

HDMI (HDBaseT) CAT5 Extender Series

ITEM NO.: HE02EXP 4K 60Hz 4:4:4 HDMI & IR/RS232/PoH CAT5e Extender



HE02EXP HDMI CAT5e Extender is using only one cost effective CAT5e/6 cable to extend your 4K UHD 60Hz 4:4:4 display up to 100M. With Bi-directional RS232 and IR function and power could be send from either side to delivers significant value to the entire home and commercial entertainment system.

HE02EXP 4K 60Hz 4:4:4 HDMI with IR/RS232/PoH CAT5e Extender

- Extends HDMI 4K UHD, RS232 and IR signal over one CAT5e/6 cable.
- HDMI 2.0, HDCP 2.2/1.4 & DVI Compliant.
- Support 4K UHD capability@60Hz with 4:4:4, HDR. 18Gbps (6Gbps per color)
- Support 4K@60hz /1080p@60Hz@48bits at 100M.
- Support PoH (Power over HDBaseT), allow power send either from TX or RX unit.
- Audio supports up to LPCM 7.1 @ 192KHz, Dolby TrueHD, DTS-HD MA
- Bi-directional IR, support 30-60khz.
- Bi-Directional RS232.
- Support CEC, EDID pass through

Installation view:



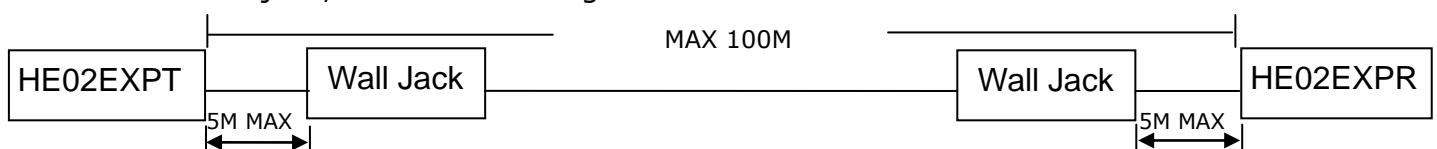
Cable:

Link cable recommend use high quality CAT5e, CAT6, CAT6a, CAT7 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.

HDBaseT Distance Chart by Different Cable:

Cable Type	Range	Supported Video
CAT5e / CAT6	100m	Up to 1080p 60Hz 12bit
CAT6a / CAT7	100m	
CAT5e / CAT6	70m	Up to 4096x2160@60Hz 4:4:4
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



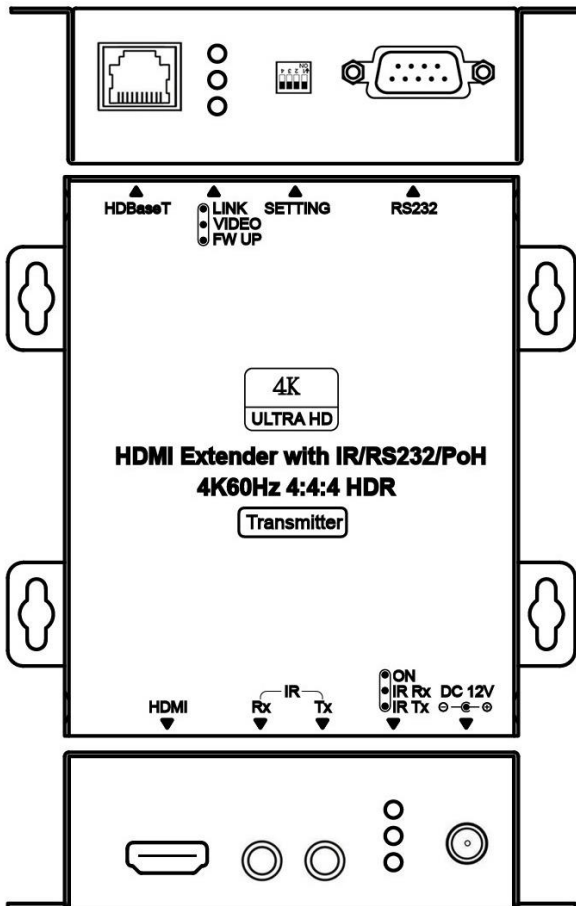
RJ45 Define:

Video Link (TIA/EIA-568-B)

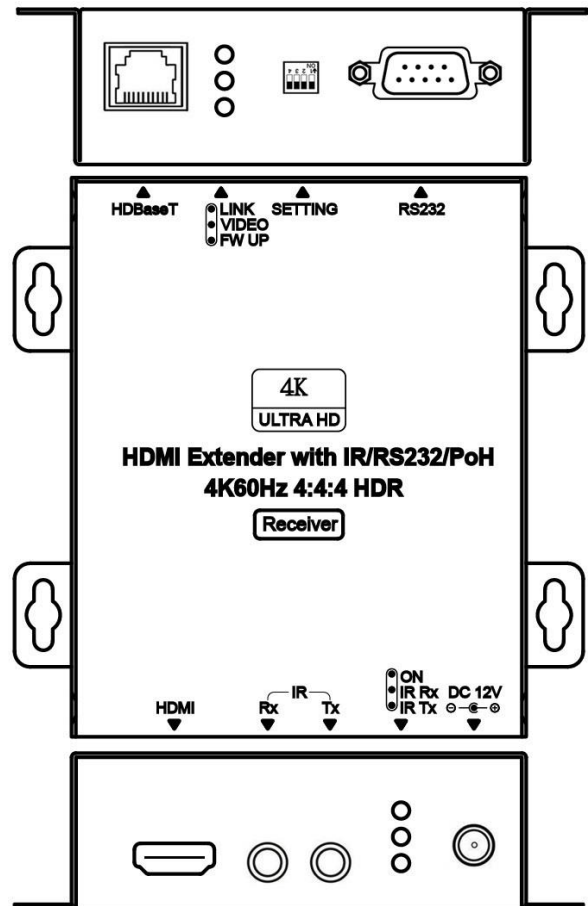
- 1. Orange-white DATA0 +
- 2. Orange DATA0 -
- 3. Green-white DATA1 +
- 4. Blue DATA2 +
- 5. Blue-white DATA2 -
- 6. Green DATA1 -
- 7. Brown-white DATA3 +
- 8. Brown DATA3 -

Panel view:

HE02EXPT



HE02EXPR



LED Instruction:

Color	Status	HE02EXPT	HE02EXPR
GREEN	LINK	ON: HDBaseT Linking	
BLUE	VIDEO	ON: Input signal 4K@60Hz 4:4:4	
RED	FW UP	ON: Firmware Update	
Color	Status	HE02EXPT	HE02EXPR
GREEN	ON	ON: Power normal	
BLUE	IR RX	ON: Receiving IR signal	
RED	IR TX	ON: Sending IR signal	

Firmware updated Switch:



- 1. Reserved
- 2. FW1 updated
- 3. FW2 updated
- 4. FW3 updated

RS232 Define:**DB9 FEMALE**

RS232	
Footprint	Define
Pin 2	TX
Pin 3	RX
Pin 5	GND

DB9 MALE

RS232	
Footprint	Define
Pin 2	RX
Pin 3	TX
Pin 5	GND

Package Include:

HE02EXPT	x 1
HE02EXPR	x 1
DC12V 1.5A Adapter	x 1
IR Receiver Cable	x 1
IR Emitter Cable	x 1
Mounting Screw pack	x 2

Trouble Shooting:

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. Under HDMI 2.0 mode, must use Premium certified HDMI cable.
3. Under HDCP 2.2 mode: any one monitor HDCP authorization failed will cause no video status, other connecting monitors will be also failed. Then monitor testing must be one by one to find which monitor HDCP failed.
4. This device HDBaseT port is not general Ethernet signal; do not connect with Network devices to avoid damage.
5. IR transmitter do not put near from receiver to avoid mutual interference.

Specification:

ITEM NO.	HE02EXPT	HE02EXPR
HDMI Input Connector	HDMI Type A x 1	X
HDMI Output Connector	X	HDMI Type A x 1
HDMI Video Support	1080p @ 60Hz @ 48bpp · 3D · 4K/60Hz/4:4:4	
HDMI Audio Support	Up to 7.1 LPCM 192KHz / Dolby TrueHD / DTS-HD MA	
HDBaseT Connector	RJ45 x 1	
HDBaseT Distace	100M	
RS-232 Connector	DB9 Female	DB9 Male
RS-232 Baud Rate	115200 bps / full duplex	
IR Input/Output	3.5mm Phone Jack x 2	
IR Carrier Frequency/Angle/Distance	30~60KHz / T : ± 10° / R : ± 55° / 5M /Bi-directional	
Power consumption	5.4W	7.32W
Lower Power mode: Power Consumption	2W	1.8W
Power Adapter	DC 12V /1.5A	
Temperature	Operation: 0 to 55°C, Storage: -20 TO 85°C, Humidity: up to 90%	
Dimensions mm	109.6 x 109.5 x 30	
Weight g	260	275



Rev. A