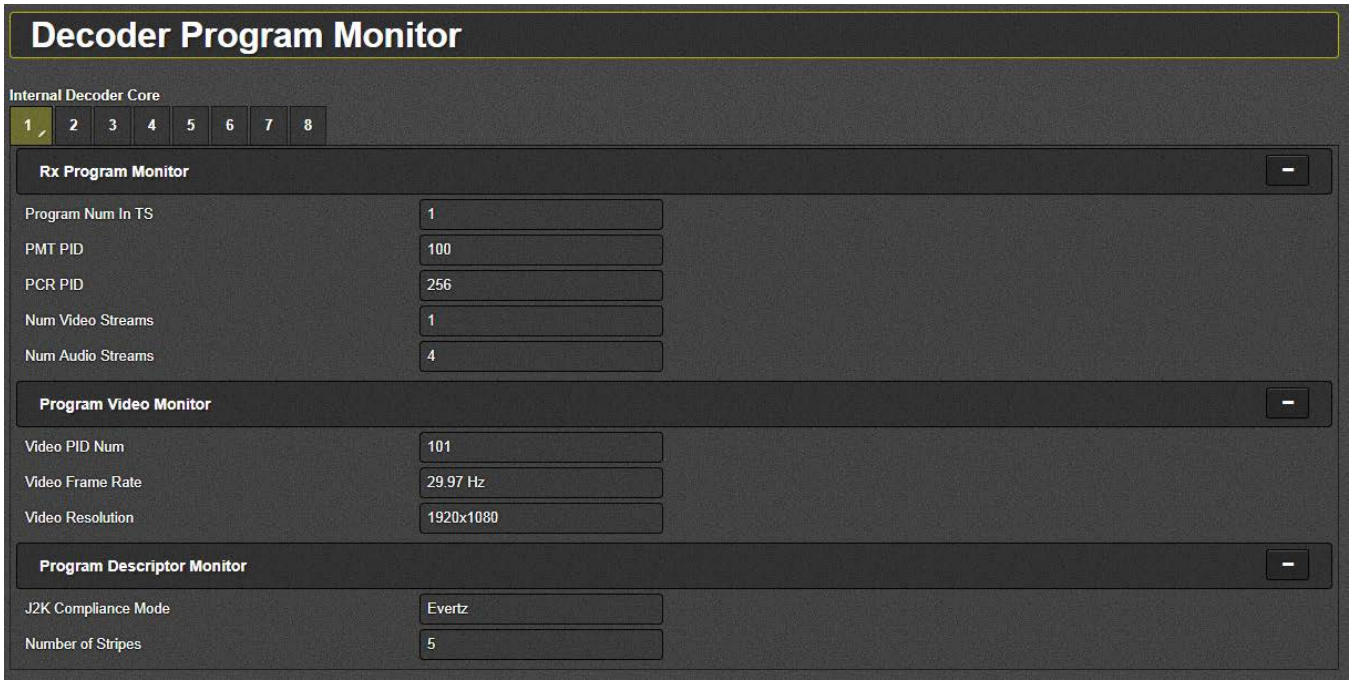


Figure 4-13 : WebEASY® - Decoder Program Monitor

4.10.1. Internal Decoder Core

For Decoder (1-8):

Program Num In TS: This parameter highlights the program number for the encoded transport stream.

PMT PID: This parameter highlights the PMT PID.

PCR PID: This parameter highlights the PCR PID.

Num Video Streams: This monitor returns number of video streams in this program.

Num Audio Streams: This monitor returns the number of audio streams in this program.

4.10.2. Program Video Monitor

For Decoder (1-8):

Video PID Num: This monitor returns the PID which carries the PES for Video.

Video Frame Rate: This monitor indicates the bit rate for the video elementary stream.

Video Resolution: This control returns the Resolution of the video.

4.10.3. Program Descriptor Monitor

J2K Compliance Mode: This monitor displays the compliance mode for this channel.

Extended Capability Flag: This monitor displays the extended capability flag for this channel applicable for TR01 ULL 2018 .

4.11. SYSTEM NOTIFY

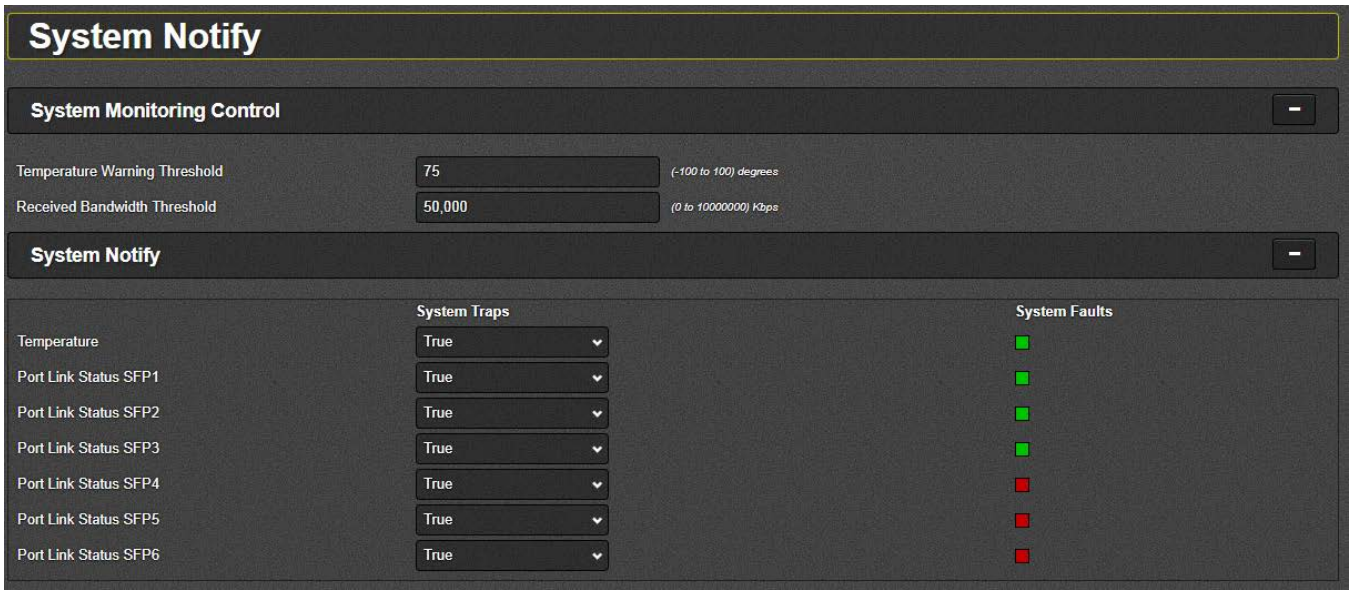


Figure 4-14 : WebEASY® - System Notify

4.11.1. System Monitoring Control

Temperature Warning Threshold: This parameter allows the user to set the threshold for the temperature overheat.

Received Bandwidth Threshold: This parameter allows the user to set the received bandwidth threshold.

4.11.2. System Notify

System Traps: This dropdown is used to turn traps on and off.

System Faults: This control checks whether a fault is currently present or not.

4.12. DECODER NOTIFY

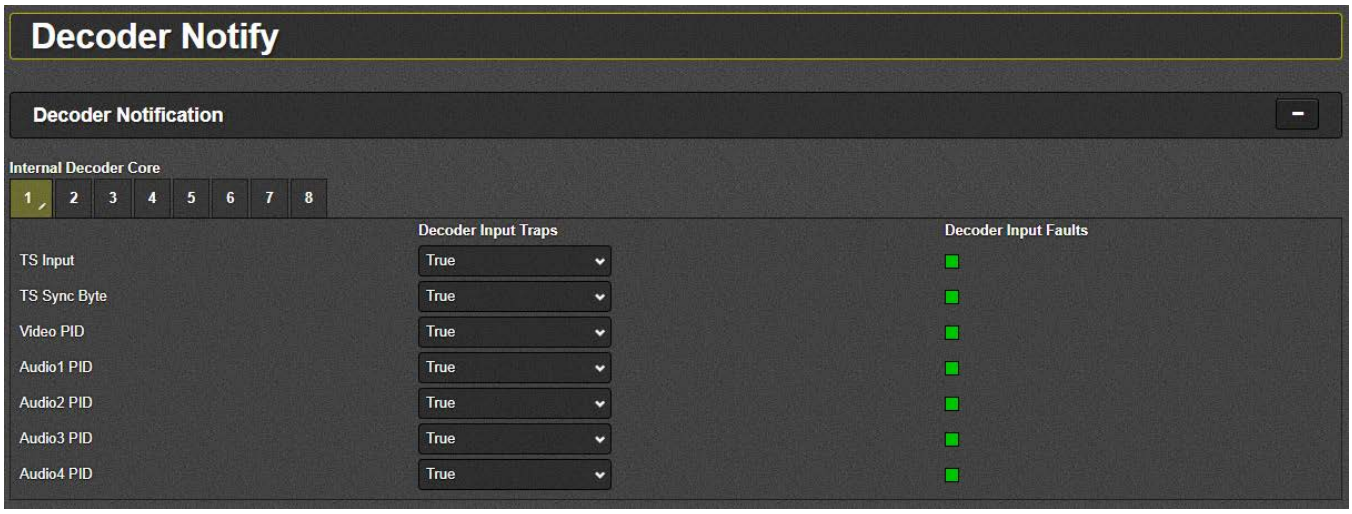


Figure 4-15 : WebEASY® - Decoder Notify

4.12.1. Decoder Notification

Decoder Input Traps: This parameter is used to turn input traps On and Off.

Decoder Input Faults: This control checks whether an input fault is currently present or not.

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5. FIRMWARE UPGRADE

Using WebEASY® on a web interface is the recommended way to load the firmware onto the 570REM modules.

On the top of the web page for the 570REM modules, there is a button labeled Upgrade. The Upgrade tab is used to check current firmware version and upload the latest firmware (Figure 5-1).

Figure 5-1 : WebEASY® - Upgrade Button on Top Menu Bar

Selecting the Upgrade tab will take the user to Figure 5-2 where the current firmware version is shown. The user needs to download the firmware image file if the firmware version is outdated.

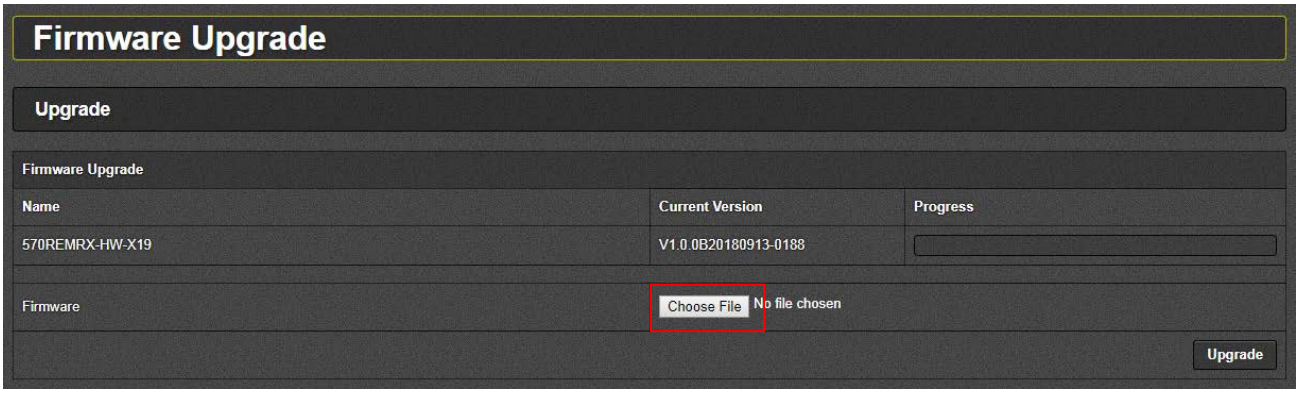

Figure 5-2 : WebEASY® - Firmware Upgrade Menu

Click choose file and browse to locate image file (Figure 5-3).

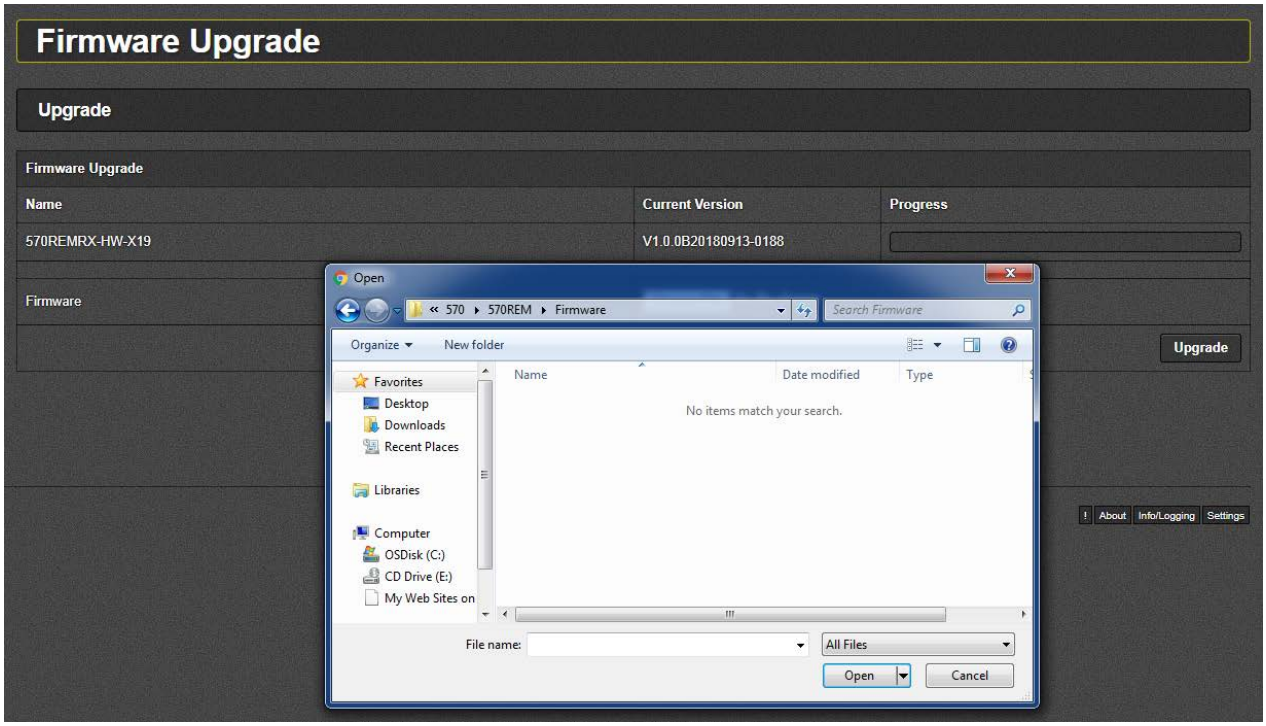

Figure 5-3 : WebEASY® - Firmware Upgrade Menu\Selecting Firmware File

Once selected, click open to advance to next step. Click upgrade and watch progress bar for status. Once completed, the device will automatically restart.