INT-PS82-H2 Owners Manual

Rev 190224

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Important Safety Instructions

» Please completely read and verify you understand all instructions in this manual before operating this equipment.

» Keep these instructions in a safe, accessible place for future reference.

» Heed all warnings.

» Follow all instructions.

» Do not use this apparatus near water.

» Clean only with a dry cloth.

» Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

» Use only accessories specified or recommended by Intelix.

» Explanation of graphical symbols:

    ◊ Lightning bolt/flash symbol: the lightning bolt/flash and arrowhead within an equilateral triangle symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product enclosure which may be of sufficient magnitude to constitute a risk of shock to a person or persons.

    ◊ Exclamation point symbol: the exclamation point within an equilateral triangle symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.
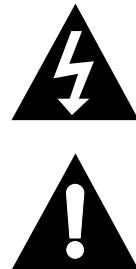
» **WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE AND OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.**

» Use the mains plug to disconnect the apparatus from the mains.

» **THE MAINS PLUG OF THE POWER CORD MUST REMAIN READILY ACCESSIBLE.**

» Do not defeat the safety purpose polarized or grounding-type plug. A polarized plug has two blades with one wider than the 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 your obsolete outlet. **Caution! To reduce the risk of electrical shock, grounding of the center pin of this plug must be maintained.**

» Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and the point where they exit from the apparatus.

» Do not block the air ventilation openings. Only mount the equipment per Intelix's instructions.

» Use only with the cart, stand, table, or rack specified by Intelix or sold with the equipment. When/if a cart is used, use caution when moving the cart/equipment combination to avoid injury from tip-over.

» Unplug this apparatus during lightning storms or when unused for long periods of time.

» **Caution!** Shock Hazard. Do not open the unit.

» Refer 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.

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Product Overview

The INT-PS82-H2 is an 8x2 multi-format seamless presentation matrix switcher featuring four HDMI, one HDBaseT, one USB-C , one DisplayPort and one VGA input as well as an HDBaseT and two HDMI outputs, one of which is a mirrored from the HDBaseT output. The switcher supports automatic switching based on video sensing, and each output can be configured separately for auto or manual switching. The INT-PS82-H2 provides true 4K up/down scaling up to 4K@60Hz / 4:4:4 / 8 bit deep color and both outputs can be scaled to different resolutions independently. The INT-PS82-H2 provides external audio inputs that can be embedded in HDBaseT, HDMI and VGA video inputs respectively. Moreover, it provides an global, auxiliary MIX audio input that can be assigned to any output. The switcher can de-embed digital and/or analog audio from both outputs for audio reinforcement purposes.

The INT-PS82-H2 ships with an 18G HDMI 2.0 HDBaseT receiver capable of extending 4K signals up to 40m / 132' or 1080p up to 70m / 232'. The INT-PS82-H2 can also tunnel RS232 and bi-directional IR signals to and from the HDBAseT receiver. The extension system enables high data rates by utilizing visual lossless compression at a 2:1 data compression rate when the signal surpasses 10Gbps, anything under 10Gbps will never be compressed. Supports static HDR (HDR10) only when data rate exceeds 18Gbps, supports dynamic HDR (HDR10+ / Dolby Vision) when data rate is 10Gbps or less.

The switchers functions can be controlled by built in web server / GUI, IR remote, RS232, IP or by front panel button operation. Two relay switches are built in for projector screen or shades control.

Product Contents

- INT-PS82-H2 8x2 HDMI 2.0 Switcher
- 70m HDBaseT 2.0 Receiver
- Quick Install Guide
- (3) 3-pin Phoenix connectors
- (7) 5-pin Phoenix connectors
- (1) 3.5mm Audio Cable (for IR cascading)
- IR Remote
- (1) IR Emitter
- (1) IR Receivers
- (1) DC24V 6A power supply with US power plug
- (2) Rack mount ears with 6 mounting screws
- (4) Plastic Cushions

Front and Rear Panels

Front Panel - Switcher

1. **POWER LED** - Illuminates solid RED when switcher is in standby mode or illuminates GREEN when device is powered ON.

2. **SOURCE**

    - *1- HDBT* - HDBaseT input selection / Left key for On Screen Display (OSD)
    - *2- HDMI* - HDMI input selection / Right key for On Screen Display (OSD)
    - *3- HDMI* - HDMI input selection / Up key for On Screen Display (OSD)
    - *4- HDMI* - HDMI input selection / Down key for On Screen Display (OSD)
    - *5- HDMI* - HDMI input selection
    - *6- VGA* - VGA input selection
    - *7- DP* - DisplayPort input selection
    - *8- USB C* - USB-C input selection / Enter key for On Screen Display (OSD)
    - *AUTO* - Auto switch selector. Press this to enter / exit auto switch mode. Press and hold for 2 seconds to enable On Screen Display (OSD) menu

3. **OUTPUTS**

    - *1- HDMI* - HDMI output selector
    - *2- HDBT* - HDBaseT output selector

    Note: To make a video route, select the desired *SOURCE* button, then select the desired *OUTPUT* button. The video will switch in 2 to 3 seconds. For faster switch response, select the desired *SOURCE* button, then select the desired *OUTPUT* button and then press the selected SOURCE button again.

4. **RESOLUTION**- Two output video resolution selectors. Press *1.HDMI* or *2.HDBT* button repeatedly to cycle through the available video resolutions. The output will reset once an option is selected

5. **VOLUME**- Variable audio control

    - Press the volume knob to toggle among *MIX, HDMI OUT* and *HDBT OUT* audio control.
    - Rotate the knob to increase decrease volume of the selected audio
    - Press and hold the knob at least 3 seconds to mute selected audio, rotate the knob to unmute

Rear Panel - Switcher

1. **INPUT**

   - *1- HDBT* - RJ45 / HDBaseT Input, external 5 pin phoenix for balanced audio input
   - *2- HDMI* - HDMI input, external 5 pin phoenix for balanced audio input
   - *3- HDMI* - HDMI input, external 5 pin phoenix for balanced audio input
   - *4- HDMI* - HDMI input
   - *5- HDMI* - HDMI input
   - *6- VGA* - VGA with 3.5mm audio input
   - *7- DP* - DisplayPort input
   - *8- USB C* - USB-C input (supports ALT-DP video mode)
   - *IR* - 3.5mm IR input to connect IR receiver for IR pass through
   - *MIX-* 5 pin phoenix for global balanced audio input

2. **OUTPUTS**

   - *1- HDMI* - HDMI output
   - *2- HDMI* - HDMI output (mirrors HDBT output)
   - *2- HDBT* - HDBaseT output
   - *IR IN* - 3.5mm IR input to connect IR receiver for IR pass through
   - *IR OUT* - 3.5mm IR input to connect IR emitter for IR pass through

3. **AUDIO OUTPUT**

   - *1* - 5 pin phoenix for balanced analog audio input and one digital SPDIF audio output for *1-HDMI* output audio de-embedding
   - *2* - 5 pin phoenix for balanced analog audio input and one digital SPDIF audio output for *2-HDBT* output audio de-embedding

4. **CONTROL**

   - *RS232* - 3 pin phoenix connector for RS232 control
   - *RELAY 1-2* - (2) 3 pin phoenix connectors for relay control
   - *IR EYE* - 3.5mm IR input to connect IR receiver for local switcher control
   - *TCP/IP* - RJ45 to control device via network / web GUI
   - *FIRMWARE-* Type A USB port for firmware upgrade

5. **DC24V**- Locking power supply port

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Front Panel - HDBaseT Receiver

1. **MODE SWITCH**

   • *CTRL -* When placed in control mode, HDBaseT receiver will receiver RS232 pass through commands from the switcher

   • *UPDATE B -* Update mode for system program

   • *UPDATE A -* Update mode for Valens program

2. **POWER LED** - Illuminates solid RED when power is applied

Rear Panel - HDBaseT Receiver

1. **DC12V**- Locking power supply port

2. **HDBT IN** - RJ45 HDBaseT connection. Connect Cat6 cable to HDBT output transmitter of the INT-PS82-H2

3. **IR IN / IR OUT**

   • 3.5mm IR input port for connection to IR receiver or IR system

   • 3.5mm IR output port for connection to IR emitter

4. **RS232** - 3 pin Phoenix connector port for connecting / passing RS232 control from INT-PS82-h2

5. **HDMI OUT** - HDMI output port for connection to video display

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Installation Instructions

Mount the Matrix

At least 2 inches of free air space is required on both sides of the INT-PS82-H2 for proper side ventilation. Avoid mounting the INT-PS82-H2 near a power amplifier or any other source of significant heat.

Rack Mounting Instructions

Attach the supplied rack ears to the sides of the INT-PS82-H2 matrix. The matrix requires one rack unit (1 RU) of space. It is recommended that you leave an empty rack space above and below the INT-PS82-H2 for additional cooling.

Connect Sources

Video Inputs

Connect source devices to the HDBaseT, HDMI, Display Port, USB-C or VGA inputs. When using HDMI cables for source inputs, use a High Speed HDMI cable that is less than or equal to 1.5 meters in length for 4k60 signals and 5 meters for 1080p signals. The HDBaseT input is compatible with all Intelix HDBaseT transmitters.

When connecting a source device to the USB-C input using a USB-C cable, be sure the USB-C cable is capable of supporting video and is no longer than 2 meters (6.6') in total length. The INT-PS82-H2 USB-C input supports ALT-DP mode for video, to ensure a laptop is compatible with the INT-PS82-H2 check the laptops capability of supporting this mode.

 Note that not all laptops with USB-C port options will support video or more specifically AT-DP video mode.

HDBaseT Input

Connect a solid core CAT6 F/UTP rated category cable to the INT-PS82-H2 HDBaseT input and a compatible Intelix HDBaseT transmitter. The INT-PS82-H2 is compatible will all Intelix branded HDBaseT transmitters. Use TIA/EIA-568B wiring for Category 6 connection between the transmitter and the INT-PS82-H2 receiver input.

Connect a source device to the HDMI input of an Intelix compatible HDBaseT transmitter using a High Speed HDMI cable that is less than or equal to 1.5 meters in length for 4k60 signals and 5 meters for 1080p signals.

Note: The HDBaseT receiver input supports up to 40m/132' for 4K@60Hz / 4:2:0 / 8 bit color signals (up to 10Gbps) and 70m/232' for 1080p signals using CAT6 F/UTP cable.

Connect Displays

HDMI Outputs

Connect display devices to the HDMI 1 and 2 output using a High Speed HDMI cable that is less than or equal to 1.5 meters in length for 4k60 signals and 5 meters for 1080p signals.

HDBaseT Output

Connect a solid core CAT6 F/UTP rated category cable to the INT-PS82-H2 HDBaseT output and the supplied HDBaseT receiver. Use TIA/EIA-568B wiring for Category 6 connection between the INT-PS82-H2 and the receiver

Connect a display device to the HDMI output of the HDBaseT receiver using a High Speed HDMI cable that is less than or equal to 1.5 meters in length for 4k60 signals and 5 meters for 1080p signals.

Note: The HDBaseT transmitter supports up to 40m/132' for 4K@60Hz / 4:4:4 / 8 bit color signals (up to 18Gbps) and 70m/232' for 1080p signals using CAT.6 F/UTP cable

Connect Audio (Optional)

The INT-PS82-H2 supports stereo balanced analog audio inputs and outputs as well as digital audio outputs via Toslink.

Connect an audio amplifier to the audio output of the DL-AS61U-H2, the switcher features a left and right balanced audio output and a digital TOSLINK output.

Connecting Control

RS232 Port Wiring

Connect a control system to the INT-PS82-H2 via RS232 for switcher control.

TX G RX

INT-PS82-H2 RS232 Port

RS232 Wiring
Connect the system controller RX signal to TX on the INT-PS82-H2 , then connect the controllers TX signal to RX on the INT-PS82-H2.

RS232 Settings:
- 9600 baud
- 8 Data Bits
- 1 Stop Bit
- Parity = none

Conncected RS232 Device pins

RX G TX
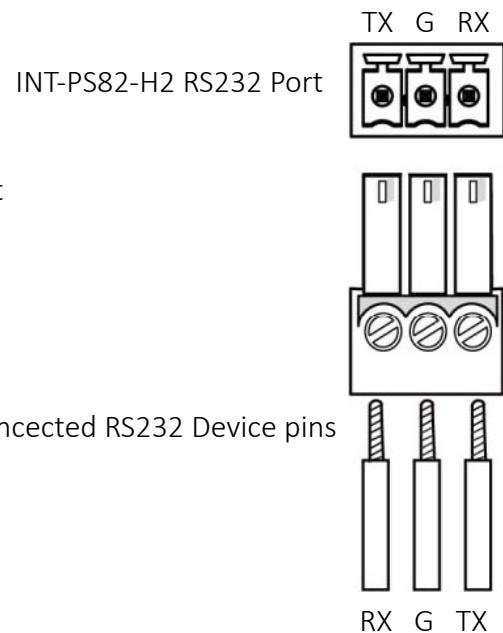
Relay Port Wiring

For the normally open contacts (NO), connect a circuit between the NO and COM terminals of the 3-pin phoenix connector

For the normally closed contacts (NC), connect a circuit between the NC and COM terminals of the 3-pin phoenix connector

RELAY 1 / 2		
I/O STATE	**RELAY STATE**	
	NO	**NC**
ON	CLOSED	OPEN
OFF	OPEN	CLOSED

IR Receiver Connection IR Remote Control

If IR extension is required, connect the suppled IR receiver to the IR EXT port, ensuring the IR receiver eye is placed in line of sight when using the suppled remot

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Connect Ethernet (Web Browser) Control (Optional)

The INT-PS82-H2 can be controlled via Ethernet through a web browser interface.

The TCP/IP port requires a standard straight-through Category 5 or greater cable with the TIA/EIA-568B crimp pattern for optimal operation.

TIA/EIA-568B

Pin 1	Orange/White
Pin 2	Orange
Pin 3	Green/White
Pin 4	Blue
Pin 5	Blue/White
Pin 6	Green
Pin 7	Brown/White
Pin 8	Brown
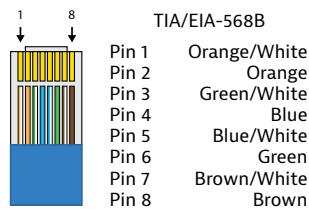
The default settings for the TCP/IP port are:
IP address: 192.168.0.178

Connect the Ethernet cable between to the switcher and a router with a straight-through cable or between the matrix and a computer with a crossover cable.

Router Connection

1. Configure the router to use the same IP range as the matrix, such as 192.168.0.1.
2. Connect the computer to the router.
3. Connect the INT-PS82-H2 to the router

Crossover Cable Connection

1. Configure the computer to use the same network prefix as the IP address assigned to the matrix. *For example, the IP address of the matrix is 192.168.0.178. Set the computer to use a static IP address within the same network range, such as 192.168.0.42.*
2. Connect the network crossover cable to the computer and to the TCP/IP port on the INT-PS82-H2

Crossover Cable Pinout

TIA/EIA-568A

Pin 1	Green/White
Pin 2	Green
Pin 3	Orange/White
Pin 4	Blue
Pin 5	Blue/White
Pin 6	Orange
Pin 7	Brown/White
Pin 8	Brown

TIA/EIA-568B

Pin 1	Orange/White
Pin 2	Orange
Pin 3	Green/White
Pin 4	Blue
Pin 5	Blue/White
Pin 6	Green
Pin 7	Brown/White
Pin 8	Brown
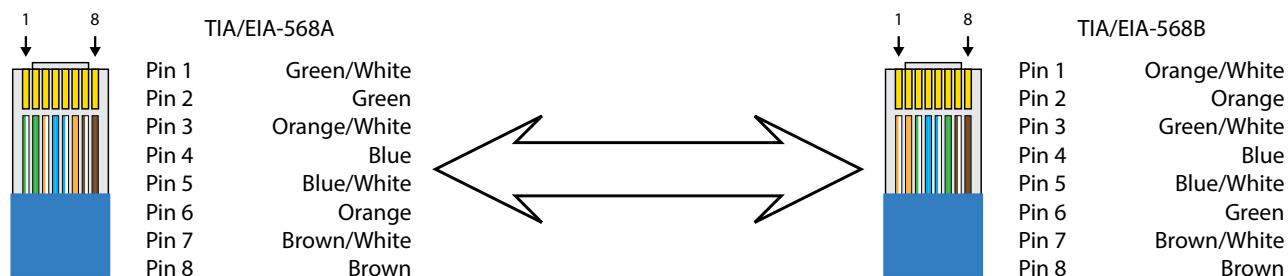
Web Browser Control

The INT-PS82-H2 includes a web portal to allow control of the matrix via a standard web browser. The IP address is the same address that is used for TCP/IP control.

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Applying Power

Connect the included power supply to the INT-PS82-H2 power port, connect the IEC power cord connected to power supply to a power source.

HDBaseT Cabling Requirements

HDBaseT Cabling

To ensure proper performance of the INT-PS82-H2, it is recommended that you use solid core, shielded Category 6 F/UTP cabling at a minimum. Category 5e F/UTP may perform well but may not support power over HDBaseT reliably over longer distances.

When using shielded category cabling *ALWAYS*...

....use shielded connectors
....properly ground the category cable

For optimized HDBaseT performance use the following Liberty Wire and Cable branded cabling;

Category 6 plenum; **24-4P-P-L6SH**
Category 6A plenum; **24-4P-P-L6ASH**

Category 6 NON-plenum; **24-4P-L6SH**
Category 6A NON-plenum; **24-4P-L6ASH**

TIA/EIA-568B	
Pin 1	Orange/White
Pin 2	Orange
Pin 3	Green/White
Pin 4	Blue
Pin 5	Blue/White
Pin 6	Green
Pin 7	Brown/White
Pin 8	Brown
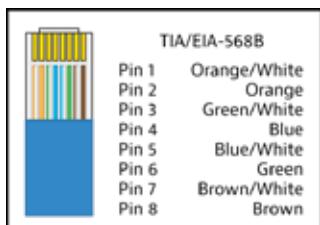
Twisted Pair Wiring
Use TIA/EIA-568B wiring for Category 6 connection between send and receive units.

A/V Diagram
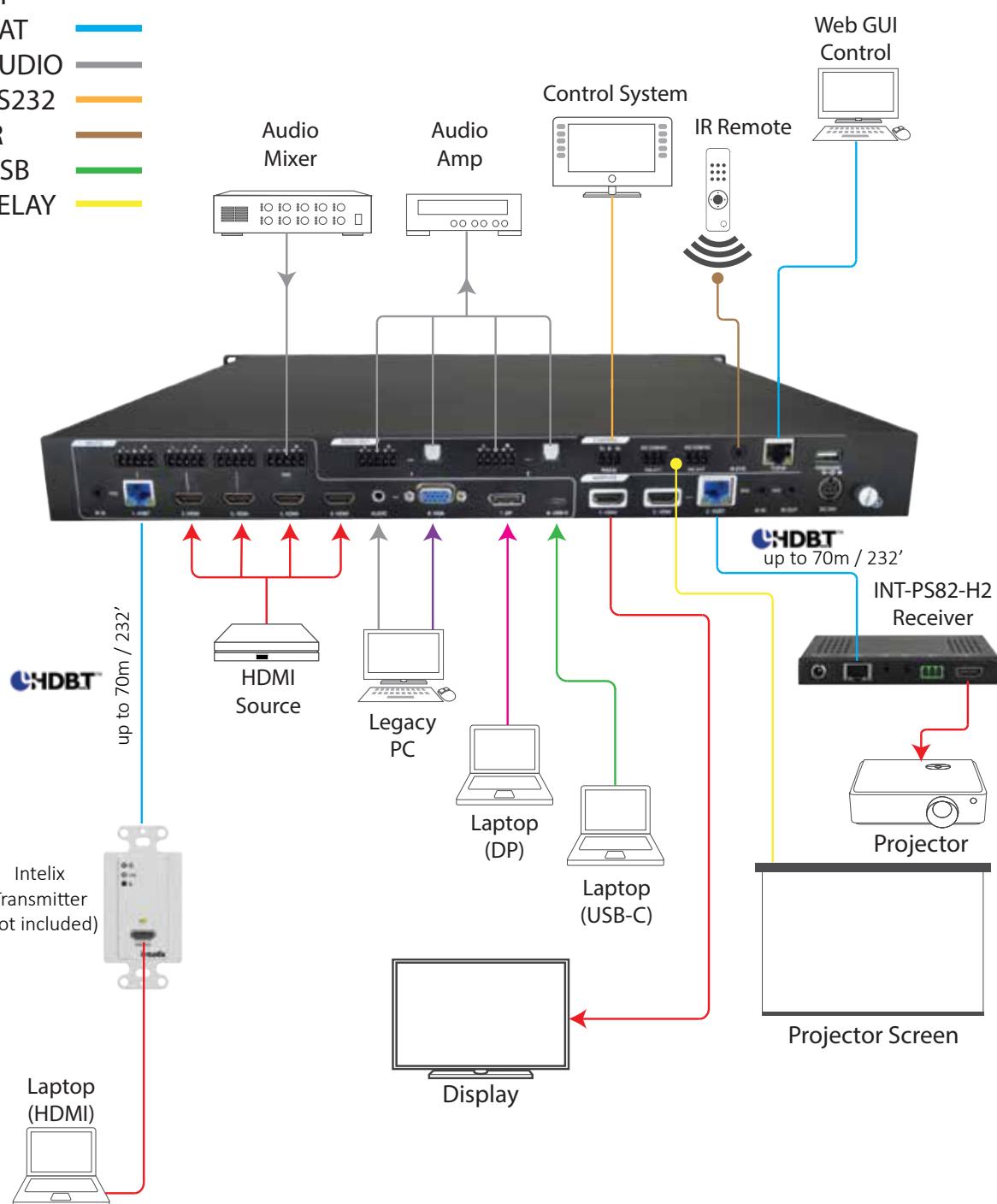
IR Remote Control
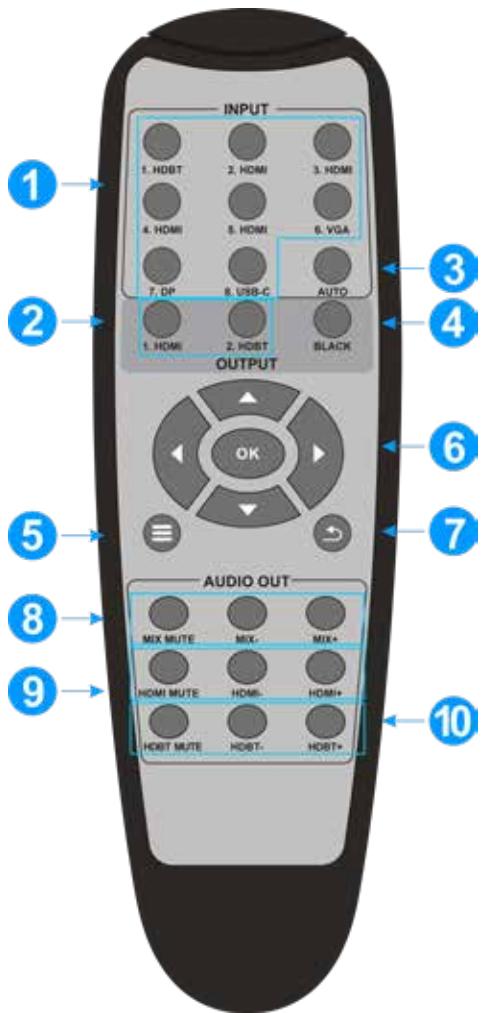
1. **Video Source Selection**

2. **Output Selection**

3. **Auto Switch Mode**

   • *Press AUTO to enable automatic switching mode, and then select output channel*

4. **Video Blackout**

   • *Press BLACK, and then select output channel to make it output black screen*

5. **On Screen Display (OSD) Menu**

6. **Navigation buttons: OK, UP, DWON, LEFT and RIGHT for OSD menu.**

7. **Return to the previous OSD menu.**

8. **MIX input audio control: Mute, Volume Down and Volume Up.**

9. **HDMI output audio control: Mute, Volume Down and Volume Up.**

10. **HDBT output audio control: Mute, Volume Down and Volume Up.**

On Screen Display (OSD) Menu

Accessing OSD Menu

The OSD menu will allow you to set audio, video and other system settings by either using the front panel buttons on the switcher or by the supplied IR remote. There are two ways to access the OSD controls on the INT-PS82-H2.

1) Press and hold the MENU/2S (AUTO) button on the front panel of the INT-PS82-H2 for 2 seconds

2) Press the MENU button on the IR remote

To control direction and selection of menu options, use either the front panel buttons or IR remote to confirm selections.

Menu Options

There are 5 menu options in the OSD menu;

PICTURE: Picture mode, color temperature and aspect ratio settings for outputs
SOUND: Volume and mute settings control for the outputs
OPTION: Output resolution settings, allows HDCP to be turned either ON or OFF for output support
SYSTEM: Allows for factory reset to be initiated
INFO: Displays current output resolution, sofware (SW) version and current IP address settings.

Navigate to a desired menu / submenu option to change or adjust settings using the front panel buttons or using the IR remote. Press *ENTER* on the front panel buttons or the OK button on the IR remote for settings to take place.

NOTE: When turning OFF HDCP support in the OPTION menu, encrypted HDCP content will not pass.

Web GUI Control / System Settings

Switcher Control

Connecting to Web GUI Control

Network a PC computer and the INT-PS82-H2 then open a web browser and type in IP address of the INT-PS82-H2. The default IP address is 192.168.0.178. Be sure the computer you are using to connect to the INT-PS82-H2 is in the same IP range to access the web GUI / server.

The login screen will appear. The default user name and password is *admin*

VIDEO SWITCHING

The *Video* menu allows you to route A/V signals to the HDMI and HDBaseT output of the switcher, enable / disable auto switching mode for each output and save and recall video switching presets. By default the INT-PS82-H2 is set to auto switching mode.

To switch the video route for either HDMI and HDBT outputs, check the 1-8 buttons corresponding to the desired input, only one input can be selected at one time for each output.

To enable / disable auto switching mode, check the *AUTO* button.

To save or recall video presets, click the desired preset button and click *SAVE* or *RECALL*.
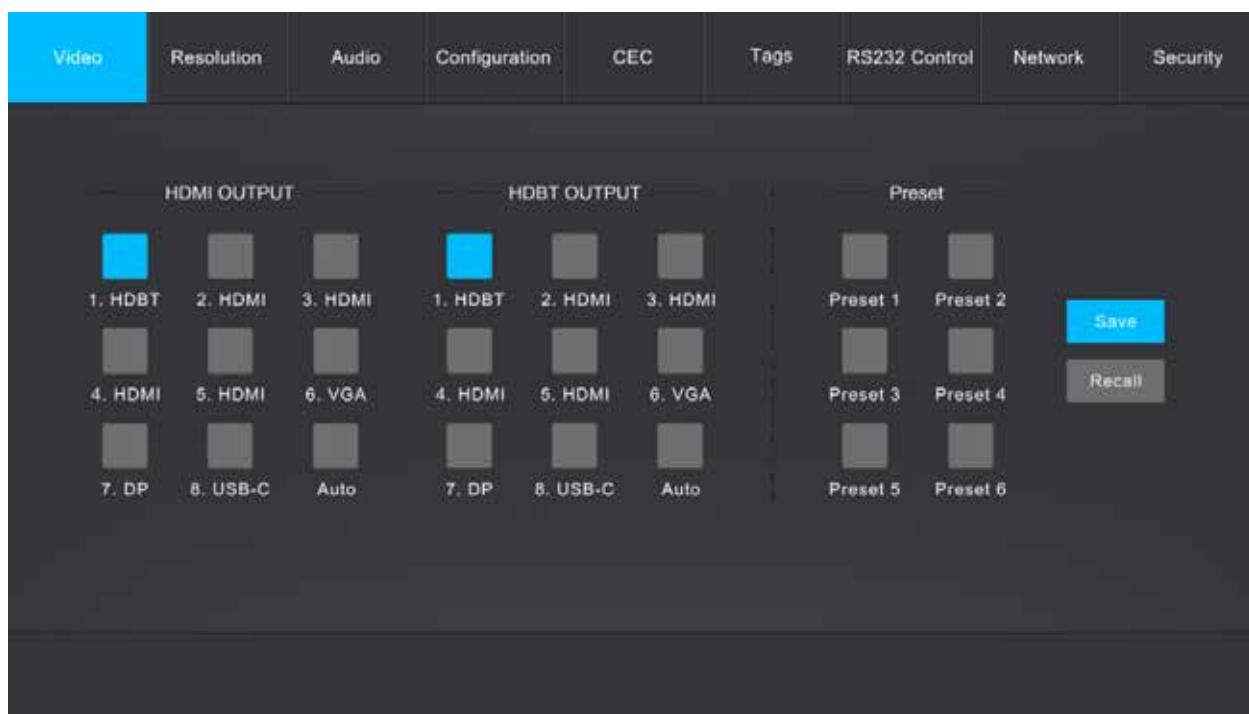
RESOLUTION

The *Resolution* menu allows you to set the scaled output of each output channel.

To adjust the scaled output of each output, select the desired resolution under *HDMI OUTPUT* or *HDBT OUTPUT* then click *CONFIRM*. When using the *AUTO* selection, the scaled output will match the connected displays native resolution.
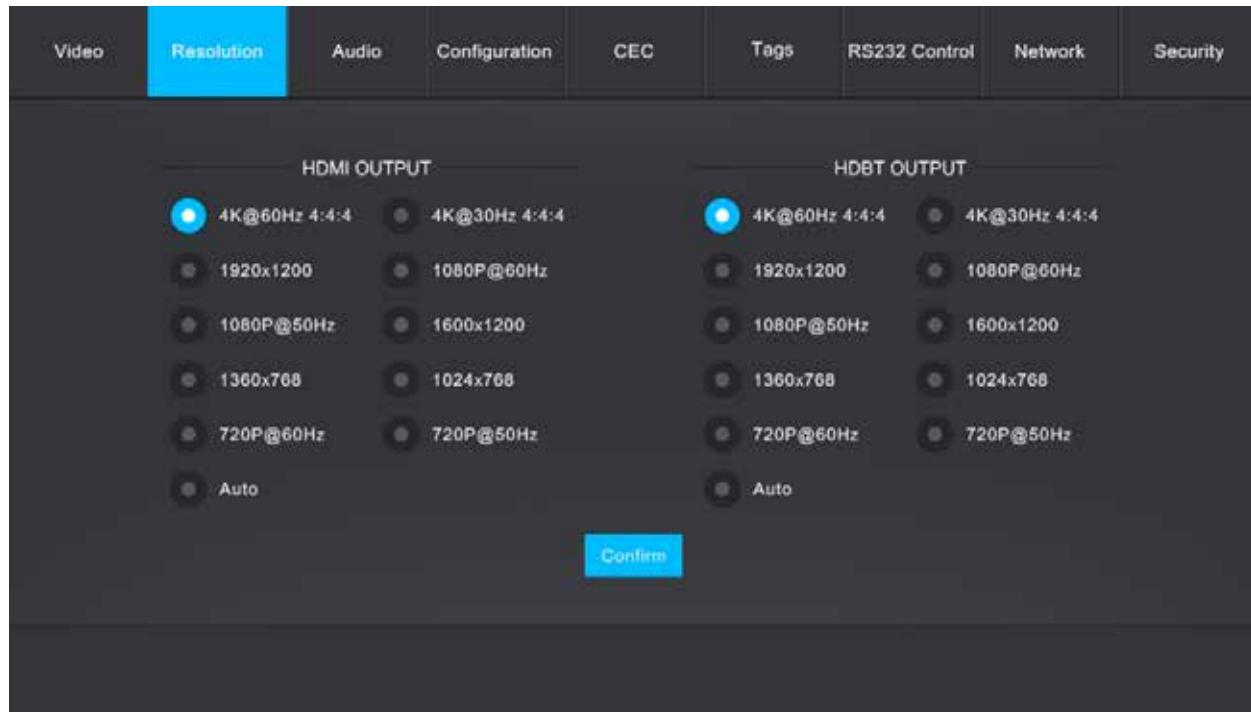
AUDIO

The *AUDIO* menu allows you adjust input and output audio options.

1. HDBT Embedded - Enabling this option embeds the 5 pin stereo balanced audio input as the embedded audio input for the HDBT input

2. HDMI Embedded - Enabling this option embeds the 5 pin stereo balanced audio input as the embedded audio input for the HDMI input (input #2)

3. HDMI Embedded - Enabling this option embeds the 5 pin stereo balanced audio input as the embedded audio input for the HDMI input (input #3)

MIX: *Global MIX input volume / mute control*

HDMI Output: Select MIX input audio to route to HDMI output audio, and then control the global output audio by volume bar / buttons.

HDBT Output: Select MIX input audio to route to HDMI output audio, and then control the global output audio by volume bar / buttons.

POC CONFIGURATION

The *POC CONFIGURATION* menu allows you to control the HDBaseT output and input PoC power options.

Navigate to the *CONFIGURATION* menu, then click *PoC*. To turn the PoC power option ON or OFF for either HDBT input or output, check the ON or OFF button and then click *CONFIRM*.
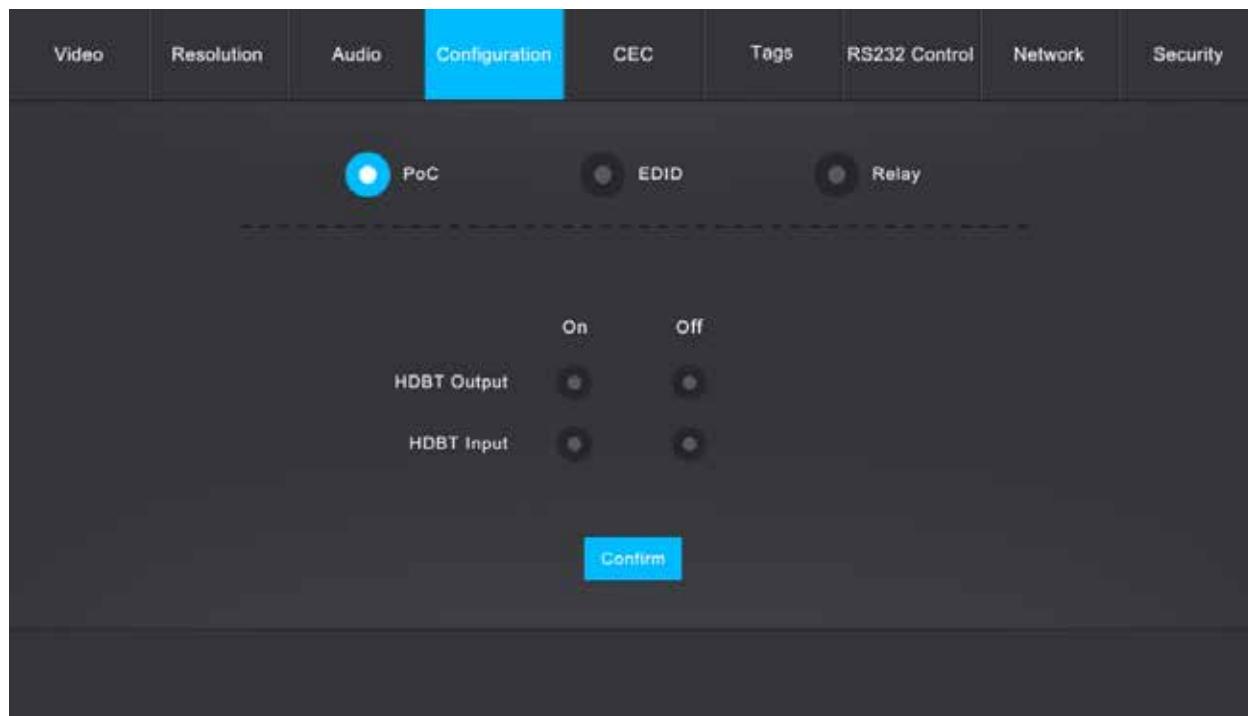
*EDID MANAGEMENT*

EDID can be set for each input using the *CONFIGURATION* menu.

Navigate to the *CONFIGURATION* menu, then click EDID. To adjust an inputs EDID option, click on the desired input channel then click on the desired resolution, then click *CONFIRM*.

When uploading a *USER DEFINED* EDID option, click the open field to locate the .bin EDID file on your local computer, then click *APPLY*.
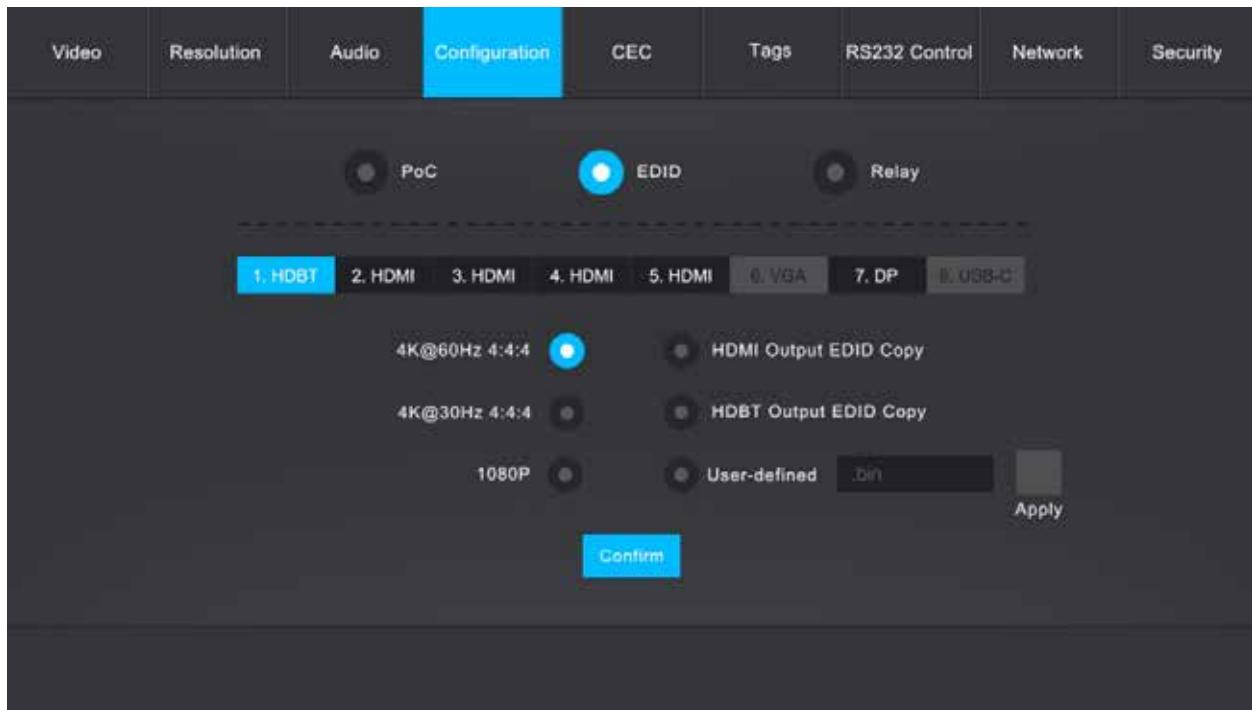
RELAY CONFIGURATION

Latching or momentary relay modes can be programmed using the *CONFIGURATION > RELAY* menu.

To adjust RELAY 1 or RELAY 2, navigate to the *CONFIGURATION* menu, them click on the *RELAY* option. Choose either *MOMENTARY* or *LATCHING* more for each relay. When choosing the *MOMENTARY* option, define how long the relay will stay open/closed.
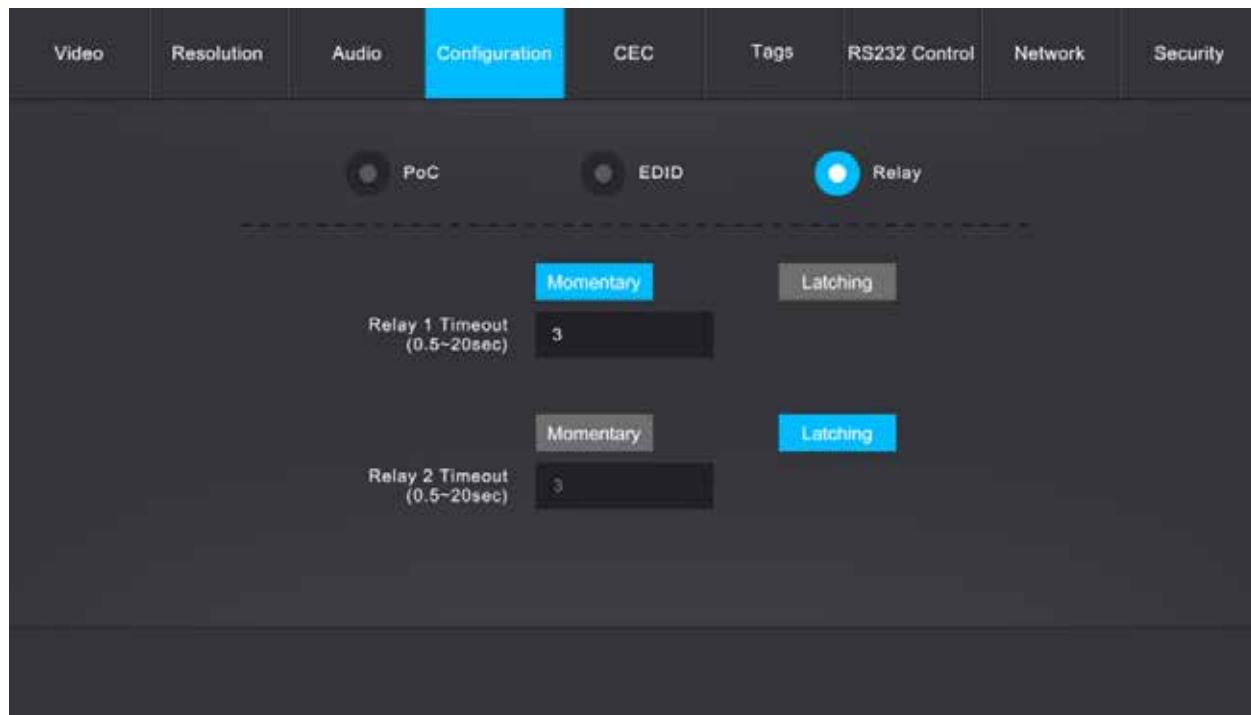
CEC - SOURCE CONTROL

The *CEC* menu allows you to control a CEC compatible source via HDMI or HDBaseT.

Navigate to the *CEC* menu, then choose the *SOURCE* submenu. Choose a source, then choose a function to control the selected source.

NOTE: The CEC compatible source must be CEC enabled in the sources systems settings. Not all functions may be supported by source manufacturer.
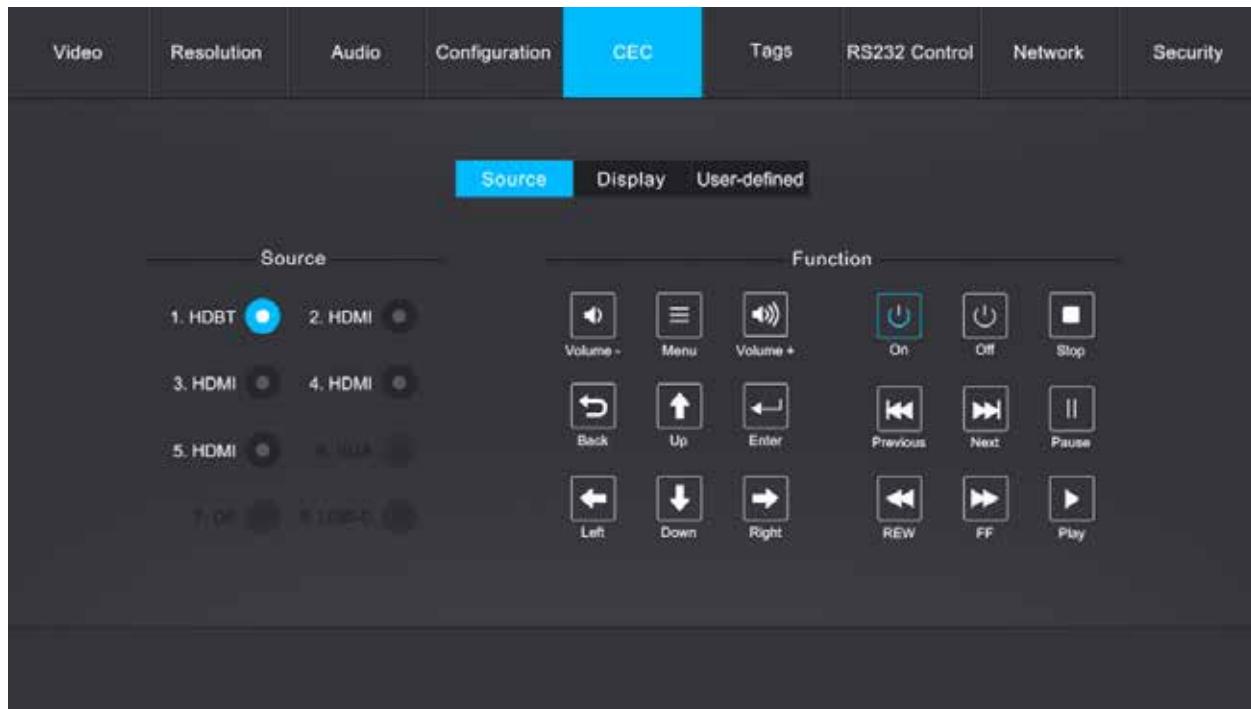
CEC - DISPLAY CONTROL

The *CEC* menu allows you to control a CEC compatible display via HDMI or HDBaseT.

Navigate to the *CEC* menu, then choose the *DISPLAY* submenu. Choose a display option (HDBT or HDMI), then choose a function to control the selected display.

NOTE: The CEC compatible display must be CEC enabled in the displays systems settings. Not all functions may be supported by display manufacturer.

CEC - USER DEFINED

The *CEC* menu allows you to control a CEC compatible source or display via HDMI or HDBaseT using known CEC commands.

Navigate to the *CEC* menu, then choose the *USER DEFINED* submenu. Choose a source or display option, then user the *TRIGGER 1* and *TRIGGER 2* fields to enter the known CEC commands, click the *SEND* button to initiate the commands.

NOTE: The CEC compatible source or display must be CEC enabled in the source or displays systems setting. Not all functions may be supported by source and display manufacturer. To find the CEC commands for a source or display contact the source or display manufacturer.
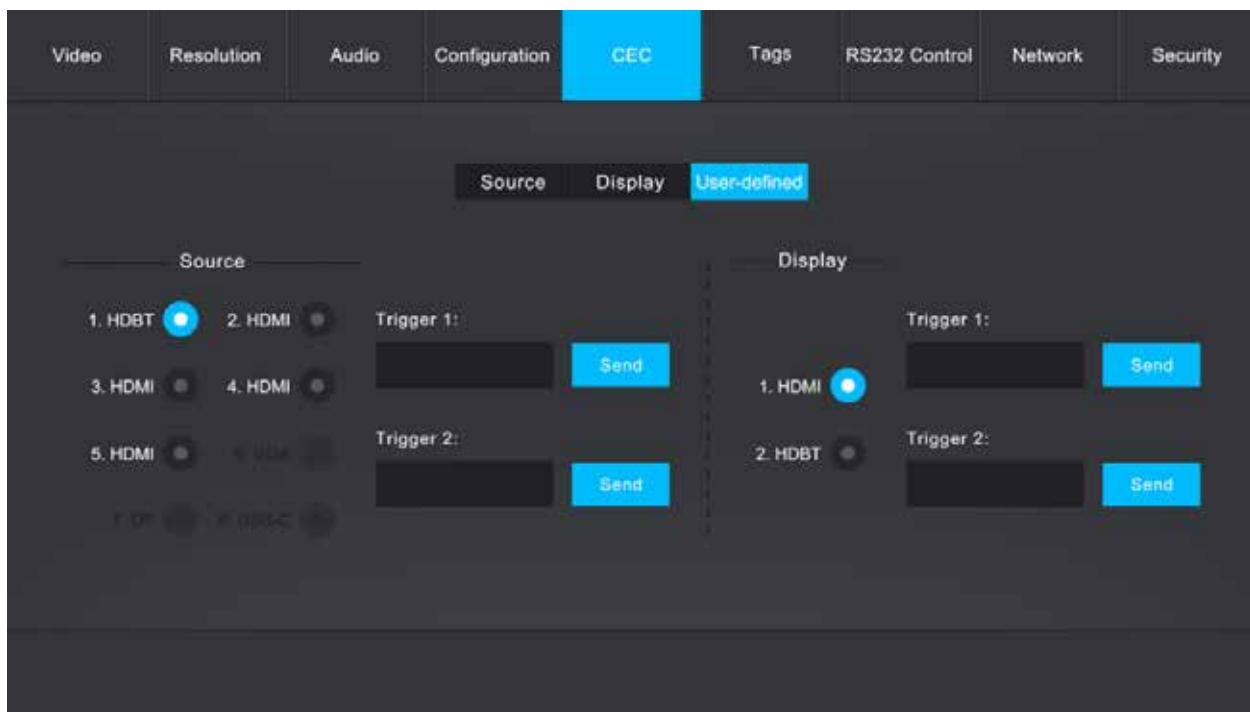
RS232 Control - PORT MODE

The *RS232 > Port Mode* menu allows you to establish how RS232 control is configured.

Navigate to the *RS232* menu, then choose the *PORT MODE* submenu.
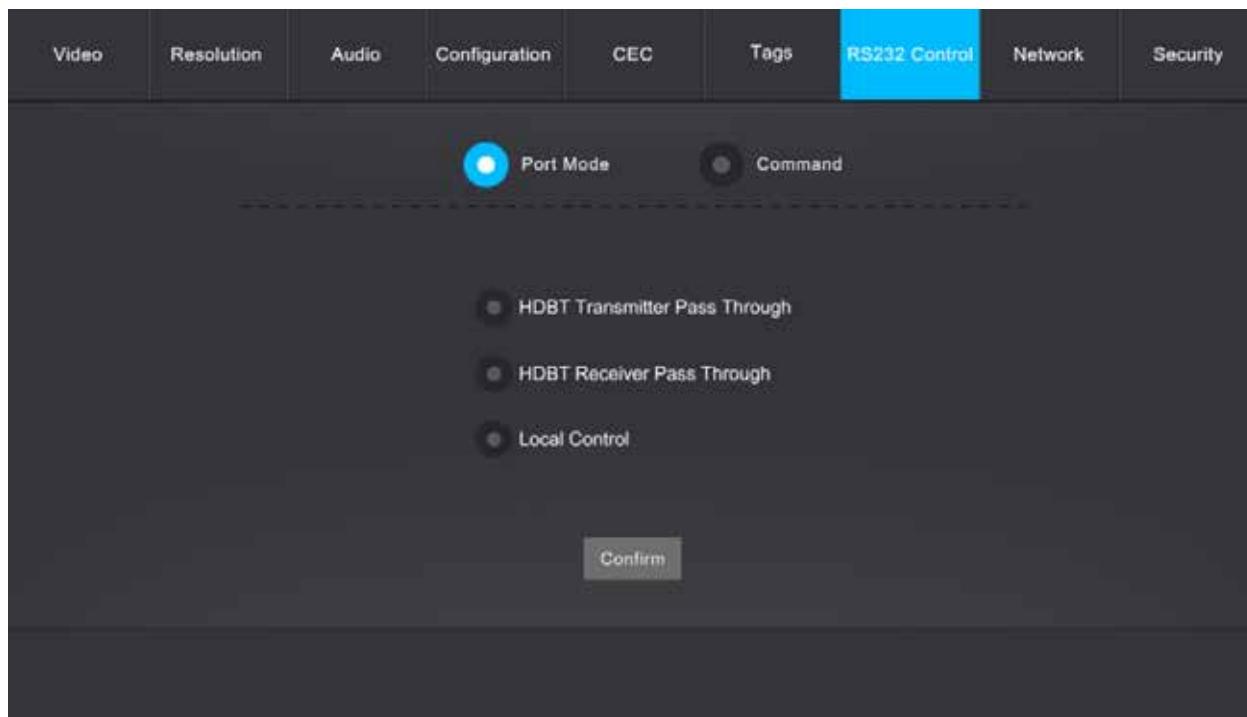
HDBT Transmitter Pass Through: Establishes RS232 pass-through communication between the INT-PS82-H2 and the HDBaseT transmitter. In this mode the RS232 port of the INT-PS82-H2 will be used to transfer commands to control third-party devices connected to the HDBaseT transmitters RS232 port.

HDBT Receiver Pass Through: Establishes RS232 pass-through communication between the INT-PS82-H2 and the HDBaseT receiver. In this mode the RS232 port of the INT-PS82-H2 will be used to transfer commands to control third-party devices connected to the HDBaseT receivers RS232 port.

Local Control: In this mode the RS232 port of the switcher will be used to connect a control device (3rd party control system) to control the INT-PS82-H2.

RS232 CONTROL - COMMAND

The *RS232 > Command* menu allows you to issue RS232 commands to 3rd party devices

Navigate to the *RS232* menu, then choose the *COMMAND* submenu.
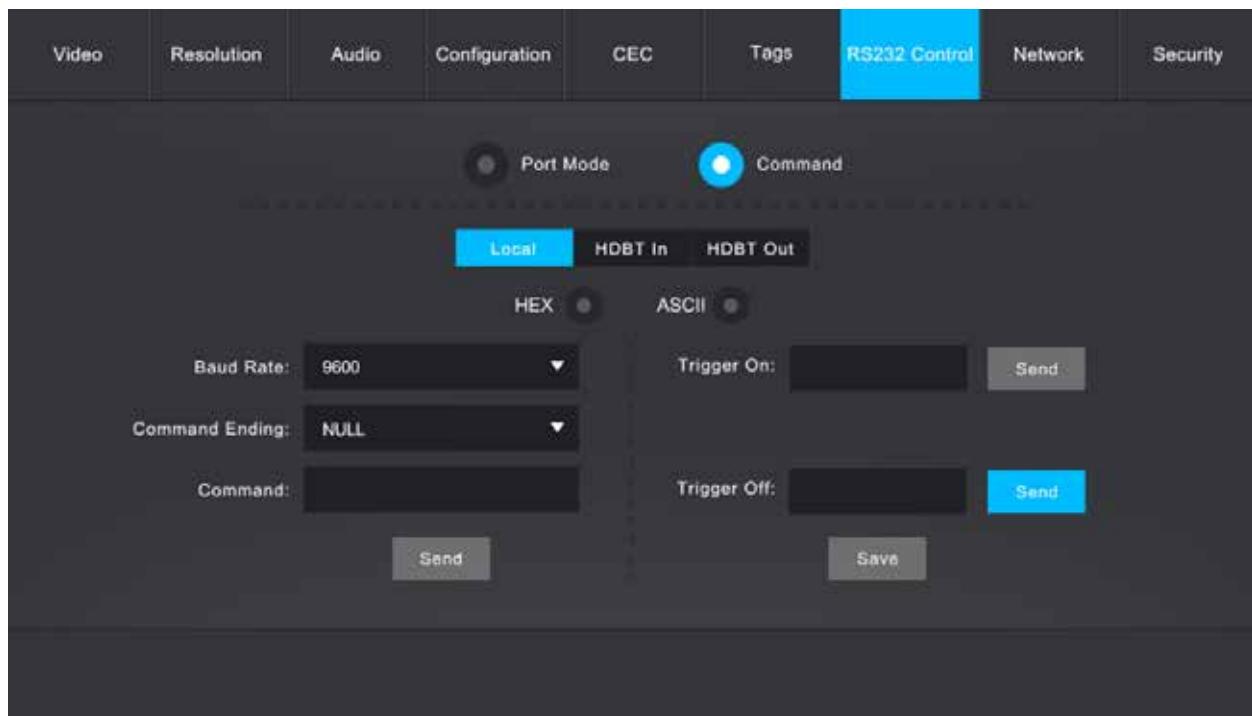
Select **Local, HDBT In** or **HDBT Out** control mode.

Local: Sends RS232 commands to control a local 3rd party device connected to the RS232 port of the INT-PS82-H2.

HDBT In: Sends RS232 commands to control the 3rd party device connected to the RS232 port of the INT-PS82-H2.of the HDBaseT transmitter.

HDBT Out: Sends RS232 commands to control the 3rd party device connected to the RS232 port of the INT-PS82-H2.of the HDBaseT receiver.

> **Select HEX or ASCII format.**
> **Select Baud Rate:** Supports 2400, 4800, 9600, 19200, 38400, 57600 or 115200.
> **Select Command Ending:** NULL, CR, LF or CR+LF can be chosen.
> **Command:** Type command in this field to control the third-party device.
> **Trigger On:** Type Power On command in this field to turn ON the third-party device.
> **Trigger Off:** Type Power Off command in this field to turn OFF the third-party device.

TAGS

The *Tags* menu allows you to set user defined names for inputs and presets that will be displayed on the VIDEO tab for easy system control

Navigate to the *Tags* menu, enter in the desired names for the *INPUTS* and *PRESET* sections, then click *CONFIRM*.
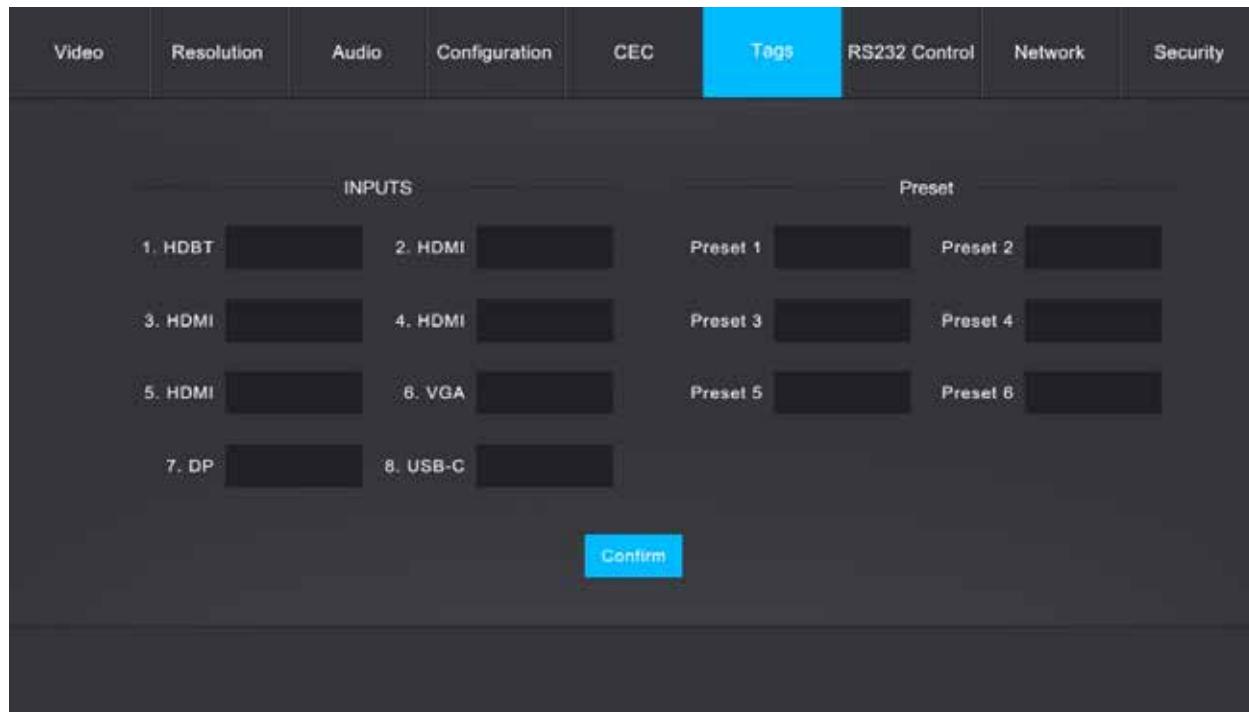
NETWORK

The *Network* menu allows you to set the network settings for the device.

Navigate to the *Network* menu, select either *DHCP* or *STATIC IP* as the desired IP mode. If choosing *DHCP*, make sure the INT-PS82-H2 is connected to a router / network switch with DHCP server support. When choosing the *STATIC IP* option, manually enter in the desired *IP ADDRESS, SUBNET MASK* and *GATEWAY* information, then click *CONFIRM* for changes to take place. Depending on the newly given IP address range you may need to adjust your computers IP address settings to log back into the web GUI server for the INT-PS82-H2
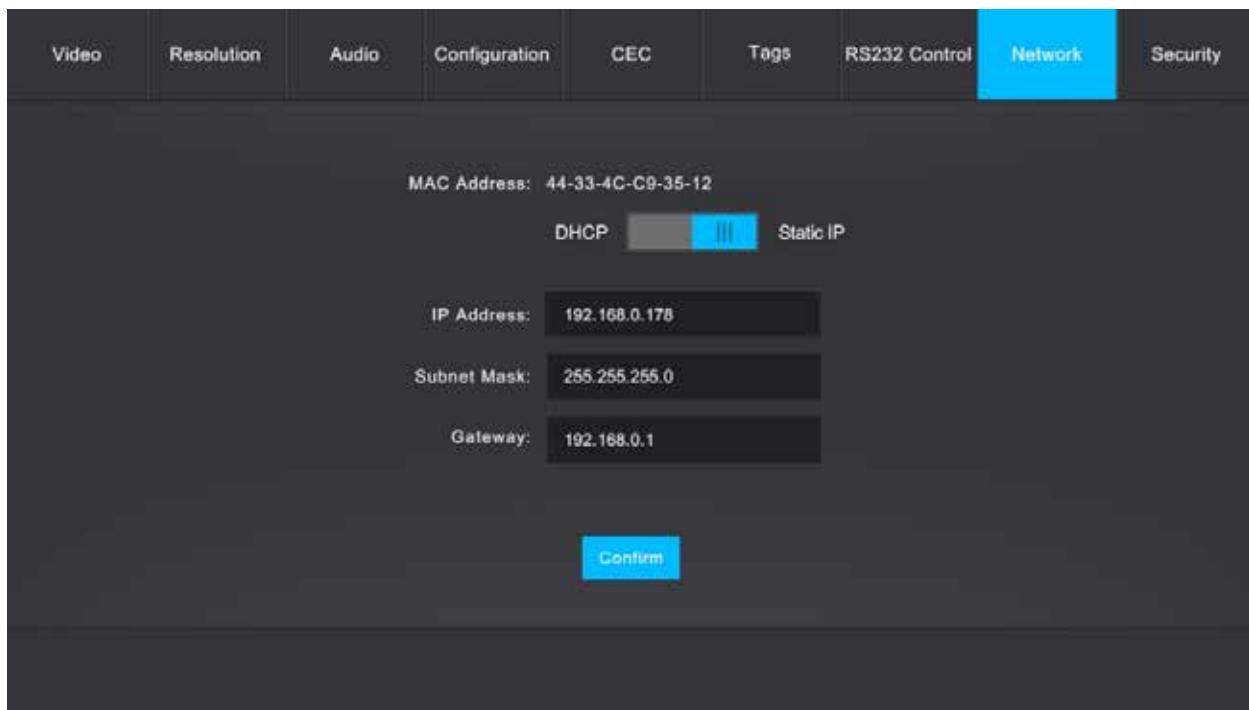
SECURITY

The *Security* menu allows you to set the admin password to a user defined password as well as lock or unlock the front panel buttons of the INT-PS82-H2

Navigate to the *Security* menu, enter in a user defined password in the password field, then click *CONFIRM*. To lock or unlock the front panel buttons simple check the *ON* or *OFF* option.
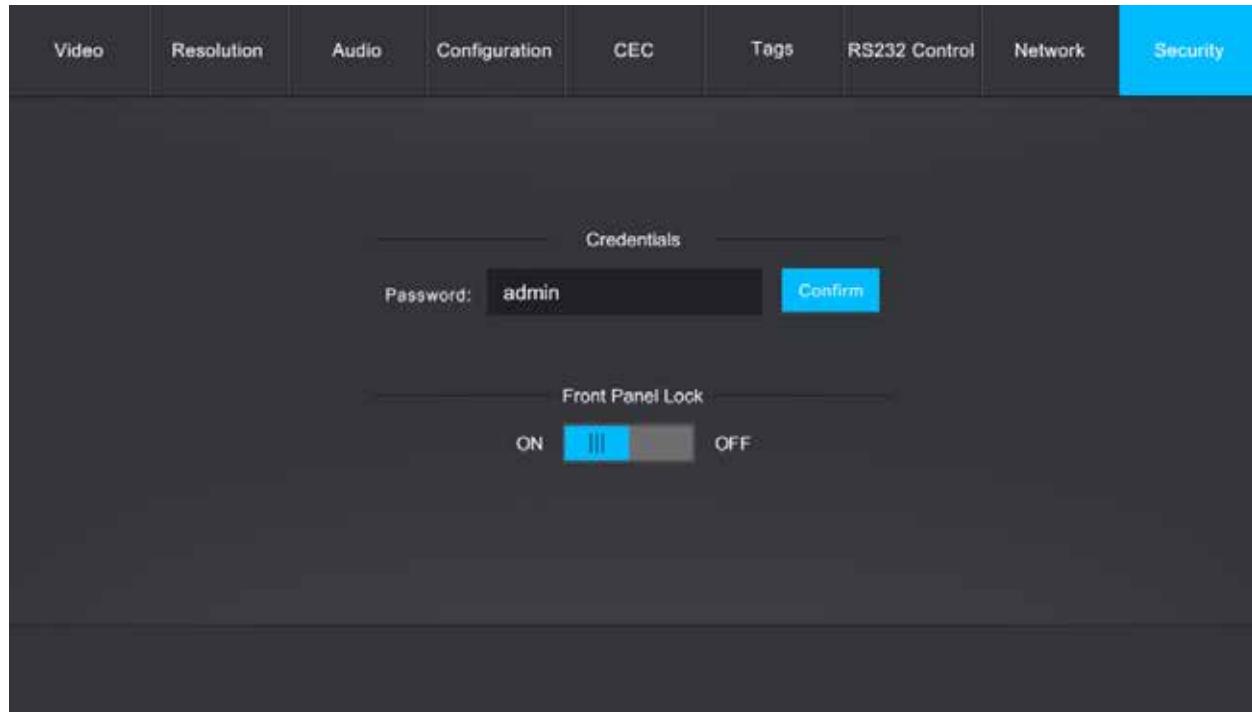
RS232 and TCP/IP Control

RS232 Settings: 9600 baud, 8 Data bits, 1 Stop bit, Parity = None
TCP/IP Settings: User defined IP address (default IP address:192.168.0.178), port 4001

There are no spaces between any of the characters in the command string. The commands are case sensitive.

Note: In order to use the switching commands below, the switcher must be in manual switching mode only. System will not respond to switching commands in auto switching mode.

A/V Routing

Description	Command	Examples

Switch input (1-8) to ALL outputs	`{I}All.`
	
	`{I} = 1-8`
		`Command:`
		`8All.`
		
		`Response:`
		`08 to All.`

Switch input (1-8) to output (1-2)
 	
Note: output 1 = HDMI, 2 = HDBT
	`{I}B{O}.`
	
	`{I} = 1-8`
	`{O} = 1-2`
		`Command:`
		`2B1.`
		
		`Response:`
		`AV:02->01`

Turn OFF all outputs	`All$.`	`Command:`
		`All$.`
		
		`Response:`
		`All Closed.`

Turn ON all outputs	`All@.`	`Command:`
		`All@.`
		
		`Response:`
		`All Open.`

Turn OFF output (1-2)	`{O}$.`
	
	`{O} = 1-2`
		`Command:`
		`1$.`
		
		`Response:`
		`1 Closed.`

Turn ON output (1-2)	`{O}@.`
	
	`{O} = 1-2`
		`Command:`
		`1@.`
		
		`Response:`
		`1 Open.`

Query routing status of outputs (1-2)	`Status.`	`Command:`
		`Status.`
		
		`Response:`
		`AV: 7->1 8->2`

Query connection status of all inputs
 	
Y = source connected
N = no source connected
	`%9971.`	`Response:`
		`IN      01 02 03 04`
		`CONNECT Y  Y  N  N`
		`IN      05 06 07 08`
		`CONNECT Y  Y  N  N`

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Preset Settings

Description	Command	Examples

Save current AV routing status to presets 0-9	`Save{P}.`
	
	`{P} = 0-9`
		`Command:`
		`Save1.`
		
		`Response:`
		`Save to F1`

Recall AV routing presets (0-9)	`Recall{P}.`
	
	`{P} = 0-9`
		`Command:`
		`Recall1.`
		
		`Response:`
		`Recall From F1`
		`AV:07->01`
		`AV:08->02`
		`Out 1 2`
		`In  7 8`

Clear AV routing presets (0-9)	`Clear{P}.`
	
	`{P} = 0-9`
		`Command:`
		`Clear1.`
		
		`Response:`
		`Clear F1`

Audio Control

Description	Command	Examples

Select external balanced audio input for inputs 1-3	`Embedded:{I}.`
	
	`{I} = 1-3`
		`Command:`
		`Embedded:1.`
		
		`Response:`
		`HDBT1 Embedded`

Select internal source audio input for inputs 1-3	`UnEmbedded:{I}.`
	
	`{I} = 1-3`
		`Command:`
		`UnEmbedded:1.`
		
		`Response:`
		`HDBT1 UnEmbedded`

Output audio is mixed with the global MIX audio input	`MIXOUT:{O}.`
	
	`{I} = 1-2`
		`Command:`
		`MIXOUT:1.`
		
		`Response:`
		`HDMI1 OUT MIX`

Output audio is unmixed with the global MIX audio input	`UnMIXOUT:{O}.`
	
	`{I} = 1-2`
		`Command:`
		`UnMIXOUT:1.`
		
		`Response:`
		`HDMI1 OUT UnMIX`

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Audio Control - Continued

Description	Command	Examples
Set HDMI 1 output volume at a specific value	SetHDMIVol:*{vl}*. *{vl} = 00-60*	*Command:* *SetHDMIVol:30.* *Response:* *Volume of HDMI: 30*
Increase HDMI 1 output volume by 1 value	HDMIVolume+.	*Command:* *HDMIVolume+.* *Response:* *Volume of HDMI: 31*
Decrease HDMI 1 output volume by 1 value	HDMIVolume-.	*Command:* *HDMIVolume+.* *Response:* *Volume of HDMI: 29*
Mute HDMI 1 output audio	HDMIMute.	*Command:* *HDMIMute.* *Response:* *HDMI Mute*
Unmute HDMI 1 output audio	HDMIUnmute.	*Command:* *HDMIUnmute.* *Response:* *HDMI Unmute*

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Audio Control - Continued

Description	Command	Examples

Set HDBT 2 / HDMI 2 output volume at a specific value	`SetHDBTVol:{vl}.`
	
	`{vl} = 00-60`
		Command:
		SetHDBTVol:30.
		
		Response:
		Volume of HDBT: 30

Increase HDBT 2 / HDMI 2 output volume by 1 value	`HDBTVolume+.`	*Command:* *HDBTVolume+.* *Response:* *Volume of HDBT: 31*
Decrease HDBT 2 / HDMI 2 output volume by 1 value	`HDBTVolume-.`	*Command:* *HDBTVolume+.* *Response:* *Volume of HDBT: 29*
Mute HDBT 2 / HDMI 2 output audio	`HDBTMute.`	*Command:* *HDBTMute.* *Response:* *HDBT Mute*
Unmute HDBT 2 / HDMI 2 output audio	`HDBTUnmute.`	*Command:* *HDMIUnmute.* *Response:* *HDBT Unmute*

Audio Control - Continued

Description	Command	Examples
Set global MIX input volume at a specific value	`SetMIXVol:`*{vl}*`.` *{vl} = 00-60*	*Command:* *SetMIXVol:30.* *Response:* *Volume of MIX: 30*
Increase global MIX input volume by 1 value	`MIXVolume+.`	*Command:* *MIXVolume+.* *Response:* *Volume of MIX: 31*
Decrease global MIX input volume by 1 value	`MIXVolume-.`	*Command:* *MIXVolume+.* *Response:* *Volume of MIX: 29*
Mute global MIX input volume audio	`MIXMute.`	*Command:* *MIXMute.* *Response:* *MIX Mute*
Unmute global MIX input volume audio	`MIXUnmute.`	*Command:* *MIXUnmute.* *Response:* *MIX Unmute*
Query current audio mute status	`%9941.`	*Command:* *%9941.* *Response:* *HDBT Unmute.* *HDMI Mute.* *MIX Mute.*
Query current audio volume values	`%9942.`	*Command:* *%9942.* *Response:* *Volume of HDBT: 10.* *Volume of HDMI: 15.* *Volume of MIX: 25.*
Query current audio input status for inputs 1-3	`%9943.`	*Command:* *%9943.* *Response:* *HDBT1 UnEmbedded.* *HDMI2 UnEmbedded.* *HDMI3 UnEmbedded.*

Relay Control

Description	Command	Examples

Turn Relay 1 or 2 ON	`RelayON{R}.`
	
	`{R} = 1-2`
		Command:
		RelayON1.
		
		Response:
		Relay 1 ON

Turn Relay 1 or 2 OFF	`RelayOFF{R}.`
	
	`{R} = 1-2`
		Command:
		RelayOFF1.
		
		Response:
		Relay 1 OFF

Turn Relay 1 or 2 ON momentarily	`RelayAutomationCtl:{R},{T}0.`
	
	`{R} = 1-2`
	`{T} = 0-20`
		Command:
		RelayAutomationCtl:1,30.
		
		Response:
		Relay 1 TURN ON, DELAY
		3.0 SECONDS TURN OFF

RS232 Pass Through Commands

Description	Command	Examples

Pass through command - ASCII	`/+{R}/{B}:{XX}.`
	
	`{R}(RS232 PORT) = 1-3`
	
	`1 = INT-PS82-H2 RS232 port`
	`2 = HDBASET Receiver RS232 port`
	`3 = HDBASET Transmitter RS232 port`
	
	`{B}(BAUD RATE) = 1-7`
	
	`1 = 2400`
	`2 = 4800`
	`3 = 9600`
	`4 = 19200`
	`5 = 38400`
	`6 = 57600`
	`7 = 115200`
	
	`{XX} = ASCII COMMAND`
		Command:
		`/+2/3:POWERON`
		
		Response:
		NO RESPONSE
		
		Sends the ASCII formatted command POWERON through the RS232 of the HDBT receiver at 9600bps baud rate

RS232 Pass Through Commands - Continued

Description	Command	Examples
Pass through command - HEX	/#{R}/{B}:{XX XX XX}. {R}(RS232 PORT) = 1-3 1 = INT-PS82-H2 RS232 port 2 = HDBASET Receiver RS232 port 3 = HDBASET Transmitter RS232 port {B}(BAUD RATE) = 1-7 1 = 2400 2 = 4800 3 = 9600 4 = 19200 5 = 38400 6 = 57600 7 = 115200 {XX XX XX} = HEX COMMAND	Command: /#2/3:A1 A2 A3 Response: NO RESPONSE Sends the HEX formatted command A1 A2 A3 through the RS232 of the HDBT receiver at 9600bps baud rate

System Commands

Description	Command	Examples

Turns switcher ON	`PWON.`	*Command:*
		`PWON.`
		
		Response:
		`PWON`

Turns switcher OFF	`PWOFF.`	*Command:* `PWOFF.` *Response:* `PWOFF.`

Initiates standby mode, initiate any command to wake up	`STANDBY.`	*Command:*
		`STANDBY.`
		
		Response:
		`STANDBY`

Query power status	`%9962.`	*Command:*
		`%9962.`
		
		Response:
		`PWON / PWOFF / STANDBY`

Front panel button LOCK	`/%Lock;`	*Command:*
		`/%Lock;`
		
		Response:
		`System Locked!`

Front panel button UNLOCK	`/%Unlock;`	*Command:*
		`/%Unlock;`
		
		Response:
		`System Unlocked!`

Query lock status	`%9961.`	*Command:*
		`%9961.`
		
		Response:
		`System Unlock / Lock`

Query firmware version	`/^Version;`	*Command:*
		`/^Version;`
		
		Response:
		`V1.0.4`

Restores the matrix to factory defaults	`%0911.`	*Command:*
		`%0911.`
		
		Response:
		`FACTORY DEFAULT!`

Technical Specifications- Switcher

Video	
Video Inputs	(1) HDBaseT, (4) HDMI, (1) DisplayPort, (1) VGA, (1) USB-C
Video Input Connectors	(1) RJ45 (HDBaseT), (4) HDMI Type A Female, (1) USB-C , (1) DisplayPort, (1) 15-pin VGA
Input video Signal	HDMI for HDMI input, ALT-DP Mode for USB-C 3.0, DP Version 1.2 for DisplayPort input
HDBaseT Input Resolution Support	Up to 4Kx2K@60Hz 4:2:0 / 8 bit deep color (10.2Gbps)
HDMI Input Resolution Support	Up to 4Kx2K@60Hz 4:4:4 / 8 bit deep color
USB C Input Resolution Support	Up to 4Kx2K@30Hz 4:4:4 / 8 bit deep color
DisplayPort Input Resolution Support	Up to 4Kx2K@60Hz 4:4:4 / 8 bit deep color
VGA Input Resolution Support	Up to 1920x1200 (50/60Hz)
Video Output	(2) HDMI, (1) HDBaseT
Video Output Connector	(2) Type-A Female HDMI, (1) RJ45
Output Resolution Support	Up to 3840 x 2160 @60Hz / 4:4:4 / 8 bit deep color
Standards	HDMI 2.0, HDCP 2.2 and CEC
Bandwidth	*HDBaseT Input (Receiver):* 10.2Gbps *All other inputs / outputs:* 18Gbps
24V DC Power	One (1) Locking Barrel (5.5 mm OD, 2.1 mm ID)
Audio Input	
Audio Input	(1) External balanced audio (L+R) for 1-HDBT input port (1) External balanced audio (L+R) for 2-HDMI input port (1) External balanced audio (L+R) for 3-HDMI input port (1) Stereo auxiliary audio for 6-VGA input port (1) Balanced MIX audio
Audio Input Connector	(4) 5-pin terminal blocks (1) 3.5mm jack
Frequency Response	20Hz − 20KHz, ±3dB
Max Input Level	2.0Vrms ± 0.5dB. 2V = 16dB headroom above- 10dBV (316mV) nominal consumer line level signal.
Input Impedance	>10KΩ
Audio Output	
Audio Output	(1) Balanced audio (L+R) for 1-HDMI output audio de-embedding (1) Digital SPDIF audio (L+R) for 1-HDMI output audio de-embedding (1) Balanced audio (L+R) for 2-HDBT output audio de-embedding (1) Digital SPDIF audio (L+R) for 2-HDBT output audio de-embedding
Audio Output Connector	(2) 5-pin terminal blocks (2) Toslink connectors
Frequency Response	20Hz − 20KHz, ±3dB
Max Input Level	2.0Vrms ± 0.5dB. 2V = 16dB headroom above-10dBV (316mV) nominal consumer line level signal
Output Impedance	70Ω

Technical Specifications- Switcher

Control	
Control Ports	(1) RS232, (2) Relay 1-2, (1) IR Eye, (2) IR IN, (1) IR OUT, (1) TCP/IP, (1) Firmware
Control Connectors	(3) 3-pin terminal blocks, (4) 3.5mm jacks, (1) RJ45, (1) Type-A USB
IR Carrier Frequency Range	33-55kHz at 5 volts
HDBaseT Signal Characteristics	
Maximum Distance	*HDBaseT Input (Receiver):* 70 m (up to 1080p) , 40 m (up to 4K@60Hz / 4:2:0 / 8 bit deep color) *HDBaseT Output (Transmitter):* 70 m (up to 1080p) , 40 m (up to 4K@60Hz / 4:4:4 / 8 bit deep color)
Cable Requirements	Solid core shielded Category 6 F/UTP cable or greater with TIA/EIA-568B crimp pattern
Bandwidth	*HDBaseT Input (Receiver):* 10.2Gbps *HDBaseT Output (Transmitter):* 18Gbps
Chassis and Environmental	
Dimensions (WxHxD)	436 mm x 44 mm x 356.5 mm (17 in x 1.7 in x 14 in) – 1RU
Shipping Weight	2.87kg (6.3 lbs.)
Operating Temperature	0° to +55° C (+32° to +131° F)
Operating Humidity	10% to 90%, Non-condensing
Storage Temperature	-20° to +70° C (+14° to +158° F)
Storage Humidity	10% to 90%, Non-condensing
Power, ESD, and Regulatory	
Power Supply Input	100V-240VAC / 50-60 Hz
Power Supply Output	24VDC / 6A
Power Consumption	85 watts (max)
ESD Protection	15kV
Product Regulatory	FCC, CE, RoHS
Power Supply Regulatory	CE, RoHS
Other	
Standard Warranty	5 years
Included Accessories	Quick Install Guide, (3) 3-pin Phoenix connectors, (7) 5-pin Phoenix connectors, (1) 3.5mm Audio Cable (for IR cascading), IR Remote, (1) IR Emitter, (1) IR Receivers, (1) DC24V 6A power supply with US power plug, (2) Rack mount ears with 6 mounting screws, (4) Plastic Cushions
Compatible Transmitters	INT-HD70-TXWP, INT-HD70-TX, AS-1H1V, AS-1H1V-WP-W., AS-2H, AS-2H-WP-W, INT-HD52

Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches.

Technical Specifications- HDBaseT Receiver

Supported Audio and Video	
Video Compliance	HDMI 2.0a, HDCP 2.2, CEC
Output Resolution Support	**SMPTE**: Up to 4096x2160@60Hz (4:4:4 chroma sub-sampling / 8 bit deep color) **VESA**: Up to 1920x1200
Embedded Audio	2 Channel Stereo
IR Carrier Frequency Range	33-55kHz at 5 volts
RS232 Baud Rate	up to 115200
HDBaseT Signal Characteristics	
Maximum Distance	70 m (up to 1080p) , 40 m (up to 4K@60Hz / 4:2:0 / 8 bit deep color)
Cable Requirements	Solid core shielded Category 6 F/UTP cable or greater with TIA/EIA-568B crimp pattern
Bandwidth	18Gbps
Chassis and Environmental	
Dimensions (WxHxD)	115 mm x 16 mm x 84 mm (4.5 in x .6 in x 3.3 in)
Shipping Weight	153g (.3 lbs.)
Operating Temperature	0° to +40° C (+32° to +104° F)
Operating Humidity	10% to 90%, Non-condensing
Storage Temperature	-10° to +50° C (+14° to +122° F)
Storage Humidity	10% to 90%, Non-condensing
Power, ESD, and Regulatory	
Power Consumption	14 watts (max)
ESD Protection	15kV
Product Regulatory	FCC, CE, RoHS
Power Supply Regulatory	CE, RoHS
Other	
Standard Warranty	5 years

Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches.

Thank you for your purchase.

For Technical Support please call our toll free number at 800-530-8998 or email us at supportlibav@libav.com

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