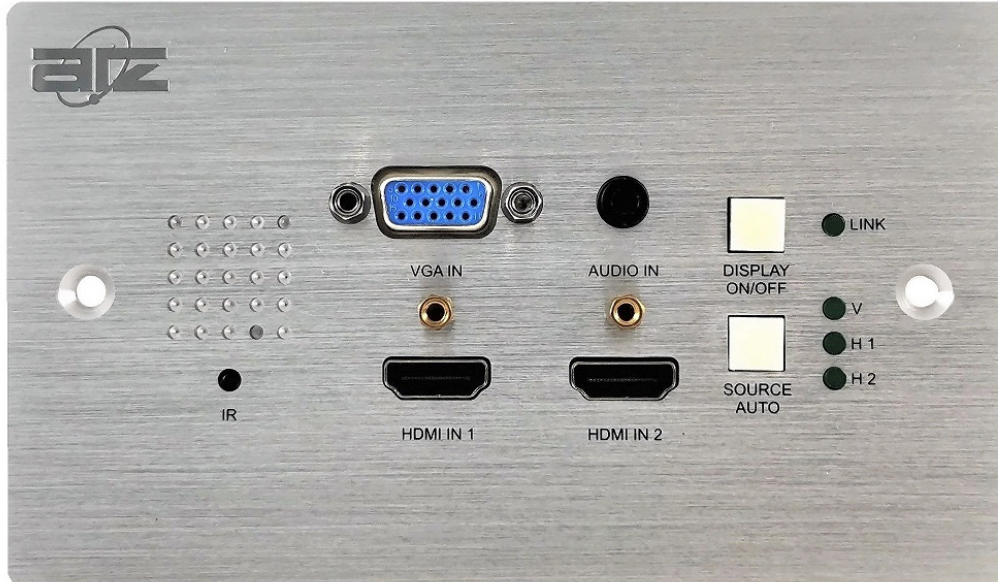


Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)



ATZ HDBT-E70-WPV2 is a 3-in-1 Wallplate Transmitter Switcher, which is designed to switch and extend HDMI or VGA input signal to far-end display device, and the transmission distance is up to 131ft/40m at 4K and 229ft/70m at 1080P video by using a single CATx cable.

The switcher features two HDMI and one VGA inputs, it can be selected by the

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

SOURCE AUTO button on the front panel. The switcher supports CEC. The DISPLAY ON/OFF button on front panel is used to control the far-end display device, and it can be programmed by RS232 command to ensure the compatibility with various display devices. Moreover, 24V-48V PoC allows the switcher can be powered from the compatible HDBaseT receiver.

Features:

- Supports HDMI signal up to 4K@60Hz 4:2:0, VGA signal up to 1920x1200@60 Hz.
- HDMI 1.4 standard and HDCP 2.2 compliant. Ensures display of content protected media and interoperability with other HDCP compliant devices.
- Provides an external auxiliary audio input for VGA video.
- Supports VGA video resolution up-scaling, the VGA input video can be automatically upgraded to the default 1080P output.
- Active input automatic detective.
- Extending HDMI signal 4K@60Hz up to 131ft/40m and 1080P@60Hz up to 229ft/70m.
- Supports RS232 pass-through with HDBaseT connection and local control.
- Supports IR pass-through to extend IR signal to control display device.
- The DISPLAY ON/OFF button can be programmed by RS232 command.
- The HDBT port supports 24V-48V PoC input, the switcher can be powered from the compatible HDBaseT receiver by the CATx cable, and it also supports 24V PoC output.
- Firmware upgrade by Micro-USB port.

Specifications:

Input	
Input	2x HDMI, 1x VGA, 1x Audio
Input Connector	2x Female type A HDMI 1x Female VGA (15-pin) 1x 3.5mm mini jack
HDMI Input Resolution	Up to 4K/UHD@60Hz 4:2:0
VGA Input Resolution	Up to 1920x1200@60 Hz
Audio Input Impedance	> 10KΩ

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

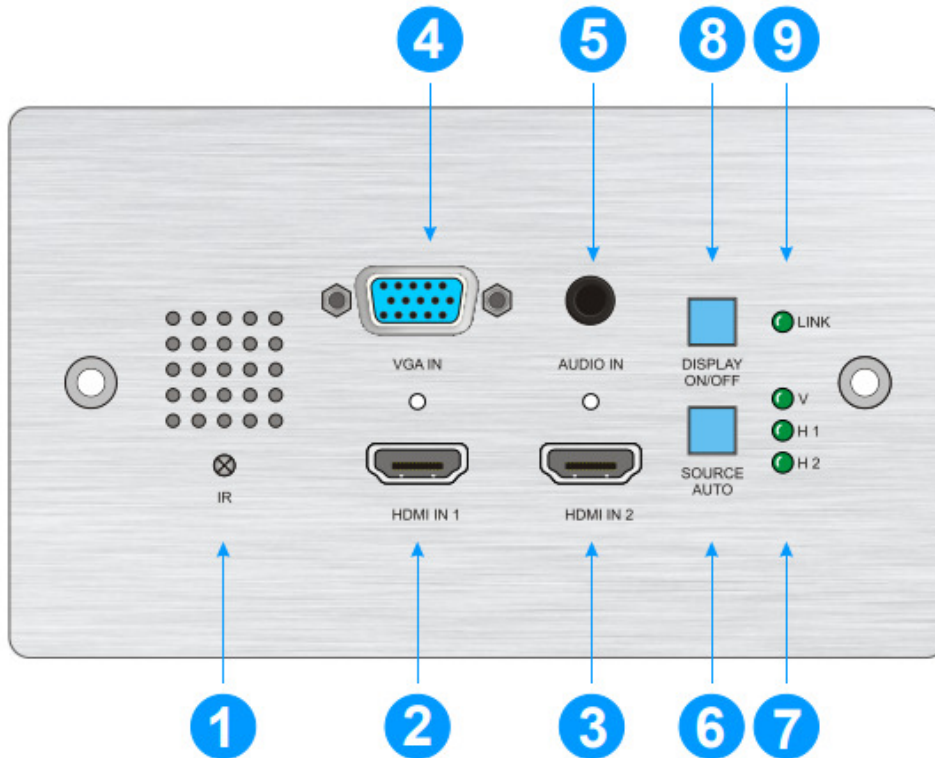
Frequency Response	20Hz~20KHz
SNR	>85db@20Hz~20KHz
Output	
Output	1x HDBT OUT
Output Connector	1x RJ45
HDBT Output Resolution	Up to 4K/UHD@60Hz 4:2:0
Control	
Control Ports	1x IR 1x FIRMWARE 1x RS232 1x IR IN
Control Connector	1x Built-in IR sensor, 1x Micro-USB, 2x 3-pin terminal block
General	
Bandwidth	10.2Gbps
Transmission Mode	HDBaseT
HDMI Version	1.4
HDCP Version	1.4 and 2.2
Transmission Distance	4K@60Hz≤40M, 1080P@60Hz≤70M
External Power Supply	Input:100V~240V AC; Output: 24VDC 1.25A
Power Consumption	5W max.
Operation Temperature	-10 ~ +40°C
Storage Temperature	-15 ~ +55°C
Relative Humidity	10% ~ 90%
Dimension (W*H*D)	146mm x 86mm x 39mm
Net Weight	245g

Panel Description

Front Panel

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Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

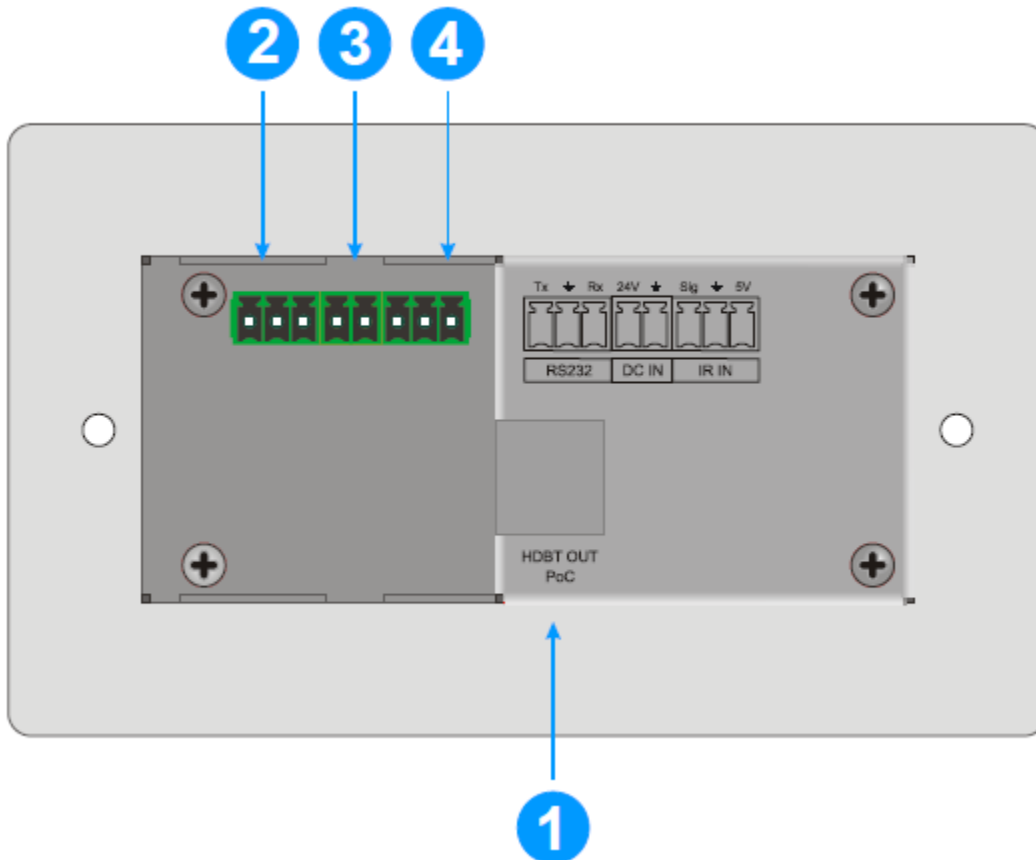


- ① IR: Built-in IR sensor to receive IR signal from IR remote to control display.
- ② HDMI IN 1: Type-A HDMI port to connect HDMI source.
- ③ HDMI IN 2: Type-A HDMI port to connect HDMI source.
- ④ VGA IN: Female 15-pin VGA port to connect VGA source.
- ⑤ Audio IN: 3.5mm mini jack to connect an audio source for VGA.
- ⑥ SOURCE AUTO:
 - ✓ Press the backlit button to select the next input source.
 - ✓ Press and hold the button at least 3 seconds to enable auto switching mode. For more details, please refer to the **Source Switching** on the page 7.
- ⑦ Input LED:
 - V: The LED illuminates green to indicate the VGA input is selected.
 - H 1: The LED illuminates green to indicate the HDMI 1 input is selected.
 - H 2: The LED illuminates green to indicate the HDMI 2 input is selected.
- ⑧ DISPLAY ON/OFF: Turn the display ON or OFF via CEC or RS232 (Programming required). For more details, please refer to the **Display Control** on the page 8.
- ⑨ LINK LED: The LED illuminates green to indicate a valid data link with the HDBaseT receiver.

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

Rear Panel



① **HDBT (POC):** RJ45 HDBaseT output port to connect to the HDBT IN port of the receiver by a CATx cable. It supports 24V-48V PoC to enable the switcher can be powered from a compatible receiver.

② **RS232:** Either 3-pin terminal block to connect a control device (such as PC) to send the RS232 command to control this unit, or to connect a third party device which needs to be controlled by RS232 pass-through. For more details, please refer to the **RS232 Control** on the page 9.

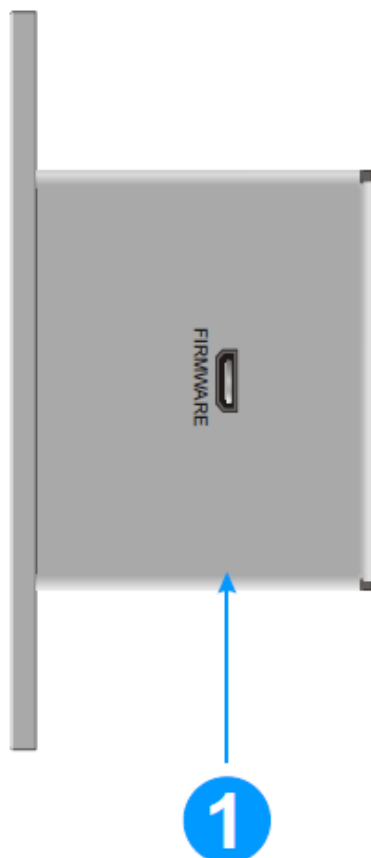
③ **DC IN:** Power port to connect 24V DC power adapter.

④ **IR IN:** 3-pin terminal block to connect an IR receiver.

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

Side Panel



① **FIRMWARE:** Micro-USB port for firmware upgrade.

System Connection

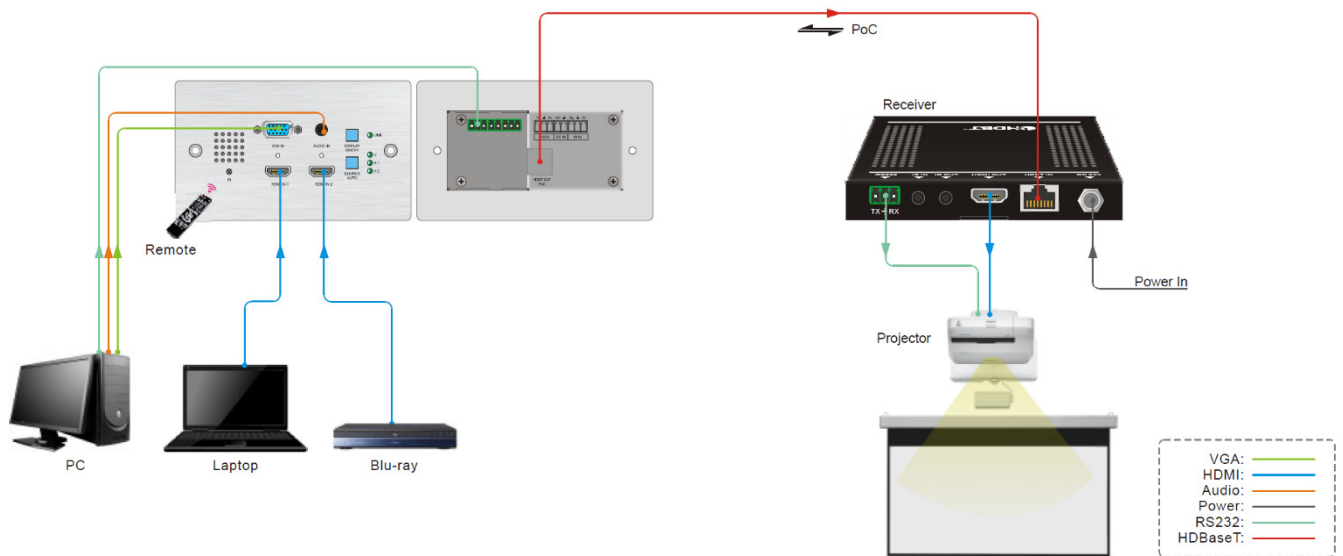
Usage Precautions:

- Make sure all components and accessories included before installation.
- System should be installed in a clean environment with proper temperature and humidity.
- All of the power switches, plugs, sockets, and power cords should be insulated and safe.
- All devices should be connected before power on.

The following diagram illustrates typical input and output connection that can be utilized with the switcher:

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)



Note: We recommend CATx cabling with alien crosstalk prevention technology to ensure the performance of HDBaseT link.

Button Control

Source Switching

- 1) Press the **SOURCE AUTO** button to switch to next source device, and then the corresponding input LED will turn green.
- 2) Press and hold the **SOURCE AUTO** button at least 3 seconds to enable auto switching mode, and it abides by the following principles:

- **New Input**

Once detecting a new input signal, the switcher will automatically switch to this new signal, and the far end display device will receive command to be switched on. If source input is not detected, the far end display device will automatically turn off within two minutes.

- **Source Removed**

When an active source is removed, the switcher will switch to the first available active input starting at HDMI IN 1.

- **Reboot**

The switcher can save the last configuration before losing power. If the last switching mode is auto switching, the switcher will automatically enter auto switching mode once rebooted, then detect all inputs and memorize their connection status for future rebooting using. If the last selected input source is still available, the switcher will switch to this input. If not, it will switch to the first available active input source starting at **HDMI IN 1**

- **Exit auto switching mode**

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

Press and hold the **SOURCE AUTO** but ton for 3 seconds again to exit the auto mode, and the input source will not be changed.

Display Control

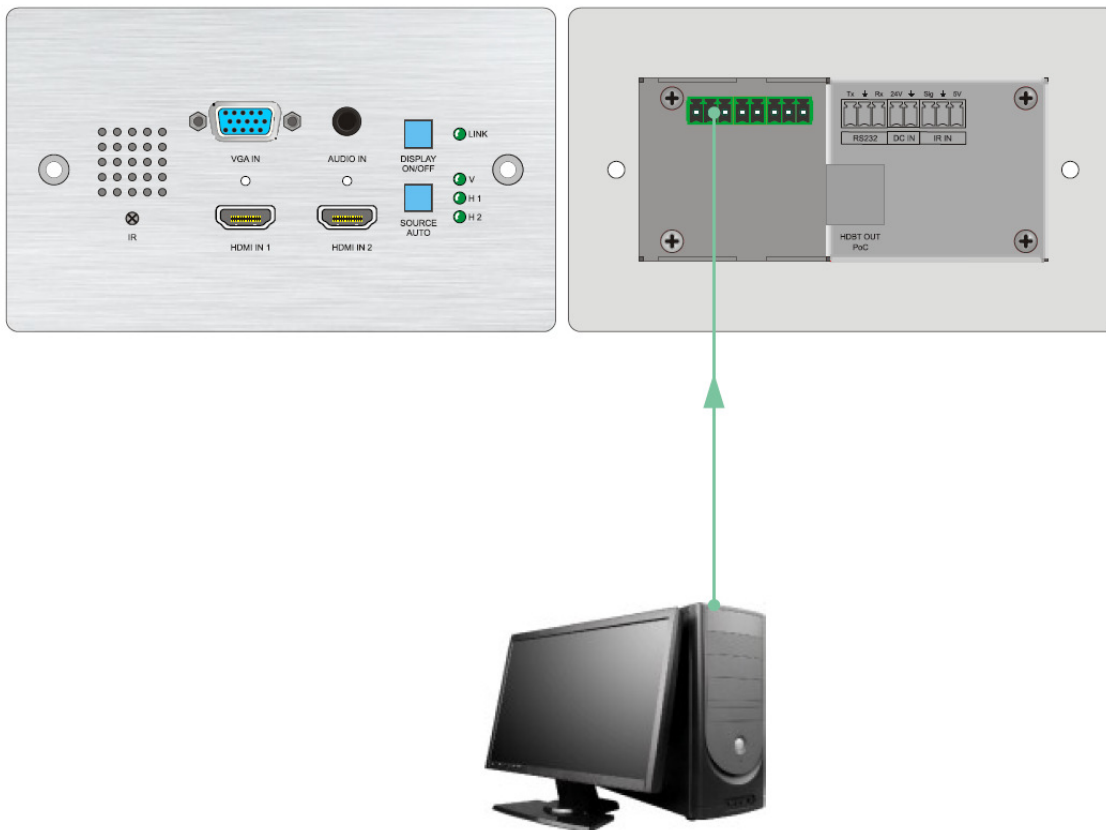
- 1) Press the **DISPLAY ON/OFF** button to turn on/ off the display.
- 2) If the incompatible display device needs to be used with this switcher, the **DISPLAY ON/OFF** button can be programmed by RS232 command. For more details, please refer to the **Button User-defined** on the page 13

RS232 Control

RS232 Connection

According the RS232 control mode, there are two types of RS232 connection can be selected.

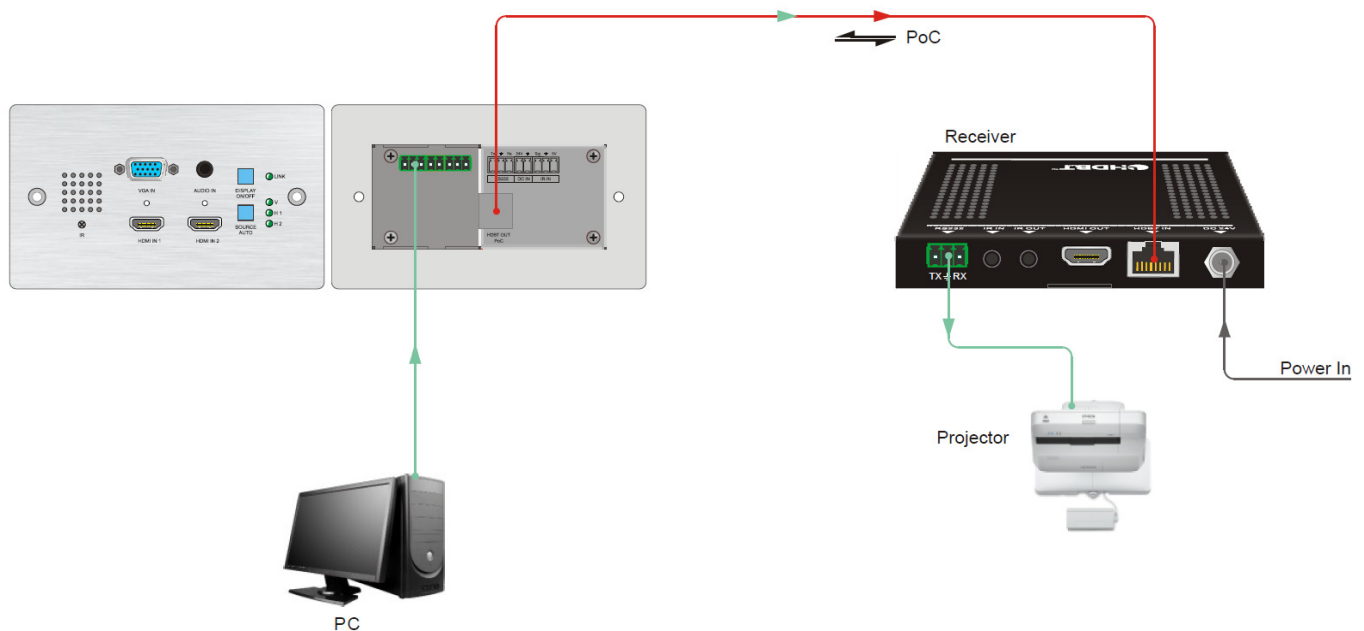
- ① When only control the local switcher, connect a control device (e.g. PC) to the RS232 port of the switcher, the connection diagram shown as below:



- ② When control the far-end third party device from local control device (e.g. PC), connect the PC to the RS232 port of the switcher, and then connect the third party device (e.g. projector) to the RS232 port of receiver. The connection diagram shown as below:

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)



RS232 Control Software

- **Installation:** Copy the control software file to the control PC.
- **Uninstallation:** Delete all the control software files in corresponding file path.

Basic Settings:

Connect ATZ HDBT-E70-WPV2 with all input devices and output devices needed, then to connect it with a computer which is installed with RS232 control software. Double-click the software icon to run this software.

Here take the software **CommWatch.exe** as example. The icon is showed as below:

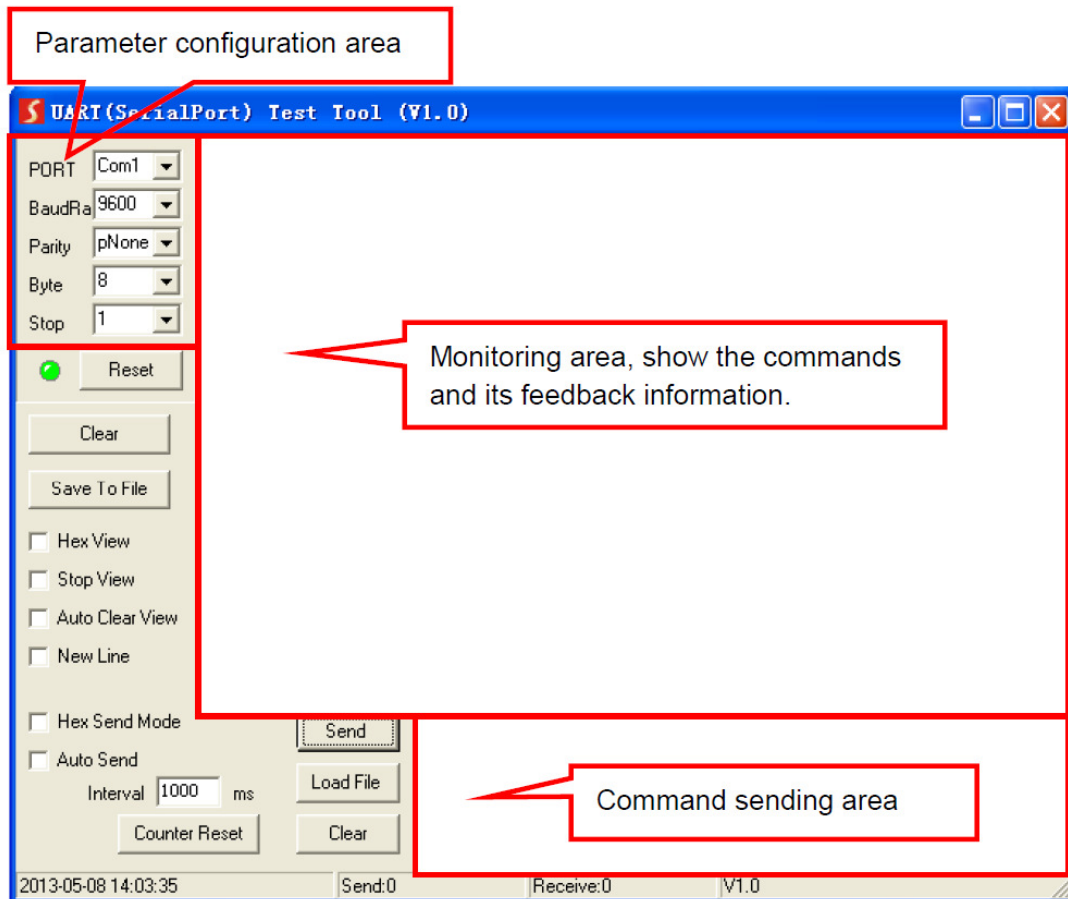


CommWatch.exe

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

The interface of the control software is showed as below:



Please set the parameters of COM number, bound rate, data bit, stop bit and the parity bit correctly, and then you are able to send command in command sending area.

RS232 Command

Communication protocol: RS232 Communication Protocol

Baud rate: 9600 Data bit: 8 Stop bit: 1 Parity bit: none

Device Control

Command	Function	Feedback Example
50617%	Restore factory default.	FACTORY RESET
50698%	Software upgrade.	SOFTWARE UPDATE
50699%	Get firmware version.	VERSION Vx.x.x
50740%	Disable DISPLAY ON/OFF button.	DISABLE DISPLAY ON/OFF KEY
50741%	Enable DISPLAY ON/OFF button.	ENABLE DISPLAY ON/OFF KEY

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

Source Switching

Command	Function	Feedback Example
50701%	Switch to HDMI 1.	SWITCH TO HDMI1
50702%	Switch to HDMI 2.	SWITCH TO HDMI2
50704%	Switch to VGA.	SWITCH TO VGA
50710%	Enable auto switching mode.	AUTO SWITCHING
50711%	Enable manual switching mode.	MANUAL SWITCHING
50712%	Get the Source Switching mode.	AUTO SWITCHING
		MANUAL SWITCHING

Output Resolution

The switcher also supports VGA scaling output to the HDBaseT port, which can be set using one of the following commands. Always be sure that the display device is able to display the chosen resolution to ensure that an image can be displayed.

Command	Output Resolution	Feedback Example
50714%	Auto adjust VGA Input.	Enable VGA AUTO ADJUST
50715%	1024x768@60Hz.	RESOLUTION: 1024x768 60Hz
50716%	1280x720 @50Hz.	RESOLUTION: 1280x720 50Hz
50717%	1280x720 @60Hz.	RESOLUTION: 1280x720 60Hz
50718%	1360x768 @60Hz.	RESOLUTION: 1360x768 60Hz
50719%	1600x1200 @60Hz.	RESOLUTION: 1600x1200 60Hz
50720%	1920x1080 @50Hz.	RESOLUTION: 1920x1080 50Hz
50721%	1920x1080 @60Hz.	RESOLUTION: 1920x1080 60Hz
50722%	1920x1200 @60Hz.	RESOLUTION: 1920x1200 60Hz
50723%	3840x2160@30Hz.	RESOLUTION: 3840x2160 30Hz

VGA Audio Control

Command	Function	Feedback Example
50726%	Mute VGA Audio Input.	VGA MUTEON
50727%	Unmute VGA Audio Input.	VGA MUTEOFF
50728%	Get VGA audio mute status.	VGA MUTEON
		VGA MUTEOFF

Baud Rate Setting

The switcher also provide the following baud rate options for the RS232 control port.

Command	Baud Rate	Feedback Example
50742%	2400	SET BAUDRATE 2400

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

50743%	4800	SET BAUDRATE 4800
50744%	9600	SET BAUDRATE 9600
50745%	19200	SET BAUDRATE 19200
50746%	38400	SET BAUDRATE 38400
50747%	57600	SET BAUDRATE 57600
50748%	115200	SET BAUDRATE 115200

EDID Management

The input resolution (EDID setting) can be set using RS232 commands to one of the options given in the following table.

Command	EDID	Feedback Example
50768%	1920x1200@60Hz PCM 2CH.	EDID:1920x1200@60, 2CH
50769%	1360x768@60Hz PCM 2CH.	EDID:1360x768@60
50770%	1080P 2D PCM 2CH.	EDID:1080P, 2D 2CH
50771%	4K@30Hz 2D PCM 2CH.	EDID:4K30, 2D 2CH
50772%	1280x720@60Hz DVI.	EDID:1280x720@60, DVI
50773%	1920x1080@60Hz DVI.	EDID:1920x1080@60, DVI
50774%	1280x720@60Hz PCM 2CH.	EDID:1280x720@60
50775%	1280x800@60Hz PCM 2CH.	EDID:1280x800@60
50776%	Get the TV EDID.	GET TV EDID
50777%	Select default EDID.	EDID:INITIA
50781%	Enable EDID user-defined mode. Uploading the user-defined EDID file by Micro-USB port within 10 seconds.	EDID: USER USB UPGRADE
50782%	Invoke the user-defined EDID.	EDID: USER
50783%	EDID bypass.	EDID: BYPASS
50784%	Get the current EDID.	EDID:1920x1200@60, 2CH
		EDID:1360x768@60
		EDID:1080P, 2D 2CH
		EDID:4K30, 2D 2CH
		EDID:1280x720@60, DVI
		EDID:1920x1080@60, DVI
		EDID:1280x720@60
		EDID:1280x800@60
		EDID:INITIAL
EDID: USER		
EDID: BYPASS		

Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

CEC Control

The switcher also supports sending of a few common CEC commands using RS232 command code. Specific CEC command can also be sent from the switcher. The RS232 commands are as given in the following table. Please note that only CEC enabled devices that have the specified logical address will respond to CEC commands.

Command	Function	Feedback Example
50733%	Display on.	CEC DISPLAY ON
50734%	Display off.	CEC DISPLAY OFF
CEC <xx:xx:xx... .>	Send CEC command "xx:xx:xx..." to control display device.	CEC <xx:xx:xx...>

Button User-defined

Press the DISPLAY ON/OFF button can turn on/off the display. If the incompatible display device needs to be used, the DISPLAY ON/OFF button can be defined to send control characters by following the below command format.

Command Format	Function	Command Example
/+kb: xxxx	k=0, Set the DISPLAY ON	/+02:abc123
	k=1, Set the DISPLAY OFF	
	xxxx: ASCII characters	
	b=0, Baud rate is 2400	Set the DISPLAY ON to send the ASCII characters abc123.
	b=1, Baud rate is 4800	
	b=2, Baud rate is 9600	
	b=3, Baud rate is 19200	
	b=4, Baud rate is 38400	
	b=5, Baud rate is 57600	
b=6, Baud rate is 115200		
/-kb:xx xx xx xx	k=0, Set the DISPLAY ON	/-12:30 31 32 33
	k=1, Set the DISPLAY OFF	
	xx xx xx xx: HEX characters	
	b=0, Baud rate is 2400	Set the DISPLAY OFF to send the HEX characters 30 31 32 33.
	b=1, Baud rate is 4800	
	b=2, Baud rate is 9600	
	b=3, Baud rate is 19200	
	b=4, Baud rate is 38400	
	b=5, Baud rate is 57600	
b=6, Baud rate is 115200		

Model : ATZ HDBT-E70-WPV2

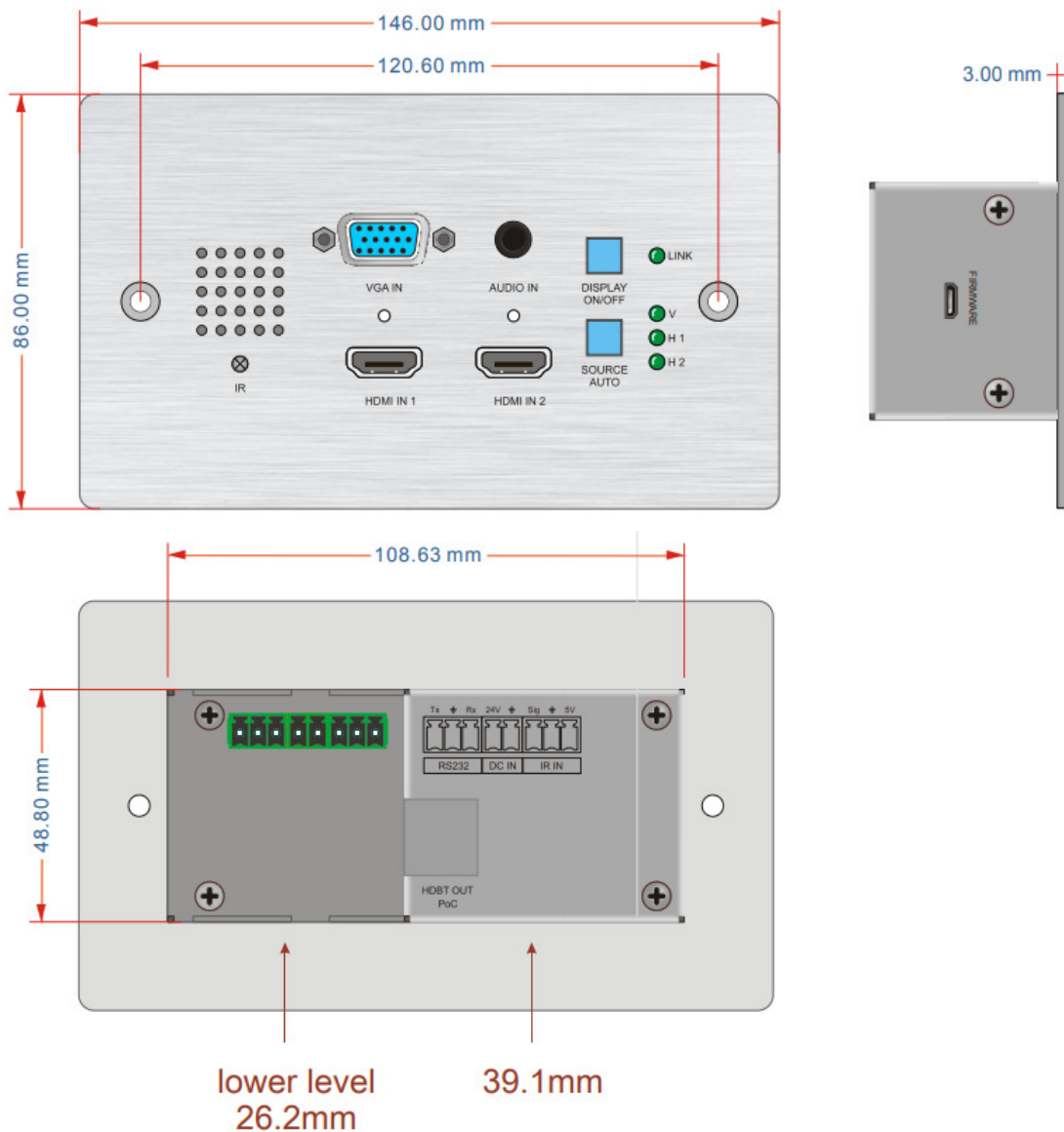
Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

/x0:xxx	Set the booking shutdown time to xxx.	SET TIME TO xxx MINUTES TO TURN OFF THE DISPLAY IF NO SOURCE DETECTED
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Package Includes:

- 1x ATZ HDBT-E70-WPV2
- 1x 2-pin Terminal Block
- 2x 3-pin Terminal Blocks
- 1x Power Adapter (24V 1.25A)

Product Drawing:



Model : ATZ HDBT-E70-WPV2

Description: HDBaseT Sender Wall Plate for 2xHDMI/VGA/Audio/RS232/PoC (70m)

Warranty: 2 Years

Warranty is effective from the date of original delivery.

This warranty shall be void if a serial number has been removed from the product.