HDMI (HDBaseT) CAT5 Extender Series
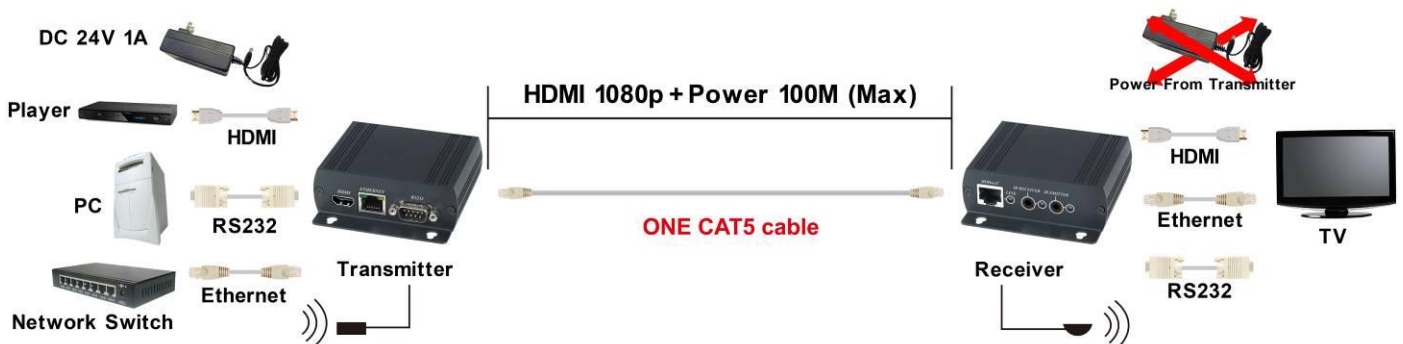
ITEM NO.:   HE02P   HDMI (HDBaseT) CAT5 Extender with Ethernet/RS232/IR/PoH

The HDMI HDBaseT Extender provides full 3D (all formats) & resolutions up to 4Kx2K (4 times the 1080p) with multi-channel audio, IR & RS-232 extension over a single low cost CAT5e/6 cable. Fully compliant with HDCP, EDID and CEC controls. The HDMI HDBaseT Extender can be easily controlled with IR/RS-232 control ports. The HDMI HDBaseT Extender extends Ethernet to connected TVs for online access and provides IR back channel to control A/V sources using the same CAT5e cable extension. With the built-in IR emitter, simply point the IR remote(s) at the display to control the Hi-Def. sources as if they were located in the same room as the display.   With supports PoH (Power over HDBaseT) feature which eliminating excess or unwanted power drain and also provides power to the receiver at the remote location.

HE02P   HDMI (HDBaseT) CAT5 Extender with Ethernet/RS232/IR/PoH

- Extends HDMI, RS232 and IR signal with Ethernet over one CAT5e/6 cable.
- Uncompressed high definition video up to 1080p@60Hz@48bits.
- HDMI 1.4 with 3D, 4k x 2k support, HDCP & DVI Compliant.
- Max. Data Rate- 10.2Gbps.
- Audio supports up to LPCM 7.1 @ 192KHz、Dolby TrueHD、DTS-HD MA
- Transmission range up to 100 meters at 1080p resolution.
- Bi-directional IR, support 30-60khz.
- Bi-Directional RS232 interface – commands and data can flow in both directions via RS232, allowing status requests and control of the destination unit.
- Support two port 10/100Mbps network, allow to connect the network TV or internet devices.
- Support PoH (Power over HDBaseT), no external power required at receiver.
- External power supply included for the Transmitter.

Installation view:

Cable:

Link cable recommend use high quality Cat.5e、Cat.6、Cat.6a、Cat.7 UTP / STP or FTP cable.

Poor quality cable or network connection or improper construction will cause unstable connection, video or sound disruptions, picture noise appears.
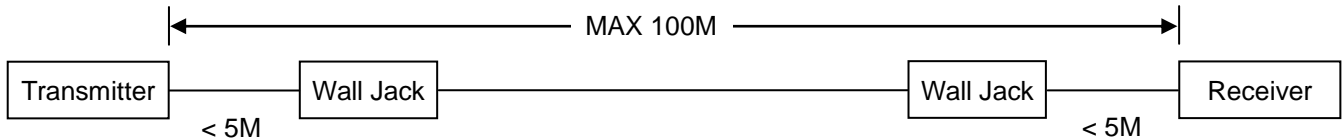
Transmission Distance:

The maximum transmission distance up to 100meters, use lower resolution won't extend longer distance

HDBaseT Distance chart by different cable:

Cable Type	Range	Pixel Clock Rate	Video Data Rate	Supported Video
CAT5e / CAT6	100m	<=225Mhz	<=5.3Gbps (HD Video)	Up to 1080p 60Hz 36 bits
	70m	>225Mhz	>5.3Gbps (Ultra HD Video)	1080p 60Hz 48bits 1080p 60Hz 3D, 4K x 2K 30Hz
CAT6a / CAT7	100m			

If connection through the wall socket, the cable length must less 5 meters between HDMI extender and wall jack, as below drawing:

10/100Mbps network connection using general CAT5e cable and working distance up to 100M.

RJ45 Define:

PIN	Color	HDBaseT	10/100Mbps Ethernet
1	W-O	DATA 0 +	RX +
2	O	DATA 0 -	RX -
3	W-G	DATA 1 +	TX +
4	BL	DATA 2 +	N/C
5	W-BL	DATA 2 -	N/C
6	G	DATA 1 -	TX -
7	W-BR	DATA 3 +	N/C
8	BR	DATA 3 -	N/C

LED Indication:

HDMI Port Status LED :

Color	LED Function	HE02PT	HE02PR
Green	Power	On: Power On	
Blue	IR Receive	On: IR Received Signal	
Red	IR Emitter	On: IR Emitting	

HDBaseT Port Status LED :

Color	LED Function	HE02PT	HE02PR
Green	HDBaseT Linking	On: HDBaseT Linking , Flash: Low Power Mode	
Blue	Reserve	No Function	
Red	HDMI	On: With HDCP , Flash: Without HDCP , Off: HDMI Unlink	

10/100 Ethernet Port :

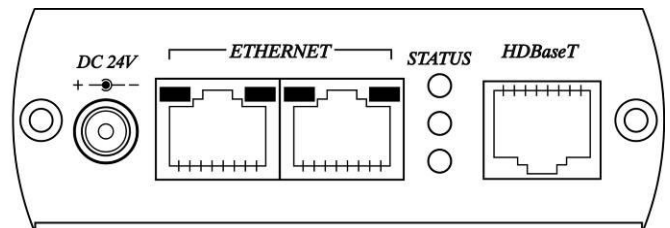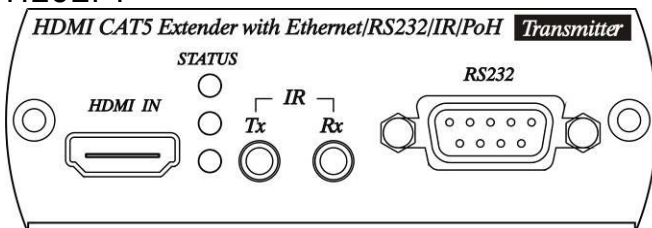| Color	LED Function	HE02PT	HE02PR
Green	Ethernet Linking	On: Linking , Flash: Data Transmission	
Yellow	Reserve	No Function	

Low-power Mode:

When there is no HDMI video signal input, or TV is not connected or power off, this product will enter a low-power mode to save power consumption; Under a low power mode still provides Ethernet, RS-232(Max. 9600bps), IR, CEC of signal transmission.
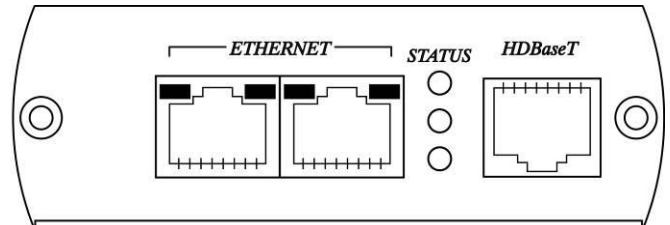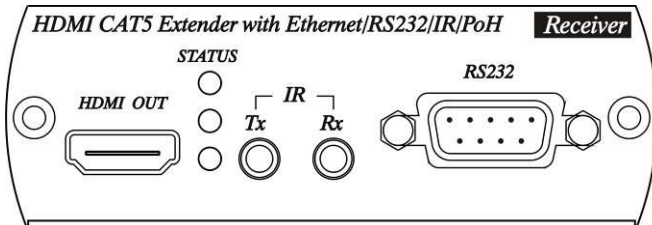
Caution:

1. The wiring must away from any equipment with electromagnetic wave, i.e.: mobile phone, microwave, radio equipment, fluorescent lamp, high voltage power lines.
2. This device HDBaseT port is not general Ethernet signal which also carry power, do not connect with Network to avoid damage.
3. IR transmitter do not put near from receiver to avoid mutual interference.

Panel view:

HE02PT

HE02PR

Package Include:

HE02PT   Transmitter x 1 piece
HE02PR   Receiver x 1 piece
Power adapter DC24V 1AMP x 1 piece
Mounting screw pack x 2 bags
IR Emitter cable x 2 pieces
IR Receiver cable x 2 pieces

Specification:

ITEM NO	HE02PT	HE02PR
HDMI Connector	HDMI Type A x 1	
HDMI Video	Up to 1080p@60Hz@48bits、3D、4K x 2K	
HDMI Audio	Up to LPCM 7.1 192Khz、Dolby TrueHD、DTS-HD MA	
HDBaseT Connector	RJ45 x 1	
HDBaseT Distance	100M (Max)	
Ethernet Connector	RJ45 x 2 (with 2 LED)	
Ethernet Data Rate	10 / 100Mbps	
Ethernet Distance	100M (Max)	
RS-232 Connector	DB9 Female	DB9 Male
RS-232 Baud Rate	Up to 115200 bps / Full Duplex	
IR Connector	3.5mm Phone Jack x 2	
IR Carrier	30-60KHz / T：± 10° / R：± 55° / 5M / 2 Way	
Power Supply	Regulated DC 24V 1A	PoH (From HE02PT)
Power Consumption	Max Total 15W, Low Power Total 5W	
Temperature	Operation: 0 to 55℃, Storage: -20 TO 85℃, Humidity: up to 95%	
Dimensions mm	88 x 135 x 30	
Weight g	300	

RoHS CE FC C

Rev. A