

## HDMI (HDBaseT) CAT5 Extender Series

### ITEM NO.: HE02EIX 4K 60Hz 4:4:4 HDMI & IR/RS232 CAT5e Extender

HE02EIX HDMI CAT5 Extender is using only one cost effective CAT5E/6 cable to extend your 4K UHD 60Hz 4:4:4 display up to 70M. With Bi-directional RS232 and IR function to delivers significant value to the entire home and commercial entertainment system.

### **HE02EIX 4K 60Hz 4:4:4 HDMI with IR/RS232 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.**
- **Support 1080p@60Hz@48bits at 70M, 4K@60hz at 40M.**
- Transmitter built in local loop out for local display.
- Receiver built in dual HDMI output for two output display.
- 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
- 18Gbps (6Gbps per color)

#### Installation view:



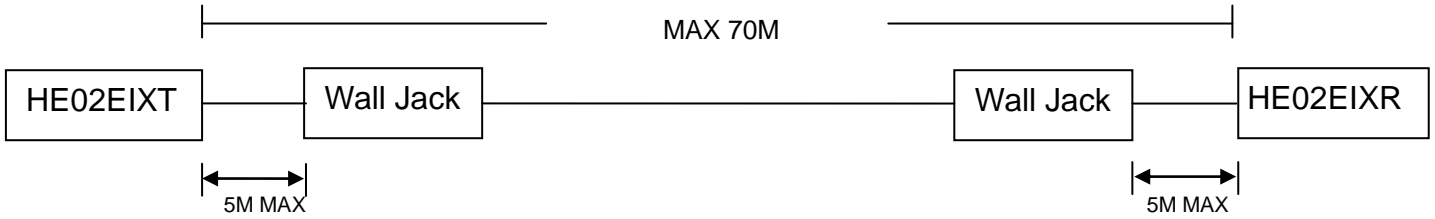
#### Cable:

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	60m	Up to 1080p 60Hz 12bit
CAT6e / CAT7	70m	
CAT5e / CAT6	35m	Up to 4096x2160@60Hz 4:4:4
CAT6a / CAT7	40m	

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



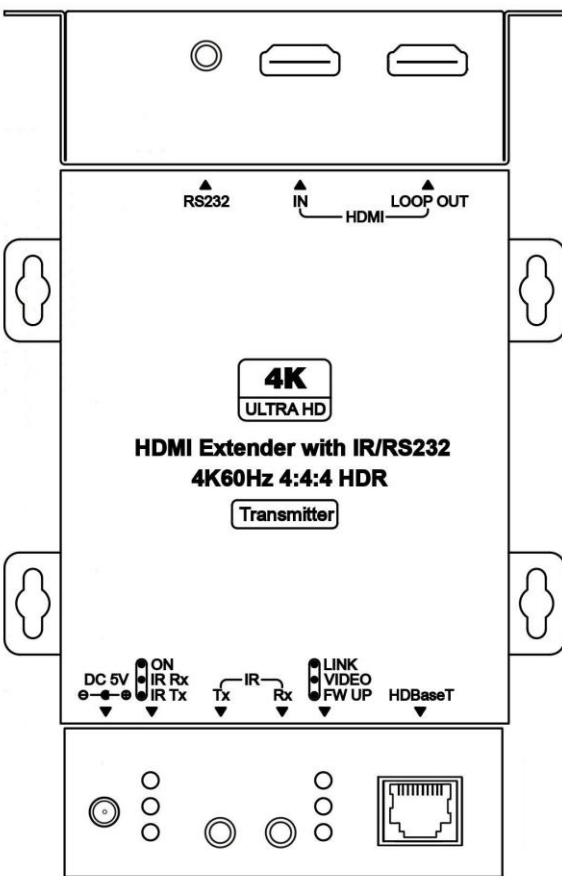
**RJ45 Define:**

**Video Link (TIA/EIA-568-B)**

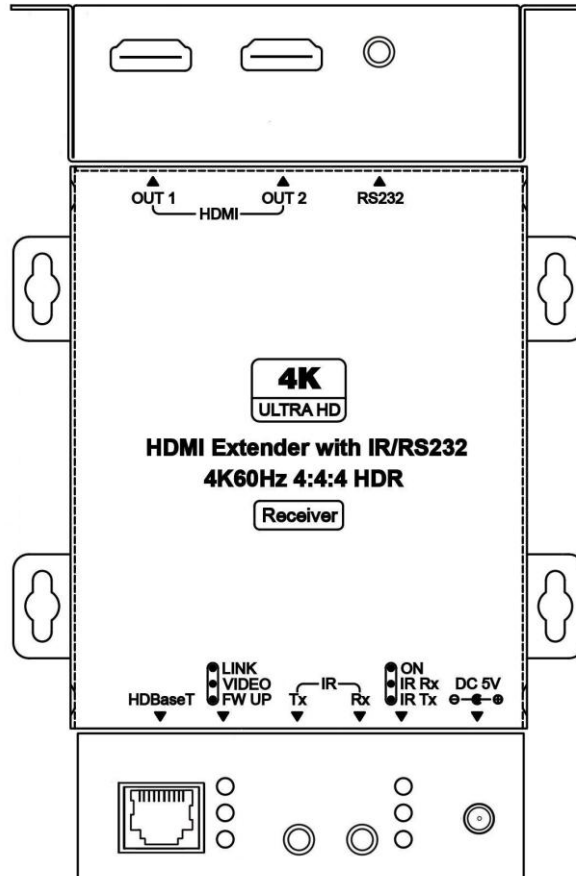
- 1. Orange-white      DATA0 +
- 2. Orange            DATA0 -
- 3. Green-white      DATA1 +
- 4. Blue                DATA2 +
- 5. Blue-white        DATA2 -
- 6. Green              DATA1 -
- 7. Brown-white      DATA3 +
- 8. Brown             DATA3 -

**Panel view:**

HE02EIXT



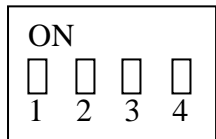
HE02EIXR



## LED Instruction:

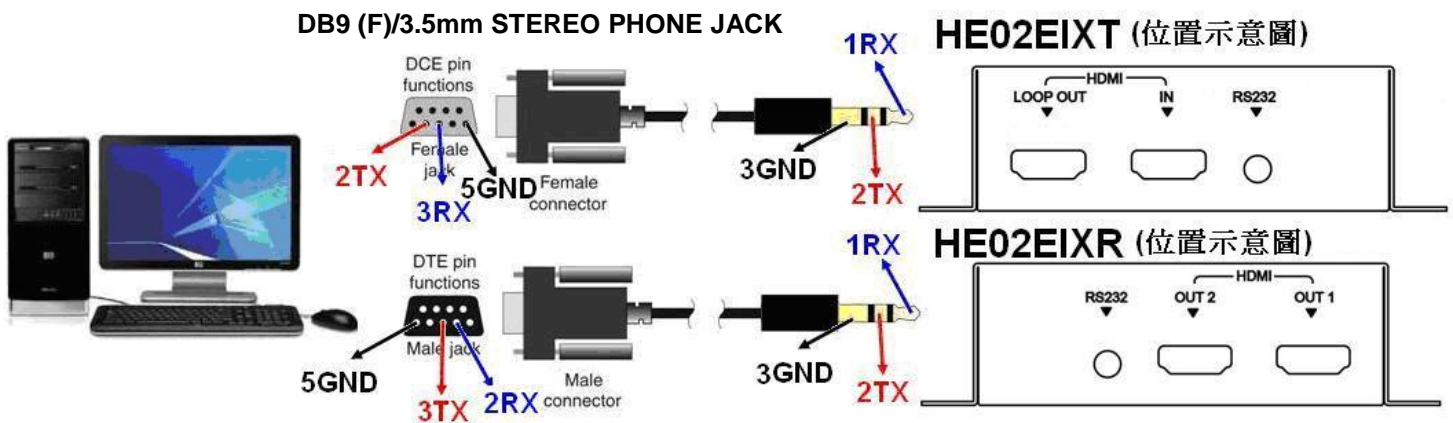
Color	Status	HE02EIXT	HE02EIXR
GREEN	LINK	ON: HDBaseT Linking	
BLUE	VIDEO	ON: Input signal 4K@60Hz 4:4:4	
RED	FW UP	ON: Firmware Update	
Color	Status	HE02EIXT	HE02EIXR
GREEN	ON	ON: Power normal	
BLUE	IR RX	ON: Receiving IR signal	
RED	IR TX	ON: Sending IR signal	

## Firmware updated Switch:



1. RS232                      ON: Firmware Update, OFF: RS232 Extender
2. Reserve                    Must Keep Off
3. Low Power Mode        ON: Turn off power saving mode, OFF: Turn on power saving mode
4. Reserve                    Must Keep Off

## RS232 Define:



### DB9 (F)/3.5mm STEREO PHONE JACK

RS232		3.5 mm Phone Jack	
Footprint	Define	Footprint	Define
Pin 2	TX	Pin 1	RX
Pin 3	RX	Pin 2	TX
Pin 5	GND	Pin 3	GND

### DB9 (M)/3.5mm STEREO PHONE JACK

RS232		3.5 mm Phone Jack	
Footprint	Define	Footprint	Define
Pin 2	RX	Pin 1	RX
Pin 3	TX	Pin 2	TX
Pin 5	GND	Pin 3	GND

**Package Include:**

HE02EIXT	x 1
HE02EIXR	x 1
DC 5V 2A Adapter	x 2
IR Receiver Cable	x 1
IR Emitter Cable	x 1
DB9 (M)/3.5mm STEREO PHONE JACK	x 1
DB9 (F)/3.5mm STEREO PHONE JACK	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 EDID pass through for HE02EXT transmitter input and HE02EXR receiver output 1 only.
4. CEC works for HE02EXT transmitter input and HE02EXR receiver output 1 only.
5. 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.
6. This device DBase port is not general Ethernet signal; do not connect with Network devices to avoid damage.
7. IR transmitter do not put near from receiver to avoid mutual interference.

**Specification:**

ITEM NO.	HE02EIXT	HE02EIXR
HDMI Input Connector	HDMI Type A x 1	X
HDMI Output Connector	HDMI Type A x 1	HDMI Type A x 2
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	70M	
RS-232 Connector	DB9(F)/3.5mm STEREO PHONE JACK	DB9(M)/3.5mm STEREO PHONE JACK
RS-232 Baud Rate	115200 bps / full duplex	
IR Input/Output	3.5mm Phone Jack x 2	
IR Carrier Frequecny/Angle/Distance	30~60KHz / T : ± 10° / R : ± 55° / 5M /Bi-directional	
Power consumption	1A	1.6A
Lower Power mode: Power Consumption	263mA	324mA
Power Adapter	DC 5V 2A	
Temperature	Operation: 0 to 55°C, Storage: -20 TO 85°C, Humidity: up to 95%	
Dimensions mm	109.6 x 109.5 x 30	
Weight g	270	285