

**Description:** HDBaseT<sup>™</sup> 1x8 Splitter HDMI 2.0b, HDR10+, 18G, support 4K@60hz

(150m) c/w 8x Receivers



This 18Gbps HDMI 1x8 HDBaseT Splitter can distribute 1 source signal to any 8 display devices. Support video resolution up to 4K2K@60Hz 4:4:4. It is designed with 1 HDMI loop output and 8 HDBaseT outputs. The HDMI signal transmission distance can be extended up to **120 meters** at the resolution of 4K2K@60Hz, or **150 meters** at 1080P@60Hz via a single CAT6/ 6a/7 cable. The product supports IR and RS-232 signal pass-through, audio extract function and advanced EDID management.

#### **Features:**

- HDMI 2.0b, HDCP 2.2 and HDCP 1.x compliant
- Support 18Gbps video bandwidth
- Support video resolution up to 4K2K@60Hz 4:4:4
- Support HDR, HDR10+, HLG and Dolby vision
- Support up to 7.1CH HD audio pass-through
- Support digital and analog audio de-embedded output
- Extend the signal transmission distance up to 120 m at 4K2K@60Hz, 150 m at 1080P@60Hz via a single CAT6/6a/7 cable
- Support 1 HDMI input, 1 HDMI loop output and 8 HDBaseT outputs.
- IR, RS-232 routed to HDBaseT output
- Advanced EDID management
- Support one-way POC function (only from transmitter to receiver)
- Compact design for easy and flexible installation



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## **Specifications:**

Technical			
HDMI Compliance	HDMI 2.0b		
HDCP Compliance	HDCP 2.2/1.x		
Video Bandwidth	594MHz/18Gbps		
Video Resolution	Up to 4k2k@60Hz 4:4:4		
	8-bit,10-bit,12-bit(1080p@60Hz)		
Color Depth	8-bit (4K2K@60Hz YUV4:4:4)		
	8-bit,10-bit,12-bit(4K2K@60Hz YCbCr 4:2:2/4:2:0)		
Color Space	RGB 4:4:4, YCbCr 4:4:4 / 4:2:2 /4:2:0		
HDR	Support HDR, HDR10+, HLG, Dolby vision		
	LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD,		
HDMI Audio Formats	Dolby Digital Plus(DD+), DTS-ES, DTS HD Master, DTS HD-		
	HRA, DTS-X		
Coaxial Audio Formats	PCM2.0, Dolby Digital / Plus, DTS 2.0/5.1		
Analog Audio Formats	PCM 2.0CH		
ESD Protection	Human body model—±8kV (Air-gap discharge) &		
	±4kV (Contact discharge)		
Connection			
Input	1×HDMI Type A (19-pin female)		
	1×HDMI Type A (19-pin female)		
Output	8x HDBaseT OUT [RJ45]		
	1x Coaxial Audio OUT [RCA]		
	1x L/R Audio OUT [5-pin phoenix connector]		
	1×RS-232 (3-pin phoenix connector)		
Control	1x EDID DIP switch [5-pin]		
	1x IR IN [3.5mm Stereo Mini-jack]		
	1x IR OUT [3.5mm Stereo Mini-jack]		
Mechanical			
Housing	Metal Enclosure		
Silkscreen Color	Black		
Dimensions	Transmitter: 440mm (W) $\times$ 130mm (D) $\times$ 44mm (H)		
	Receiver: 140mm (W) $\times$ 65mm (D) $\times$ 18mm (H)		
Weight	Transmitter: 1.62kg Receiver: 246g		
Power Supply	Input: AC100 - 240V 50/60Hz, Output: DC 24V/3.75A		
	(US/EU standards, CE/FCC/UL certified)		
Power Consumption	72W		



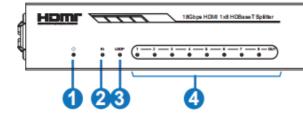
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Operation	0°C ~ 40°C / 32°F ~ 104°F
Temperature	
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)

# **Operation Controls and Functions**

# **Transmitter Front Panel:**



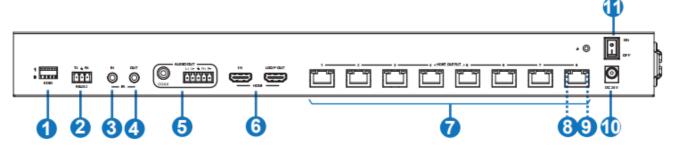
No.	Name	Function Description
1	POWER LED	When the device is powered on, the red power LED will be on.
2	IN LED	When the HDMI IN port connects an active source device,
	IN LLD	the green LED will be on.
2	LOOP LED	When the HDMI LOOP OUT port connects an active display
3	LOOP LLD	device, the green LED will be on.
1	OUT(1~8) LED	When the HDBT OUTPUT port connects an HDBaseT Receiver,
4	LED	the corresponding green OUT LED will be on.



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#### **Rear Panel:**



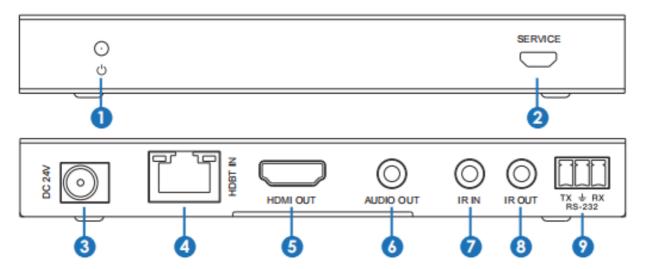
No. I	Nama	Function Description	
	Name	Function Description	
1	EDID DIP switch	Used to set EDID mode. Please refer to Section "6. EDID Mode" for details.	
2	RS-232	Connect to a PC or control system via a 3-pin phoenix connector cable for three functions:  1, Firmware update;  2, Control the Splitter via RS-232 commands;  3, RS-232 signal pass-through (from transmitter to receiver or from receiver to transmitter).	
3	IR IN	Connect to IR receiver cable, the IR receive signal will emit to "IR OUT" port of the HDBaseT Receiver.	
4	IR OUT	Connect to IR blaster cable, the IR emit signal is from "IR IN" port of the HDBaseT Receiver.	
5	AUDIO OUT	Coaxial/balanced audio output port, connect to amplifer or	
	(COAX, L/R)	speaker.	
6	HDMI port	IN: HDMI input port, connect to HDMI source device such as DVD or set-top box with an HDMI cable.  LOOP OUT: HDMI loop output port, connect to the HDMI display device such as TV or Monitor with an HDMI cable.	
7	HDBT OUTPUT port (1~8)	Connect to the HDBT IN port of the HDBaseT receiver with a CAT cable.	
8	Connection Signal Indicator lamp (Green)	<ul> <li>Illuminating: Transmitter and Receiver are in good connection status.</li> <li>Flashing: Transmitter and Receiver are in poor connection status.</li> <li>Dark: Transmitter and Receiver are not connected.</li> </ul>	
9	Data Signal Indicator lamp (Orange)	<ul><li>Illuminating: HDMI signal with HDCP.</li><li>Flashing: HDMI signal without HDCP.</li><li>Dark: No HDMI signal.</li></ul>	
10	DC 24V	Plug the DC 24V power supply into the unit and connect the adaptor to an AC outlet. ( <b>Note:</b> The transmitter can power the receiver via a CAT cable.)	
11	POWER switch Press this switch to power on/off the device.		



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### **HDBaseT Receiver**



No.	Name	Function Description			
1	Power	When the receiver is powered on, the power indicator will be			
	Indicator	on.			
2	SERVICE port	Used for firmware update.			
		Plug DC 24V/1A power supply into the unit and connect			
3	DC 24V	the adapter to an AC outlet.			
		( <b>Note:</b> The HDBaseT receiver also can be powered by the			
		transmitter via a CAT cable.)			
4	HDBT IN	Connect to the HDBT OUTPUT port on the transmitter			
		with a CAT cable.			
	Connection	-Illuminating: Transmitter and Receiver are in good			
5	Signal	connection status.			
	Indicator lamp	·			
	(Green)	connection status.			
		- Dark: Transmitter and Receiver are not connected.			
	Data Signal	· Illuminating: HDMI signal with HDCP.			
6	Indicator	- Flashing: HDMI signal without HDCP.			
	lamp	-Dark: No HDMI signal.			
_	(Orange)				
7	HDMI OUT	HDMI output port, connect to HDMI display device such as			
-	ALIDIO OLIT	TV or Projector with an HDMI cable.			
8	AUDIO OUT	Audio output port, connect to amplifier or speaker.			
9	IR IN	Connect to the IR Receiver cable. The IR signal will send to			
4.0		the IR OUT port of the transmitter.			
10	IR OUT	Connect to the IR blaster cable, the IR signal is from IR			
		IN port of the transmitter.			
		3-pin Phoenix connector for RS-232 command transmission.			
11	RS-232	The RS-232 command will pass-through from transmitter to			
		receiver or from receiver to transmitter.			



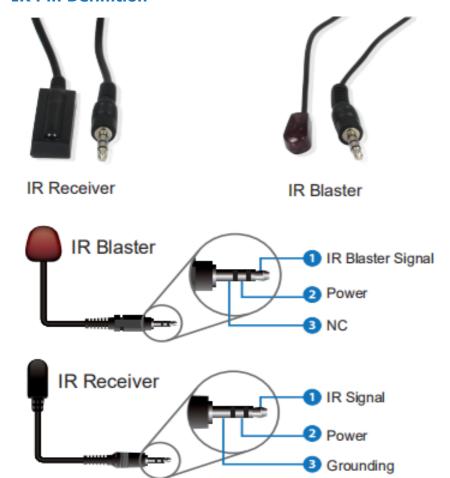
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#### **Package Includes:**

- 1× 18Gbps HDMI 1×8 HDBaseT Splitter
- 8× HDBaseT Receiver
- 9× IR Blaster Cable (1.5 meters)
- 9× 20K~60KHz IR Receiver Cable (1.5 meters)
- 9× 3-pin Phoenix Connector
- 1× 5-pin Phoenix Connector
- 18× Mounting Ear
- 1× 24V/3.75A DC Locking Power Adapter
- 1× User Manual

#### **IR Pin Definition**



**Note:** When the angle between the IR receiver and the remote control is  $\pm$  45 °, the transmission distance is 0-5 meters; when the angle between the IR receiver and the remote



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control is  $\pm$  90 °, the transmission distance is 0-8 meters

#### **EDID Mode**

The defined EDID setting list of the product is shown as below:

EDID Mode	EDID Description
11111	1080P, Stereo Audio 2.0
11110	1080P, Dolby/DTS 5.1
11101	1080P, HD Audio 7.1
11100	1080I, Stereo Audio 2.0
11011	1080I, Dolby/DTS 5.1
11010	1080I, HD Audio 7.1
11001	1080P 3D, Stereo Audio 2.0
11000	1080P 3D, Dolby/DTS 5.1
10111	1080P 3D, HD Audio 7.1
10110	4K2K30Hz_444, Stereo Audio 2.0
10101	4K2K30Hz_444, Dolby/DTS 5.1
10100	4K2K30Hz_444, HD Audio 7.1
10011	4K2K60Hz_420, Stereo Audio 2.0
10010	4K2K60Hz_420, Dolby/DTS 5.1
10001	4K2K60Hz_420, HD Audio 7.1
10000	4K2K60Hz_444, Stereo Audio 2.0
01111	4K2K60Hz_444, Dolby/DTS 5.1
01110	4K2K60Hz_444, HD Audio 7.1
01101	4K2K60Hz_444, Stereo Audio 2.0 HDR
01100	4K2K60Hz_444, Dolby/DTS 5.1 HDR
01011	4K2K60Hz_444, HD Audio 7.1HDR
01010	COPY_FROM_LOOP OUT
01001	COPY_FROM_HDBT OUT1
01000	COPY_FROM_HDBT OUT2
00111	COPY_FROM_HDBT OUT3
00110	COPY_FROM_HDBT OUT4
00101	COPY_FROM_HDBT OUT5
00100	COPY_FROM_HDBT OUT6
00011	COPY_FROM_HDBT OUT7
00010	COPY_FROM_HDBT OUT8
00001	1080P, Stereo Audio 2.0
00000	PC control mode



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#### **ASCII Commands**

The product also supports ASCII command control. Connect the RS-232 port of the product to a PC with a 3-pin phoenix connector cable. Then, open a Serial Command tool on PC to send ASCII commands to control the product. The ASCII command list about the product is shown as below.

#### **ASCII Commands**

Serial port protocol. Baud rate: 115200, Data bits: 8bit, Stop bits:1, Check bit: 0

x - Parameter 1 y - Parameter 2

! - Delimiter

Command Code	Function Description	Example	Feedback	Default Setting
Power				
s power z!	Power on/off the device,z=0~1 (z=0 power off, z=1 power on)	s power 1!	Power on  System Initializing Initialization Finished! FW version x.xx.xx	power on
r power!	Get current power state	r power!	power on/power off Reboot	
s reboot!	Reboot the device	s reboot!	System Initializing Initialization Finished! FW version x.xx.xx	
System Setup				
help! r type!	List all commands Get device model	help! r type!	HDC-SPR18H120	
r status!	Get device current status	r status!	Get the unit all status: power, in/out connection, edid mode	
r fw version!	Get Firmware version	r fw version!	MCU BOOT: Vx.xx.xx MCU APP: Vx.xx.xx	
r link in!	Get the connection status of the input port	r link in!	HDMI IN: connect	
r link out y!	Get the connection status of the y output port, y=0~9(0=all, 1~8=HDBT 1~8, 9=loop out)	r link out 1!	nami loop out: connect hdbt output 1: connect	
s reset!	Reset to factory defaults	s reset!	Reset to factory defaults  System Initializing Initialization Finished! FW version x.xx.xx	
Command Code	Function Description	Example	Feedback	Default Setting
<b>Output Sett</b>	ing			
s hdmi stream z!	Set hdmi loop output stream on/off z=0~1(0:disable,1:enable	s hdmi stream 1 !	Enable hdmi loop out stream Disable hdmi loop out stream	enable



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s edid in from z!	3,1080p,HD Audio 7.1 4,1080i,Stereo Audio 2.0 5,1080i,Dolby/DTS 5.1 6,1080i,HD Audio 7.1 7,3D,Stereo Audio 2.0 8,3D,Dolby/DTS 5.1 9,3D,HD Audio 7.1 10,4K2K30_444,     Stereo Audio 2.0 11,4K2K30_444,     Dolby/DTS 5.1 12,4K2K30_444,HD Audio 7.1 13,4K2K60_420,     Stereo Audio 2.0 14,4K2K60_420,     Dolby/DTS 5.1 15,4K2K60_420,     Dolby/DTS 5.1 15,4K2K60_420,     Dolby/DTS 5.1 15,4K2K60_420,     Dolby/DTS 5.1	s edid in from 1!	input EDID:1080p, Stereo Audio 2.0 Please toggle EDID	1080p,Stereo Audio 2.0
EDID Setting	Set input EDID from default EDID z, z=1~32 1,1080p,Stereo Audio 2.0 2,1080p,Dolby/DTS 5.1			
Command Code	Function Description	Example	reeuback	Delault Setting
r hdbt stream!	Get hdbt output y stream status, y=0~8(0=all)	r hdbt 1 stream!	Enable hdbt output 1 stream Feedback	Default Setting
r hdbt y hdcp!	status Get hdbt output y hdcp status, y=0~8(0=all)	r hdbt 1 hdcp!	Enable hdbt output 1 hdcp	
r hdmi hdcp!	Get hdmi loop out hdcp	r hdmi hdcp!	Enable hdmi output hdcp	
r hdmi stream!	Get hdmi loop out stream status	r hdmi stream!	Enable hdmi output stream	
s hdbt y stream z!	Set hdbt output y stream on/ off, $y=0~8(0=all)$	s hdbt 1 stream 1! s hdbt 0 stream 1!	Enable hdbt output 1 stream Disable hdbt output 1 stream Enable hdbt all outputs stream Disable hdbt all outputs outputs stream	enable
s hdbt y hdcp z!	Set hdbt output y hdcp on/off, $y=0\sim8(0=all)$ $z=0\sim1(0:disable,$ 1:enable)	s hdbt 1 hdcp 1 ! s hdbt 0 hdcp 1 !	hdcp Disable hdbt output 1 hdcp Enable hdbt all outputs hdcp Disable hdbt all outputs hdcp	enable
s hdmi hdcp z!	Set hdmi loop output hdcp on/ off $z=0\sim1(0:disable,1:enable)$	s hdmi hdcp 1!	Enable hdmi loop out hdcp Disable hdmi loop out hdcp Enable habt output 1	enable



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		ı	1	
	16,4K2K60_444, Stereo Audio 2.0 17,4K2K60_444, Dolby/DTS 5.1 18,4K2K60_444,HD Audio 7.1 19,4K2K60_444, Stereo Audio 2.0 HDR 20,4K2K60_444, Dolby/DTS 5.1 HDR 21,4K2K60_444, HD Audio 7.1 HDR 22, copy from hdmi loop out 23,copy from hdbt output 1 24,copy from hdbt output 2 25,copy from hdbt output 3 26,copy from hdbt output 4 27,copy from hdbt output 5 28,copy from hdbt output 6 29,copy from hdbt output 7 30,copy from hdbt output 7 30,copy from hdbt output 8 31,1080p,Stereo Audio 2.0 32,use user1 EDID		dip switch to 00000!	
Command Code	Function Description	Example	Feedback	Default Setting
s edid user1 00 FF FF FF FF!		00 ff ff ff ff	user1 EDID data: 00 FF FF	
r edid user1!	Get user1 EDID data	r edid user1!	user1 EDID data: 00 FF FF FF FF FF FF OO	



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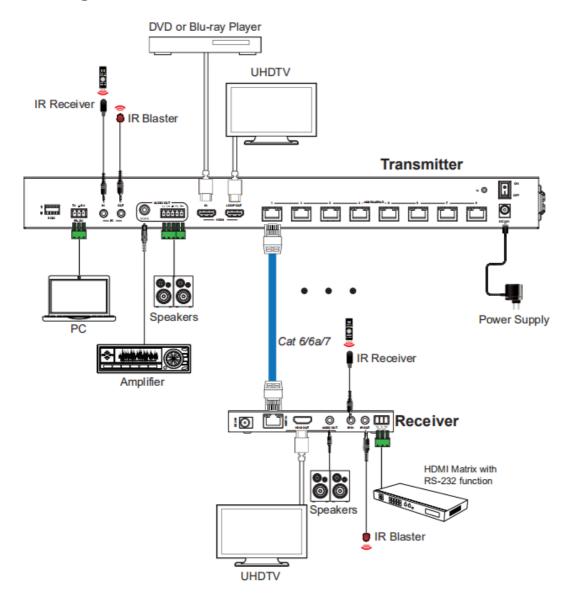
r edid in!	Get EDID status of the input	r edid in!	input EDID: 4K2K60_ 444,Stereo Audio 2.0	
r edid in data!	Get the EDID data of the hdmi input	r edid in data!	EDID data: 00 FF FF FF FF FF FF 00	
RS-232 BYP	ASS Setting			
s rs232 bypass hdbt y!	Set RS-232 port connect to HDBT out1 Receiver RS- 232 port, y=0~9( 0=all, 1~8= hdbt out 1~8, 9=NC)	s rs232 bypass hdbt 1!	RS-232 connect to HDBT OUT1 RS-232 not connect to HDBT OUT	y=0
r rs232 bypass!	Get RS-232 port connect to HDBT out receiver RS- 232 port	r rs232 bypass!	RS-232 connect to HDBT OUT1 RS-232 connect to all HDBT OUT RS-232 not connect to HDBT OUT	
s device baud w size x stop y parity z!	Set receiver control device COM port setting, w=2400, 4800,9600,19200,38400, 57600,115200, x=7,8 y=1,2, z=none, even,odd	s device baud 57600 size 8 stop 1 parity none!	receiver device COM port setting baudrate: 57600 data size :8, stop:1 parity: none	
s rs232 time x!	set send RS232 command wait time x=200~5000ms	s rs232 time 200!	send RS-232 command wait time 200ms	200ms



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#### **Product Diagram:**



#### 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.