



JPEG XS IP Gateway
CD-5550

Instruction Manual

Ver. 1.00

ASTRODESIGN, Inc.

Safety Precautions (Always Observe)

Always observe the following precautions. Failure to do so can result in fires, electric shock, serious injury or death, and damage to property.

Warning Indications and Their Meanings

This manual uses the following warning indications. Before reading this manual, make sure that you understand the meaning of these indications. Read this manual after understanding the contents of the indications.

Warning Indications

 **Warning** Failure to heed this warning can result in fire, electric shock, serious injury, or death.

 **Caution** Failure to heed this caution can lead to injury due to electric shock or other accidents, and damage to the unit and other property in the vicinity.

Symbols

- Caution symbols

			
Fire	Electric shock	High temperatures	Finger injury hazard
- Symbols for forbidden actions

	
Forbidden	Do not disassemble
- Symbols for required actions


Required actions

 **Warning**  

About Handling the Product

 **Forbidden** Do not throw or subject to strong shocks.
Doing so may cause a malfunction, heat generation, or fire.

Do not use in places where there is a risk of fire or explosion.
Doing so may cause a fire.

Do not allow water or foreign objects inside the product.
Doing so can result in fires and electric shock. If water or foreign objects should get inside, immediately turn the product off and contact your dealer or an ASTRODESIGN, Inc. sales representative.

 **Forbidden** Do not open the case.
Do not insert or remove the internal board.
There is a high voltage part inside.
There is a risk of fire, electric shock, burns, and injury, which may cause a malfunction.

 **Do not disassemble** Do not disassemble, repair, or modify
There is a high voltage part inside.
There is a risk of fire, electric shock, burns, and injury, which may cause a malfunction.

 **Required actions** If you hear thunder or lightning during outdoor use, turn off the power immediately, unplug the power plug from the outlet, and move to a safe place.
Failure to do so may result in a fire or electric shock due to lightning.

About Handling of Power Cord

 **Forbidden** Do not damage the power cord
Damage to the power cord may cause a fire or electric shock.

- Do not process the power cord
- Do not forcibly bend it, use it in a bundle, or put heavy objects on it.
- Keep away from heating appliances or heat

 **Required actions** When unplugging the power cord, be sure to hold the plug when unplugging.

Caution

About Handling of this Unit



Forbidden

Do not install in a place with wobbling
The device may fall and cause injury or malfunction.

Do not put anything on this unit.
It may cause a malfunction of this device.

Do not put anything around this device
If the fan part is blocked, it may cause the device to malfunction.

Not used in the following environment
It may cause a malfunction.

- Locations where the ambient temperature is outside the range of 5-40 ° C
- Locations with ambient humidity outside the 20-80% RH range
- Places close to air conditioning equipment and subject to sudden temperature changes or condensation
- Places exposed to direct sunlight
- Places with heavy corrosive gas and dust
- Where a strong magnetic field is generated
- Places where you may be exposed to splashes of water, oil, chemicals, etc.
- A place where vibration is transmitted from the floor
- Unstable place

About Shock



Forbidden

Do not drop the unit, do not give a shock to the unit
There is a risk of failure if a shock is applied.
Please be careful when moving.

About Installation



Required actions

Install so as not to block the ventilation holes

The internal temperature will rise, and it may cause a malfunction.

When installing this unit in a rack, etc., be careful not to block the ventilation holes to ensure ventilation.

About Frame Ground



Required actions

Be sure to share the frame ground (FG) prior to connecting to other equipment.

Failure to share the same FG may result in damage.

When disconnecting the devices, unplug the connection cable and then disconnect FG cable.

About Power Supply



Forbidden

Do not turn the power on again immediately after turning off the power.
It may cause a malfunction.



Required actions

Be sure to connect to an outlet with a protective grounding terminal.

- Power supply AC100-240V.
- Grounded through a 3-wire power cord with a ground line.
- Failure to ground the unit may result in electric shock or malfunction.
- If an outlet with a protective grounding terminal is not available, be sure to use the FG terminal for grounding.

Use a dedicated power supply.

Use of the same AC power source for microphones, amplifiers, speakers, and other audio products may affect the audio.

To make it easier to disconnect the power, this device should be installed near an electrical outlet.

To completely disconnect the power supply, remove the plug from the outlet.

LCD



Forbidden

Do not touch liquid leaking from the LCD panel (LCD)

- If the LCD panel is accidentally damaged and the liquid (LCD) inside leaks out, be careful not to get it in your mouth, on your skin, or inhale the liquid.
 - If liquid gets into your eyes or mouth, rinse with water immediately. If it gets onto your skin or clothes, immediately wipe it off with alcohol and then wash it off with soap. Leaving it on may damage your skin or clothing.
-



Finger injury hazard

Beware of broken LCD panel glass fragments.

If you accidentally damage the LCD panel, be careful not to cut your hand on a piece of glass.



Required actions

Exercise caution when handling the liquid crystal panel.

- Do not wipe with benzene, thinner, etc.
- Do not pour water (salt water) on the panel.
- Avoid prolonged exposure to UV light
- Do not use in an environment where condensation occurs.
- Do not subject to strong impacts such as hitting, bumping, etc.
- Do not disassemble.

If the Unit Malfunctions or Trouble Occurs

Stop using the product, turn off the power switch, unplug the DC power cable, and contact your local dealer or an ASTRODESIGN, Inc. sales representative.

Before Operation

Introduction

Thank you for purchasing the JPEG XS IP Gateway CD-5550.

This instruction manual (hereinafter referred to as "this manual") explains how to use CD-5550 and precautions for use. Please be sure to read this manual before use to ensure correct use.

Also, please keep this manual in a safe place.

Conventions

In this manual, some terms are written as follows for the sake of brevity.

Items	Notation in this book
CD-5550	This unit

Supplied Items

The accessories of this device are as follows. If any item is missing or damaged, please contact your dealer or ASTRODESIGN, Inc. sales department.

Items	Quantity
CD-5550 (main unit)	1
CD-5550 instruction manual	1
AC cable	2
EIA rack mount bracket	1

! Important

- Always use the items supplied in the package. Use of accessories other than the supplied items may damage the product.

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Chapter 1 About this unit

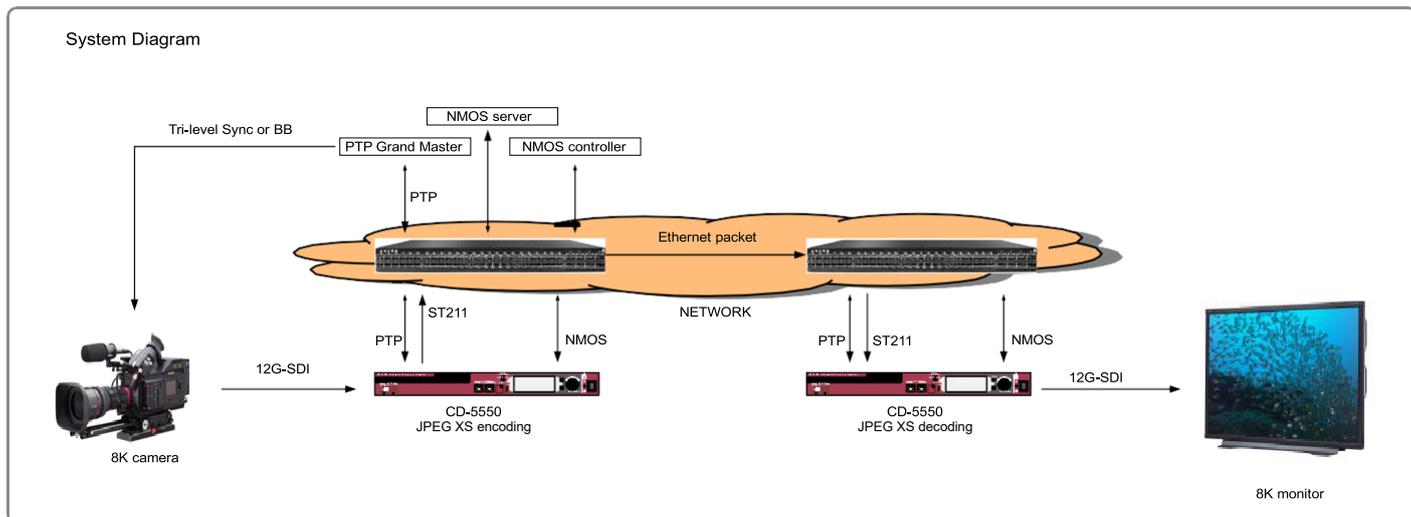
1.1 Overview

This device is a JPEG XS IP Gateway that supports the JPEG XS codec for SDI/IP interconversion.

1.2 Features

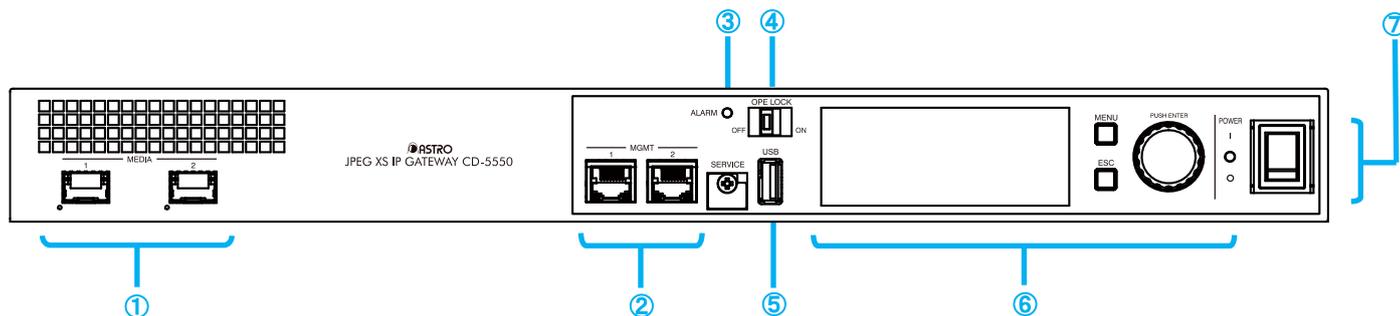
- **Compliant with Video Over IP standards**
 - Video data can be transmitted using SMPTE ST 2110-22 (Compressed Video)
 - SMPTE ST 2059-1/2 compliant and can be operated with BMC (Best Master Clock)
 - Supports IPv4 multicast
- **Supports SDI to IP/IP to SDI**
- **Compressed and transmitted in JPEG XS**
 - Compression ratio can be specified in the range of 1/5 to 1/16
 - Packet format transmission compliant with ISO/IEC 21122
- **Equipped with 10GbE (SFP +)**
- **Supports external synchronizing signals (Tri-level Sync or BB)**
- **Compatible with time pulse (1PPS) output**
- **Equipped with a front panel to display status and change various settings**
- **Double power supply (hot-swappable)**
- **Supports fan replacement (hot-swappable)**
- **EIA 1U Rack Size (Depth: 470mm)**

1.3 System Diagram



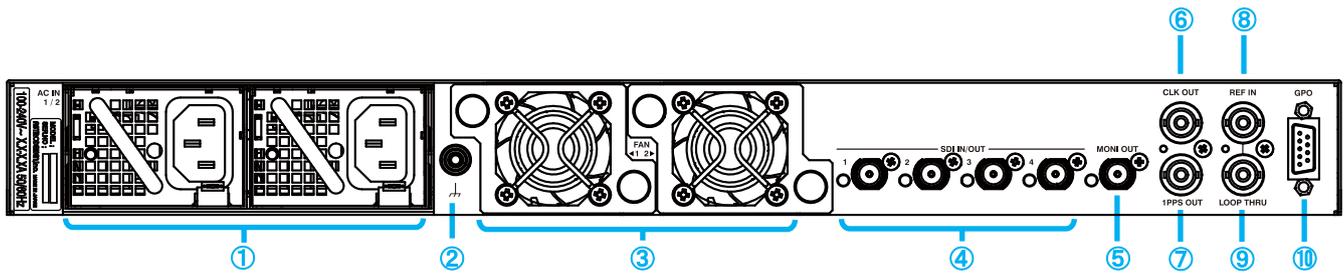
1.4 Names and Functions of Parts

1.4.1 Front View



Number	Name	Description
①	MEDIA	Port for sending and receiving the unit's media (Video) and PTP Two 10GbE (SFP+ cage) ports (SFP+ module not included) The lower LED turns green for each port when a link is established. ※Functions related to port 2 will be supported in the future.
②	MGMT	External unit control (NMOS/WEB) Ports 1 and 2 support Link Aggregation redundancy
③	ALARM	The red LED lights up when an alarm is detected by the unit. For details on alarm conditions, refer to 5.1 ALARM LED
④	OPE.LOCK	Disables front panel operation. ON: Does not allow any operation on the front panel (Switch LED: Lit up) OFF: Allows operation on the front panel. (Switch LED: Off)
⑤	USB	Used for upgrading the product
⑥	Operation panel	Displays the status and allows you to change settings on the LCD screen. Operation from the front panel is only one part of external control.
⑦	Power switch	Turns the unit on/off The Power LED (green) lights up when the camera is turned on.

1.4.2 Back View



Number	Name	Description
①	AC IN 1/2	Power (AC 100-240V 50/60Hz) IN PSU (Power Supply Unit) is replaceable (hot-swappable) Supports power supply redundancy
②	FG	Frame ground
③	FAN1/2	FAN for cooling the device. Replaceable FAN units (hot-swappable)
④	SDI IN/OUT	SDI input/output Uses 1 to 4-ports when recording 8K
⑤	MONI OUT	HD down-converted output port for SDI output
⑥	CLK OUT	Output clock signal synchronized with PTP (10 MHz square wave)
⑦	1PPS OUT	Outputs 1PPS (pulses at 1 second intervals) signal synchronized with PTP
⑧	REF IN	Reference signal input
⑨	LOOP THRU	Passive through output on REF IN (auto-terminate)
⑩	GPO	Contact output

Chapter 2 Preparation and Basic Operations

This chapter describes how to connect, start, and terminate the unit.

2.1 Connection the Power Supply and Input/Output Devices

- 1** Check that the power is turned off.
- 2** Connect the supplied AC cord to the AC IN connector and to the AC power supply.
- 3** Connect I/O devices.

The I/O pins used differ depending on the mode to be executed. Refer to the system configuration diagram.

2.2 Start up This unit

- After completing all the connections, turn the power on.

The ASTRO logo will display on the screen.

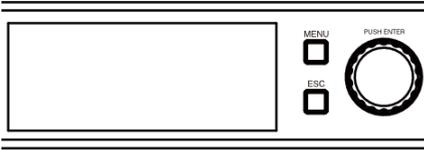
2.3 Shut down This unit

- Turn the power switch off.

Chapter 3 Front Menu Settings

This chapter explains how to operate the front panel and the menus that are displayed.

3.1 Basic Operation Method



The menu can be operated using the MENU and ESC buttons on the front of the machine.

1 Press MENU.

The menu's top screen will display.

2 Rotate the jog dial to select a menu item and press to confirm selection.

The first level of the selected menu will display.

3 Rotate the jog dial to select the desired item and press to confirm selection.

- Proceed to the second level, if any.
Rotate the jog dial to select an item and press to confirm selection.
Repeat until the screen for selecting a set value or process is displayed.
- If there is no second level, the screen for selecting the set value or process will display.
- When the setting value is displayed as "▶", you can move down one level.

4 Turn the jog dial to select the set value or process and press to confirm.

- Pressing ESC cancels the change of the setting value.
If the change is cancelled without pressing the jog dial, the set value will return to the value before the change.

5 Press the MENU button to exit.

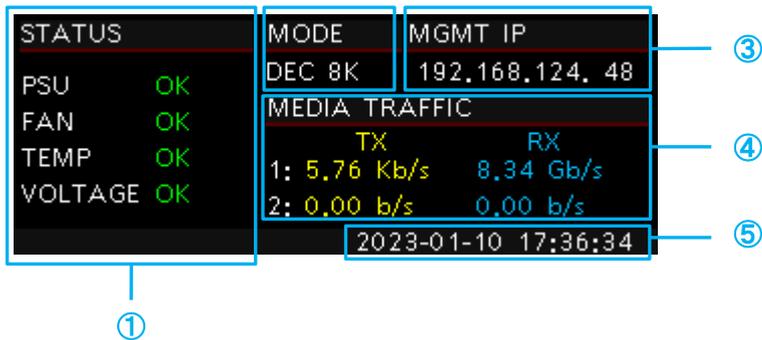
● Press the ESC button to return to the previous level.

● From here, you can continue to navigate the menu.

If you press ESC several times until the menu screen disappears, items whose selections have not been confirmed will remain in their status before changes were made.

3.2 Home Screen

After the unit completes startup, the home screen shown in the figure below will display.



Number	Item 1	Item 2	Item 3	Display description	Description
①	STATUS				
		PSU	OK / ERR		Displays the status of the power supply unit.
		FAN	OK / WARN / ERR		Displays the status of FAN unit.
		TEMP	OK / WARN / ERR		Displays the current temperature.
		VOLTAGE	OK / WARN / ERR		Displays the current voltage.
②	MODE		ENC 8K / DEC 8K		Displays the current mode along with the resolution.
③	MGMT IP		***.		Shows the IP address for the MGMT port.
④	MEDIA TRAFFIC				
		1:	TX ** Gb/s		Displays the transmission bit rate for MEDIA port 1.
			RX ** Gb/s		Displays the receive bit rate for MEDIA port 1.
		2:	TX ** Gb/s		Displays the transmission bit rate for MEDIA port 2.
			RX ** Gb/s		Displays the received bit rate of MEDIA port 2.
⑤	DATE/TIME				Displays the current date and time.

3.3 Menu Screen

Items with a ▲ mark at the beginning of the line are status display items. These settings cannot be changed.

Level 1	Level 2	Level 3	Level 4	Contents (initial setting: underlined)	Description
SETTINGS					
MGMT					
			LACP	<u>OFF</u> / ON	
			BOND (MGMT 1&2)		Displayed when LACP is on.
			MODE	<u>STATIC</u> / DHCP	Sets IP address mode.
			IP ADDRESS	<u>192.168.1.2</u>	Set IPv4 address.
			SUBNET MASK	<u>255.255.255.0</u>	Sets IPv4 subnet mask.
			GATEWAY	<u>192.168.1.1</u>	Configures IPv4 gateway.
			▲MAC ADDRESS	*****.***	Displays MAC address.
			MGMT1		Grayed out when LACP is on.
			MODE	<u>STATIC</u> / DHCP	Sets IP address mode.
			IP ADDRESS	<u>192.168.1.2</u>	Set IPv4 address.
			SUBNET MASK	<u>255.255.255.0</u>	Sets IPv4 subnet mask.
			GATEWAY	<u>192.168.1.1</u>	Configures IPv4 gateway.
			▲MAC ADDRESS	*****.***	Displays MAC address.
			MGMT2		Grayed out when LACP is on.
			▲MAC ADDRESS	*****.***	Displays MAC address.
			DHCP STATUS		Displays when the IP address mode is DHCP.
			▲IP ADDRESS	***.***.***.***	Displays IPv4 address obtained by DHCP.
			▲SUBNET MASK	***.***.***.***	Displays IPv4 subnet mask obtained by DHCP.
			▲GATEWAY	***.***.***.***	Displays IPv4 gateways retrieved by DHCP.
SYSTEM					
TIME					
			ADJUST MODE	<u>MANUAL</u> / NTP	Sets the time correction mode.
			TIME ZONE	<u>UTC-08:00</u> PST/PDT UTC-07:00 MST/MDT UTC-06:00 CST/CDT UTC-05:00 EST/EDT <u>UTC</u> UTC+08:00 CST UTC+09:00 JST	Sets the time zone.
			DATE/TIME		Sets the date and time.
			NTP		
			MODE	<u>STEP</u> / SLEW	Sets NTP time synchronization mode.
			MINPOLL	4~17 <u>4</u>	Sets the minimum value of the poll interval with an exponent of 2. 4(16 seconds) / 5(32 seconds) / 6(64 seconds) / 7(128 seconds) / 8(256 seconds) / 9(512 seconds) / 10(1024 Sec./11 (2048 sec.) / ... 17(36 Time 24 minutes 32 seconds)

Level 1	Level 2	Level 3	Level 4	Contents (initial setting: underlined)	Description
			MAXPOLL	<u>4~17</u> <u>6</u>	Sets the maximum value of poll interval with a power of 2 4 (16 seconds) / 5 (32 seconds) / 6 (64 seconds) / 7 (128 seconds) / 8 (256 seconds) / 9 (512 seconds) / 10 (1024 seconds) / 11 (2048 seconds) / ... 17(36 Time 24 minutes 32 seconds)
			SVR1 IP VER	<u>IPv4</u> / <u>OFF</u>	NTP Server 1 Set whether to use or not.
			SVR1 IP ADDRESS	<u>130.34.11.117</u>	Sets the IP address for NTP server 1.
			SVR2 IP VER	<u>IPv4</u> / <u>OFF</u>	NTP Server 2 set unused/used.
			SVR2 IP ADDRESS	<u>210.173.160.27</u>	Sets the IP address for NTP server 2.
			BOOT MODE		
			MODE	<u>ENCODE</u> / <u>DECODE</u>	Sets the mode for the next startup.
	INITIALIZE				
			ALL SETTINGS		
			Execute ?	<u>OK</u> / <u>CANCEL</u>	Resets all settings.
MAINTENANCE					
	INFORMATION				
			▲Product Model	<u>CD-5550</u>	Displays the product model number.
			▲Product S/N	<u>*****</u>	Displays the product serial number.
			▲FAN1 S/N	<u>*****_*</u>	Displays the FAN1 serial number.
			▲FAN2 S/N	<u>*****_*</u>	Displays the FAN2 serial number.
	VERSION				
			▲SYS FPGA	<u>*.*</u>	Displays the SYSTEM FPGA version.
			▲SYS PMIC	<u>*.*</u>	Displays the SYSTEM F/W version.
			▲MAIN FPGA	<u>*.*</u>	Displays the MAIN FPGA version.
			▲MAIN PMIC	<u>*.*</u>	Displays the MAIN F/W version.
			▲FAN1 PMIC	<u>*.*</u>	Displays the FAN1 F/W version.
			▲FAN2 PMIC	<u>*.*</u>	Displays the FAN2 F/W version.
			▲U-BOOT	<u>*.*</u>	Displays the U-BOOT version.
			▲KERNEL	<u>*.*</u>	Displays the KERNEL version.
			▲APPLICATION	<u>*.*</u>	Displays the APPLICATION version.
	UPDATE				
			Execute ?	<u>OK</u> / <u>CANCEL</u>	Will start the upgrade.

Chapter 4 WEB GUI Settings

This chapter describes how to access WEB GUI window and the displayed menus.

4.1 Access Method

It can be accessed by entering the MGMT IP address of this device in the URL field of the web browser.

4.2 Supported WEB browsers

The following browsers have been verified.

Browser	Version
Google Chrome	93.0.4577.82
Microsoft Edge	93.0.961.52

4.3 Home Screen

When the WEB GUI is accessed, the home screen will display as shown below.

Number	Item	Description
①	Product model/startup mode	Displays the product model name and operation mode.
②	Menu item	Displays menu items.
③	System time	Displays the system time.
④	Home status	Displays partial status. The contents of the displayed status differ depending on the startup mode (Encode/Decode).

4.3.1 PTP

Displays the PTP status.

See [4.5.4 PTP Status](#) for more

Item	Description
Settings	Switches to the PTP setting screen.
Status	Switches to the PTP status window.

4.3.2 MEDIA1 RX RTP

This status is displayed only when operating in Decode.

Displays the RTP receive status.

See [4.5.2 RTP Status](#) for more

Item	Description
Status	Switches to RTP status window.

4.3.3 SDI IN

This status is displayed only when operating in Encode.

Displays the SDI IN status.

See [4.5.3 SDI Status](#) for more

4.3.4 SDI OUT

This status is displayed only when operating in Decode.

Displays the SDI OUT status.

See [4.5.3 SDI Status](#) for more

Item	Description
Settings	Switches to RECEIVER setting window.

4.3.5 GENLOCK

This status is displayed only when operating in Decode.

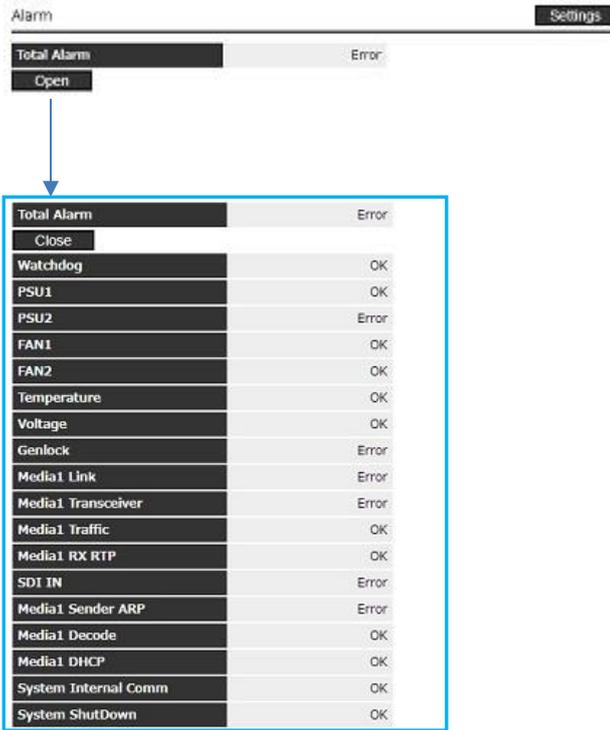
Displays the GENLOCK status.

See [4.5.5 System Status](#) for more

Item	Description
Settings	Switches to RECEIVER setting window.

4.3.6 Alarm

Indicates whether an alarm has gone off.



Item	Display description	Description
Settings		Switches to the corresponding setting screen.
Total Alarm	OK / Error	Will display as Error if any alarms are Error alarms.
Open/Close		Switches between hiding and displaying the alarm content.
Alarm description	OK / Error	See 5.3 If something goes wrong for details on the alarm and generation conditions.

4.3.7 GPO

Displays GPO status.



Item	Display description	Description
Settings		Switches to the corresponding setting screen.
GPO status		
GPO1	Open / Close	Will display as Open if normal, Close if abnormal.
GPO2	Open / Close	
GPO3	Open / Close	
GPO4	Open / Close	

4.3.8 Version

Displays F/W and FPGA versions.

See [4.6.1 Maintenance](#) for more information.

4.4 Settings

4.4.1 MEDIA PORT

Set the MEDIA PORT IP address.

MEDIA 1

Mode	<input type="text" value="STATIC"/>
IP Address	<input type="text" value="192.168.1.4"/>
SUBNET MASK	<input type="text" value="255.255.255.0"/>
GATEWAY	<input type="text" value="0.0.0.0"/>
MAC Address	<input type="text" value="00:02:DE:82:00:02"/>

Apply

Setting items	Contents (initial setting: underlined)	Description
MEDIA 1		
Mode	STATIC / DHCP	Sets IP address mode. Sets IPv4 address.
IP Address	192.168.1.4	Sets IPv4 address.
SUBNET MASK	255.255.255.0	Sets IPv4 subnet mask.
GATEWAY	0.0.0.0	Configures IPv4 gateway.
MAC Address	**.**.**.**.**.**	Displays MAC address.
DHCP Status		Displayed when IP address mode is DHCP.
Apply		Applies the settings.

4.4.2 SENDER (SDI -> IP)

Sets the compression/destination IP and other settings.

Settings can only be configured when operating in Encode.

COMMON

RTP Payload Type	96
Compression ratio	5

MEDIA 1

Enable	OFF
SRC UDP Port	50000
DST IP Address	239.0.0.1
DST UDP Port	0
TTL	32
DST MAC Address	01:00:5E:00:00:01

Apply

Setting items	Contents (initial setting: underlined)	Description
COMMON		
RTP Payload Type	96~127 <u>96</u>	Sets RTP Payload Type.
Compression ratio	5~200 <u>5</u>	Sets the compression rate. ➤ If you set a compression ratio of 17 or higher, the image quality may deteriorate.
MEDIA 1		
ENABLE	<u>OFF</u> / ON	Sets transmission ON/OFF.
SRC UDP Port	0~65535 <u>50000</u>	Sets the source UDP port number.
DST IP Address	<u>224.0.0.1</u>	Sets the destination IP address.
DST UDP Port	0~65535 <u>0</u>	Sets the destination UDP port number.
TTL	0~255 <u>32</u>	Sets TTL of outgoing packets.
DST MAC Address	*****	Displays the DST MAC Address obtained from the DST IP Address.
Apply		Applies the settings.

4.4.3 RECEIVER (IP -> SDI)

Configures settings such as the reference, SDI output, and receiving IP address.

Settings can only be configured when operating in Decode.

COMMON

RTP Payload Type

Compression ratio

MEDIA 1

Enable

SRC UDP Port

DST IP Address

DST UDP Port

TTL

DST MAC Address

Apply

Setting items	Contents (initial setting: underlined)	Description
REFERENCE		
Source	<u>PTP / REF IN / FREE RUN</u>	Sets the reference.
COMMON		
FRAME RATE	<u>60p / 59.94p</u>	Sets the frame rate.
HDR/SDR(SDI PID)	<u>SDR / HLG / PQ / Unspecified</u>	Sets HDR/SDR.
Colorimetry(SDI PID)	<u>BT.709 / BT.2020 / Unknown</u>	Sets Colorimetry.
MEDIA 1		
IGMP Version	<u>IGMPv3 / IGMPv2</u>	Sets IGMP version.
ENABLE	<u>OFF / ON</u>	Sets the reception ON/OFF.
SRC IP Address	<u>0.0.0.0</u>	Sets the source IP address.
DST IP Address	<u>224.0.0.1</u>	Sets the destination IP address.
DST UDP Port	<u>0~65535 0</u>	Sets the destination UDP port number.
RTP Payload Type	<u>96~127 96</u>	Set RTP Payload Type.
Apply		Applies the settings.

4.4.4 PTP

Sets PTP.

PTP

Reset PTP

Domain Number	<input type="text" value="127"/>
Announce Timeout (log)	<input type="text" value="0.25Hz(2)"/>
Delay Request Interval(log)	<input type="text" value="8Hz(-3)"/>
Offset Load Threshold	<input type="text" value="512μs"/>
Before Lock Gain	<input type="text" value="x1"/>
After Lock Gain	<input type="text" value="x1"/>

Apply

Setting items	Contents (initial setting: underlined)	Description
Reset PTP		Resets PTP.
Domain Number	0~127 <u>127</u>	Sets the domain number of the PTP to be received.
Announce Timeout (log)	0.0625Hz(4) / 0.125Hz(3) / <u>0.25Hz(2)</u> / 0.5Hz(1) / 1Hz(0) / 2Hz(-1) / 4Hz(-2) / 8Hz(-3) / 16Hz(-4) / 32Hz(-5) / 64Hz(-6) / 128Hz(-7)	Sets the timeout period for PTP announcement messages.
Delay Request Interval (log)	0.0625Hz(4) / 0.125Hz(3) / <u>0.25Hz(2)</u> / 0.5Hz(1) / 1Hz(0) / 2Hz(-1) / 4Hz(-2) / 8Hz(-3) / 16Hz(-4) / 32Hz(-5) / 64Hz(-6) / 128Hz(-7)	Sets the amount of time between PTP delay requests.
Offset Load Threshold	8ms / 2ms / <u>512μs</u> / 128μs / 64 μs / 32μs / 16μs / 8μs / 4μ s / 2μs	Sets the difference tolerance for offset values.
Before Lock Gain	<u>x8</u> / x4 / x2 / x1 / x0.5 / x0.25 / x0.125	Set the gain of the pre-lock PLL.
After Lock Gain	<u>x8</u> / x4 / x2 / x1 / x0.5 / x0.25 / x0.125	Sets the gain of the locked PLL.
Apply		Applies the settings.

4.4.5 ALARM

Sets the alarm.

For details on the alarms, see 5.3 List of Alarm Conditions.

Alarm Preset

Default					
	Alarm 1	Alarm 2	Alarm 3	Alarm 4	Total Alarm
Watchdog	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PSU1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PSU2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
FAN1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
FAN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Voltage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Genlock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Media1 Link	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Media1 Transceiver	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Media1 Traffic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Media1 RX RTP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SDI IN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Media1 Sender ARP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Media1 Decode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Media1 DHCP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
System Internal Comm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
System ShutDown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

GPO

GPO 1	Alarm 1
GPO 2	Alarm 1
GPO 3	Alarm 1
GPO 4	Alarm 1

Apply

Setting items	Contents (initial setting: underlined)	Description
Alarm Preset		
Default		Sets Alarm Preset settings to default settings.
Alarm 1	<u>ON</u> / OFF	Assigns the target item's alarm to Alarm1.
Alarm 2	<u>ON</u> / OFF	Assigns the target item's alarm to Alarm2.
Alarm 3	<u>ON</u> / OFF	Assigns the target item's alarm to Alarm3.
Alarm 4	<u>ON</u> / OFF	Assigns the target item's alarm to Alarm4.
Total Alarm	<u>ON</u> / OFF	When set to OFF, no notification will be sent even if an alarm for the target item occurs. This applies to the alarms for the front panel, ALARM LED, WEB GUI.
GPO		
GPO1	<u>Alarm 1</u> / Alarm 2 / Alarm 3 / Alarm 4	Sets the alarm preset to assigned to GPO1.
GPO2	<u>Alarm 1</u> / Alarm 2 / Alarm 3 / Alarm 4	Sets the alarm preset assigned to GPO2.
GPO3	<u>Alarm 1</u> / Alarm 2 / Alarm 3 / Alarm 4	Sets the alarm preset assigned to GPO3.
GPO4	<u>Alarm 1</u> / Alarm 2 / Alarm 3 / Alarm 4	Sets the alarm preset assigned to GPO4.
Apply		Applies the settings.

4.5 Status

4.5.1 MEDIA Status

Displays the Media Traffic status.

Reset Cumulative Statistics		
MEDIA 1 TX Traffic		
	Current	Cumulative
Total Bits	0	0
Total Packets	0	0
Unicast Packets	0	0
Multicast Packets	0	0
Broadcast Packets	0	0
MEDIA 1 RX Traffic		
	Current	Cumulative
Total Bits	0	0
Total Packets	0	0
Preamble Error Packets	0	0
SFD Error Packets	0	0
FCS Error Packets	0	0
Discard Packets	0	0
64B/66B Code Violations	0	0
Oversize Packets	0	0
Undersize Packets	0	0
Unicast Packets	0	0

Item	Display description	Description
Reset Cumulative Statistics		All cumulative values (Cumulative) are reset to 0.
TX Traffic		
Total Bits	*	Displays the number of Bits per second and the cumulative number of sent packets.
Total Packets	*	Displays the number of packets per second and the cumulative number of packets sent.
Unicast Packets	*	Displays the number of packets per second and their cumulative number of transmitted unicast packets.
Multicast Packets	*	Displays the number of packets per second and their cumulative number of outgoing multicast packets.
Broadcast Packets	*	Displays the number of packets per second and their cumulative number of outgoing broadcast packets.
RX Traffic		
Total Bits	*	Displays the number of Bits per second and the cumulative number of received packets.
Total Packets	*	Displays the number of packets per second and the cumulative number of packets received.
Preamble Error Packets	*	Displays the number of errors per second and the cumulative amount of Preamble errors.
SFD Error Packets	*	Displays the number of errors per second and the cumulative number of errors for SFD error.
FCS Error Packets	*	Displays the number of errors per second and the cumulative number of errors for FCS error.
Discard Packets	*	Displays the number of packets discarded per second and their cumulative number.
64B/66B Code Violations	*	Displays the number of 64B/66B code violations per second and their cumulative number.
Oversize Packets	*	Displays the number of packets per second and their cumulative number of oversized packets.

Item	Display description	Description
Undersize Packets	*	Displays the number of packets per second and their cumulative number of undersized packets.
Undersize Packets	*	Displays the number of packets per second and their cumulative number of undersized packets.
Undersize Packets	*	Displays the number of packets per second and their cumulative number of undersized packets.
Undersize Packets	*	Displays the number of packets per second and their cumulative number of undersized packets.
SYSTEM TX Traffic		
Total Bits	*	Displays the number of Bits per second and the cumulative amount of sent packets.
Total Packets	*	Displays the number of packets per second and the cumulative amount of sent packets.
Discard Packets	*	Displays the number of packets discarded per second and their cumulative number.
ARP Packets	*	Displays the number of ARP packets per second and their cumulative number.
LLDP Packets	*	Displays the number of LLDP packets per second and their cumulative number.
ICMP Packets	*	Displays the number of ICMP packets per second and their cumulative number.
IGMP Packets	*	Displays the number of IGMP packets per second and the cumulative number of packets.
TCP Packets	*	Displays the number of TCP packets per second and their cumulative number.
UDP Packets	*	Displays the number of UDP packets per second and their cumulative value.
SYSTEM TX IGMP Status		
IGMP Membership Query	*	Displays the number of Membership Query transmissions per second and the cumulative number.
IGMPv1 Membership Report	*	Displays the number of IGMPv1 Membership Report transmissions per second and the cumulative number.
IGMPv2 Membership Report	*	Displays the number of IGMPv2 Membership Reports sent per second and the cumulative number.
IGMPv2 Leave Group	*	Displays the number of IGMPv2 Leave Groups sent per second and the cumulative number.
IGMPv3 Membership Report	*	Displays the number of IGMPv3 Membership Reports sent per second and the cumulative number.
SYSTEM RX Traffic		
Total Bits	*	Displays the number of Bits per second and the cumulative number of received packets.
Total Packets	*	Displays the number of packets per second and the cumulative number of packets received.
Discard Packets	*	Displays the number of dropped packets per second and their cumulative number.
ARP Packets	*	Displays the number of ARP packets per second and the cumulative number of packets.
LLDP Packets	*	Displays the number of LLDP packets per second and the cumulative number of packets.
ICMP Packets	*	Displays the number of ICMP packets per second and the cumulative number of packets.
IGMP Packets	*	Displays the number of IGMP packets per second and the cumulative number of packets.
TCP Packets	*	Displays the number of TCP packets per second and the cumulative number of packets.
UDP Packets	*	Displays the number of UDP packets per second and the cumulative number of packets.

Item	Display description	Description
SYSTEM RX IGMP Status		
IGMP Membership Query	*	Displays the number of times of Membership Querys received per second and the cumulative number,
IGMPv1 Membership Report	*	Displays the number of IGMPv1 Membership Report received per second and the cumulative number of received messages.
IGMPv2 Membership Report	*	Displays the number of IGMPv2 Membership Reports received per second and the cumulative number of received messages.
IGMPv2 Leave Group	*	Displays the number of IGMPv2 Leave Groups received per second and the cumulative number of received messages.
IGMPv3 Membership Report	*	Displays the number of IGMPv3 Membership Reports received per second and the cumulative number of received messages.

4.5.2 RTP Status

Displays the status of RTP.

Displayed only when operating in Decode.

Reset Cumulative Statistics

MEDIA 1 RX RTP

	Current	Cumulative
RTP Bits	0	0
RTP Packets	0	0
Sequence Number Error	0	0
Timestamp Error	0	0

Item	Display description	Description
Reset Cumulative Statistics		All cumulative values (Cumulative) are reset to 0.
RX RTP		
RTP Bits	*	Displays the number of Bits per second of received RTP and its cumulative number.
RTP Packets	*	Shows the number of packets received per second for RTP and their cumulative number.
Sequence Number Error	*	Displays the number of received RTP sequence number errors per second and their cumulative number.
Timestamp Error	*	Displays the number of timestamp errors per second for received RTP and their cumulative number.

4.5.3 SDI Status

Displays the status of SDI IN when operating in Encode.

Displays the status of SDI OUT when operating in Decode.

SDI IN

Resolution	8K
FRAME RATE	59.94p
SDI FORMAT	12G-SDI

	IN 1	IN 2	IN 3	IN 4
Lock	Unlock	Unlock	Unlock	Unlock
CRC	N/A	N/A	N/A	N/A
HDR/SDR	N/A	N/A	N/A	N/A
Colorimetry	N/A	N/A	N/A	N/A

Item	Display description	Description
SDI IN		
RESOLUTION	For supported formats,	Displays the input resolution.
FRAME RATE	refer to 7.1.1 SDI Input /	Displays the input frame rate.
SDI FORMAT	output specifications	Displays the input SDI format.
Lock	Lock / Unlock	Displays the lock status of SDI IN1 to SDI IN4.
CRC	OK / Error / N/A	Displays CRC errors for SDI IN1 to SDI IN4.
HDR/SDR	SDR / HLG / PQ / Unspecified / N/A	Displays HDR/SDR of SDI IN4 from SDI IN1.
Colorimetry	BT.709 / BT.2020 / Unknown / N/A	Displays Colorimetry of SDI IN4 from SDI IN1.

SDI IN

Resolution	8K
FRAME RATE	59.94p
SDI FORMAT	12G-SDI

	IN 1	IN 2	IN 3	IN 4
Lock	Unlock	Unlock	Unlock	Unlock
CRC	N/A	N/A	N/A	N/A
HDR/SDR	N/A	N/A	N/A	N/A
Colorimetry	N/A	N/A	N/A	N/A

Item	Display description	Description
SDI OUT		
▲ RESOLUTION	For supported formats,	Displays the output resolution.
▲ FRAME RATE	refer t to 7.1.1 SDI Input /	Displays the output frame rate.
▲ SDI FORMAT	output specifications	Displays the output SDI format.
▲ HDR/SDR	SDR / HLG / PQ / Unspecified	Displays the power HDR/SDR.
▲ Colorimetry	BT.709 / BT.2020 / Unknown	Displays the output Colorimetry.

4.5.5 System Status

Displays the System status.

GENLOCK			
Mode		PTP	
Detect		Not Detect	
Lock		Unlock	
Format		N/A	

PSU			
	PSU 1	PSU 2	
Detect	Detect	Detect	
Voltage State	OK	Error	
Fan State	OK	Error	
Fan Speed(rpm)	7,639	0	

FAN			
	FAN 1	FAN 2	
Detect	Detect	Detect	
Voltage State	OK	OK	
Voltage[V]	11.89	11.78	
Temperature State	OK	OK	
Temperature[°C]	28	27	

Item	Display description	Description	
GENLOCK		※Displayed only when decode is selected.	
Mode	PTP / REF IN / FREE RUN	Displays the reference in use.	
Detect	Detect / Not Detect	Displays the reference signal detection status.	
Lock	Lock / Unlock	Displays the reference lock status.	
Format		Displays the reference format.	
PSU			
Detect	Detect / Not Detect	Indicates the PSU module discovery status.	
Voltage state	OK / Error	Displays PSU module voltage status.	
Fan State	OK / Error	Displays the PSU module rotational status.	
Fan Speed[rpm]	*	Displays the number of PSU module rotations.	
FAN			
Detect	Detect / Not Detect	Displays the FAN module discovery status.	
Voltage State	OK / Warning / Error	Displays FAN module voltage status.	
Voltage[V]	*.**	Displays FAN module voltage.	
Temperature State	OK / Warning / Error	Displays FAN module temperature status.	
Temperature[°C]	**	Displays FAN module temperature.	
Speed State	OK / Error	Displays the FAN module rotational status.	
Speed[rpm]	*	Displays the revolutions of the FAN module.	
BOARD			
Voltage	OK / Warning / Error	Displays the voltage status.	
FPGA Temperature State	OK / Warning / Error	Displays the FPGA thermal status.	
FPGA Temperature[°C]	**	Displays the FPGA temperature.	
PMIC Temperature State	OK / Warning / Error	Displays the PMIC thermal status.	
PMIC Temperature[°C]	**	Displays PMIC temp.	

4.6 System

4.6.1 Maintenance

Displays version information.

Version

SYSTEM FPGA	1.0.0
SYSTEM PMIC	1.0.0
MAIN FPGA	1.0.0
MAIN PMIC	1.0.0
FAN1 PMIC	1.0.0
FAN2 PMIC	1.0.0
U-BOOT	1.0.0
KERNEL	1.0.0
APPLICATION	1.0.0

Item	Display description	Description
Version		
▲SYS FPGA	*.*.*	Displays the System FPGA version.
▲SYS PMIC	*.*.*	Displays the System F/W version.
▲MAIN FPGA	*.*.*	Displays the Main FPGA version.
▲MAIN PMIC	*.*.*	Displays the MAIN F/W version.
▲FAN1 PMIC	*.*.*	Displays the FAN1 F/W version.
▲FAN2 PMIC	*.*.*	Displays the FAN2 F/W version.
▲U-BOOT	*.*.*	Displays the U-BOOT version.
▲KERNEL	*.*.*	Displays the Kernel version.
▲APPLICATION	*.*.*	Displays the Application version.

4.6.2 Net Tools

Sends a PING and executes a traceroute (acquires route information to the destination).

PING

Source	<input type="text" value="MEDIA 1"/>
Count	<input type="text" value="3"/>
DST IP Address	<input type="text" value="0.0.0.0"/>
Run	<input type="button" value="Run"/>

Result:

Stop

Setting items	Set Value (initial setting: underlined)	Description
PING		
Source	<u>MEDIA 1</u>	Sets the MEDIA to which the ping is sent.
Count	<u>1~100</u> 3	Sets the number of transmissions.
DST IP Address	<u>*** **</u> *** **	Sets the destination address.
Run		Runs PING.
Result		Displays PING execution result.
Stop		Suspends PING execution.

traceroute

Source	<input type="text" value="MEDIA 1"/>
Max TTL	<input type="text" value="30"/>
DST IP Address	<input type="text" value="0.0.0.0"/>
Run	<input type="button" value="Run"/>

Result:

Stop

Setting items	Set Value (initial setting: underlined)	Description
traceroute		
Source	<u>MEDIA 1</u>	Sets MEDIA to run traceroute.
Max TTL	<u>1~255</u> 30	Sets the max. TTL.
DST IP Address	<u>*** **</u> *** **	Sets the destination address.
Run		Runs traceroute.
Result		Displays Traceroute execution result.
Stop		Suspends traceroute execution.

4.6.3 Log

Displays the log.

```

Download
23/01/10 13:17:07 943 [0000] MAIN and SUB Normal mode.
23/01/10 13:17:07 943 [0001] relimer start --->.
23/01/10 13:17:07 971 [0002] relimer port 1.
23/01/10 13:17:07 999 [0003] relimer port 2.
23/01/10 13:17:08 027 [0004] relimer port 3.
23/01/10 13:17:08 054 [0005] relimer port 4.
23/01/10 13:17:08 054 [0006] <--- relimer end.
23/01/10 13:17:08 055 [0007] MAIN init reas success(cnt=0).
23/01/10 13:17:08 785 [0008] MAIN MSL_RST End.
23/01/10 13:17:08 785 [0009] MAIN Init Setting Start.
23/01/10 13:17:08 785 [0010] MAIN Init Setting End.
23/01/10 13:17:08 802 [0011] killall Ntpdate.sh : 256.
23/01/10 13:17:08 811 [0012] killall ntpdate : 256.
23/01/10 13:17:08 826 [0013] /hone/user/util/ntpd/NtpdRc.sh stop : 0.
23/01/10 13:17:08 827 [0014] ntpd-stop
23/01/10 13:17:08 841 [0015] /hone/user/util/ntpd/NtpdConf.sh 4 6 130.34.11.117 : 0.
23/01/10 13:17:08 850 [0016] killall NtpdateNtpdS.sh : 256.
23/01/10 13:17:08 854 [0017] /hone/user/util/ntpd/NtpdateNtpdS.sh 3 1 130.34.11.117 & : 0.
23/01/10 13:17:08 854 [0018] ntpd:start
23/01/10 13:17:08 858 [0019] ntpdline : 0.
23/01/10 13:17:11 575 [0020] ifdown -f eth3 : 0.
23/01/10 13:17:11 578 [0021] SioConnCmd_Thread_PSoC(dev_no=4, fd=13) thread start.
23/01/10 13:17:11 578 [0022] SioConnCmd_Thread_PSoC(dev_no=1, fd=14) thread start.
23/01/10 13:17:11 578 [0023] SioConnCmd_Thread_PSoC(dev_no=0, fd=10) thread start.
23/01/10 13:17:11 578 [0024] [INFO] MEDIA1 Decode Stop.
23/01/10 13:17:11 578 [0025] SioConnCmd_Thread_PSoC(dev_no=3, fd=15) thread start.
23/01/10 13:17:11 579 [0026] [ALARM] [8GN] MEDIA1 Mod detect error.
23/01/10 13:17:11 579 [0027] [ALARM] [8GN] PTP Lock error.
23/01/10 13:17:11 579 [0028] [PTP] T1 Media1[0.0].
23/01/10 13:17:11 579 [0028] [PTP] T2 Media1[0.0].
  
```

Setting items	Description
PING	
Download	Downloads the log.
Log display	Displays a maximum of log 500 entries.

Chapter 5 Alarm Function

This chapter describes the alarm function and conditions under which it occurs.

5.1 ALARM LED

ALARM LED (1.4.1 Front View) lights up when any Warning or Error occurs for any or all items in the 5.3 If something goes wrong.

※The LED will not light up when an error occurs in an alarm for which Total Alarm is turned off in 4.4.5 ALARM.

5.2 Status Items on the Home Screen

The alarm conditions are set for each FAN, PSU, TEMP, and VOLTAGE group, and "WARN" is displayed when a Warning occurs in any of the groups checked in 5.3 If something goes wrong, and "ERR" when an Error occurs in any of the groups. Both notices will display in the STATUS area on the Home screen.

Since the order of importance of alarms is OK < Warning < Error, Error is displayed first when both Warning and Error occur at the same time, and OK is displayed when none of the conditions apply.

5.3 If something goes wrong

A=ALARM LED, P=PSU, F=FAN, T=TEMP, V=VOLTAGE

Item 1	Item 2	Warning Conditions	Error Conditions	A	P	F	T	V	
Watchdog			System F/W operation abnormal	✓					
PSU1	Detect		No PSU1 connection	✓	✓				
	Voltage		Detects abnormal voltage values	✓	✓				
	FAN		Detects abnormal rotation speed	✓	✓				
PSU2	Detect		No PSU2 connection	✓	✓				
	Voltage		Detects abnormal voltage values	✓	✓				
	FAN		Detects abnormal rotation speed	✓	✓				
FAN1	Detect		No FAN1 connection	✓		✓			
	Voltage	Voltage is within Warning range	Voltage is within Fault range	✓		✓			
	Temperature	Temperature is within Warning range	Temperature is within Warning range	✓		✓			
	Speed		Detects abnormal rotation speed	✓		✓			
FAN2	Detect		No FAN2 connection	✓		✓			
	Voltage	Voltage is within Warning range	Voltage is within Fault range	✓		✓			
	Temperature	Temperature is within Warning range	Temperature is within Fault range	✓		✓			
	Speed		Detects abnormal rotation speed	✓		✓			
Temperature	SYSTEM (FPGA)	Temperature is within Warning range	Temperature is within Fault range	✓			✓		
	SYSTEM (PMIC)			✓			✓		
	MAIN (FPGA)			✓			✓		
	MAIN (PMIC)			✓			✓		
	FAN1 (PMIC)			✓		✓	✓		
	FAN2 (PMIC)			✓		✓	✓		
Voltage	SYSTEM	Voltage is within Warning range	Voltage is within Fault range	✓				✓	
	MAIN			✓				✓	
	FAN1			✓		✓	✓		
	FAN2			✓		✓	✓		
Genlock	REF IN	Detect	Reference not detected *1	✓					
		Lock	Reference not locked *1	✓					
	PTP	Lock	PTP not locked *2	✓					
		Media1 PTP		Media1 PTP not detected *2	✓				
		Detect							

Item 1	Item 2		Warning Conditions	Error Conditions	A	P	F	T	V
Genlock	PTP	T1-T4 Sequence Error		A T1-T4 Sequence fault has occurred. *2	✓				
		T3-T4 SequenceID Error		A T3-T4 Sequence ID failure occurred *2	✓				
		Announce PTP Timeout		An Announce PTP Timeout has occurred *2	✓				
Media1 Link				Media1 is linked down	✓				
Media1 Transceiver	Detect			Transceiver not connected	✓				
Media1 Traffic	Preamble Error			A Preamble error has occurred.	✓				
	SFD Error			SFD failure occurred	✓				
	FCS Error			A FCS error occurred	✓				
	Address Table Full			The address table (number of registered packets) of the receive packet buffer has reached the limit value.	✓				
	Buffer Full			Received packet buffer capacity has reached its limit.	✓				
	64B/66B Code Violations			A 64B/66B code violation has occurred	✓				
Media1 RX RTP	Sequence number Error			A Sequence number failure has occurred.	✓				
	Timestamp Error			A Timestamp failure has occurred.	✓				
	No packets received			No packet received for more than 5 seconds					
SDI IN	SDI IN 1	Lock		Not locked	✓				
		CRC		A CRC failure has occurred	✓				
	SDI IN 2	Lock		Not locked	✓				
		CRC		CRC failure has occurred	✓				
	SDI IN 3	Lock		Not locked	✓				
		CRC		A CRC failure has occurred	✓				
	SDI IN 4	Lock		Not locked	✓				
		CRC		CRC failure occurred	✓				
Media1 Sender ARP				Destination MAC for unicast transmission The address could not be obtained.	✓				
Media1 Decode	Decode Error			A Decode failure has occurred	✓				
	jxs ready freeze			jxs ready freeze occurred	✓				
	pll_no_lock			PLL not locked	✓				
Media1 DHCP				Media1 failed to acquire DHCP	✓				
System Internal Comm	SYS PMIC			Internal communication disrupted.	✓				
	MAIN PMIC			Internal communication disrupted.	✓				
	MAIN REG			Error detected during initialization	✓				
	MAIN VID			Error detected during initialization	✓				
	MAIN ETH			Error detected during initialization	✓				
	FAN1 PMIC			Internal communication disruption	✓				
	FAN2 PMIC			Internal communication disrupted	✓				
System Shutdown	Shutdown timeout			Timeout occurs during shutdown process *3	✓				
	Reboot			Reboot process was performed. *3	✓				

*1 The alarm occurs only when Reference is set to REF IN.

*2 The alarm occurs only when Reference is set to PTP.

*3 Occurs only for 1 second at startup.

Chapter 6 Troubleshooting

This chapter explains what steps to take when your device is not responding properly.

6.1 When the Product is Not Operating Normally

If the unit does not operate normally, check the following table, and take appropriate action.

If the problem persists, please contact your dealer or ASTRODESIGN, Inc. sales department.

Condition	Checklist	How to respond
No image is displayed.	① Are the input formats correct?	① The input format may not be supported by this device. For details on supported input formats, see 7.1.1 SDI Input / output specifications .
	② Is the SENDER or RECEIVER setting correct?	① Is Enable between SENDER and RECEIVER set to ON? If Enable is OFF, it will not work. ② If the RTP Payload Type setting is the same for the SENDER and RECEIVER, the RECEIVER will be filtered and will not work.

6.2 If something goes wrong

Please stop using immediately.

- Turn off the power, disconnect the power cable, and contact your dealer or ASTRODESIGN, Inc. sales department.

Chapter 7 Specifications of this unit

This chapter describes the specifications of this unit.

7.1 Specifications

Items	Specifications
IP interface	<ul style="list-style-type: none"> • 10GbE(SFP+): 2 system ※Functions related to port 2 will be supported in the future.
Supported IP formats	<ul style="list-style-type: none"> • SMPTE ST 2110(-10,-22)
Video interface	<ul style="list-style-type: none"> • 12G-SDI input/output: 1 system (12G-SDI × 4 at 8K)
Supported video formats	<ul style="list-style-type: none"> ※See 7.1.1 SDI Input / output specifications
Synchronization signal input/output	<ul style="list-style-type: none"> • Synchronization signal input <ul style="list-style-type: none"> • Blackburst (BB), Tri-level Sync • Synchronization signal output <ul style="list-style-type: none"> • Passive Through Output (Automatic Termination)
Discovery / Registration / Control	<ul style="list-style-type: none"> • DHCP
IP synchronization	<ul style="list-style-type: none"> • SMPTE ST 2059-1/-2 (BMC operation when IP2 system is used)
Clock output	<ul style="list-style-type: none"> • 1PPS output • CLK out (square-wave 10MHz)
GPO	<ul style="list-style-type: none"> • D-SUB 9 pin-recessed connector • Four control outputs (Pin assignment: see 7.1.2 GPO)

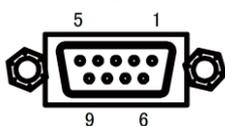
7.1.1 SDI Input / output specifications

Format	Resolution	Frame Rate	Gradation	SDI Format	LINK	Related Standards
8K	7680×4320	59.94p/60p	YCBCR 4:2:2 10bit	12G-SDI Type1 2SI	Quad	SMPTE ST 2082-1/12

7.1.2 GPO

Items	Specifications
Shape	D-SUB 9 pin-recessed connector
Structure	Semiconductor relay
Specifications	Open/Close max. 50V/0.5A
Operation	Close at alarm output
Pin Assignments	See below

Pin Assignments

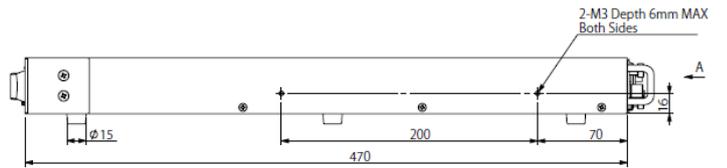
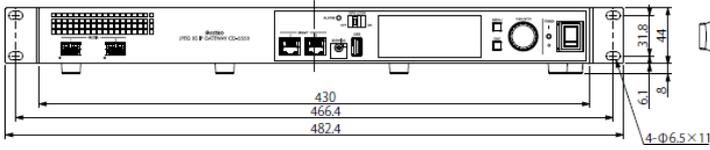
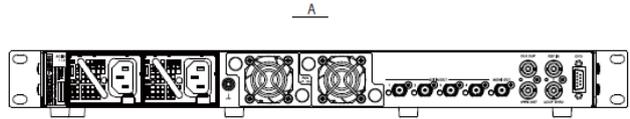
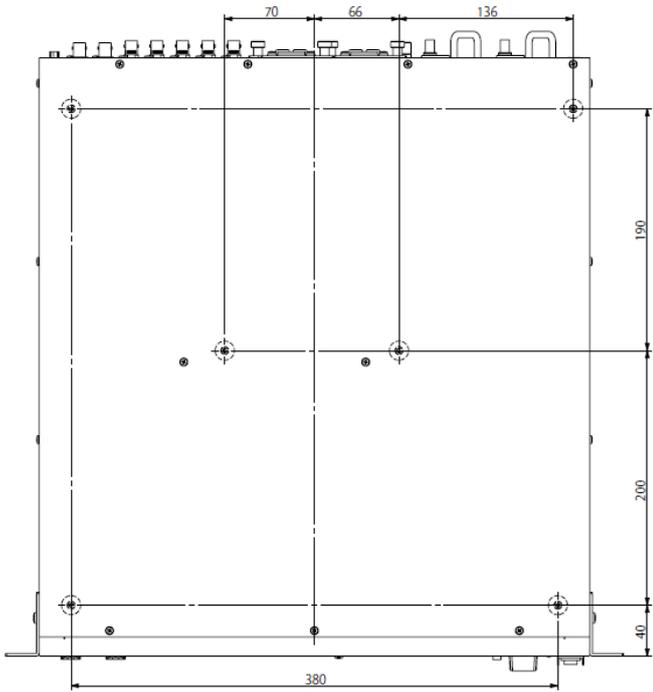


Items	Specifications
OUT1	When an alarm occurs, 1 pin and 6 pin close
OUT2	When an alarm occurs, 2 pin and 7 pin close
OUT3	When an alarm occurs, 3 pin and 8 pin close
OUT4	When an alarm occurs, 4 pin and 9 pin close
Ground with this device	5 Pin

7.1.3 General specifications

Items	Specifications
Power requirements	AC100 - 240V
Operating temperature range	5 - 40°C
Operating humidity range	20 - 80%RH (no condensation)
Power consumption	MAX 200W
External dimensions	1U/Height: 44mm × Width: 430mm × Depth: 470mm (Excluding protrusions)
Weight	About 7.7 kg

Chapter 8 Dimensions



Chapter 9 Revision history

Ver.	Date	Page	Item	Contents
1.00	2023/11/01			First edition

CD-5550**Instruction Manual Ver. 1.00**

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