sy

User Manual

HDBT-EC Set

4K HDBaseT Extender

HDMI – HDBaseT Extender Pair
with PoC & Bi-Directional IR Support

4K UHD

70m @ 1080p
40m @ 4K2K (60Hz 4:2:0)

The SY-HDBT-EC Set is an HDBaseT Extender set consisting of a transmitter (TX) and a receiver (RX) pair. It broadcasts a single HDMI signal via cat5e/cat6/cat6a cable up to 70m @ 1080p or 40m @ 4K with PoC. IR pass-through allows control of any IR device from either the transmitter or the receiver location.

Features

- Supports HDMI1.4, HDCP2.2 & CEC
- Maximum transmission distance is up to 70m for 1080p or 40m for 4Kx2K
- Supports bi-directional IR pass-through – wide carrier frequency 28-60KHz
- Supports bi-directional PoC for simplified wiring – PSU at Transmitter or Receiver
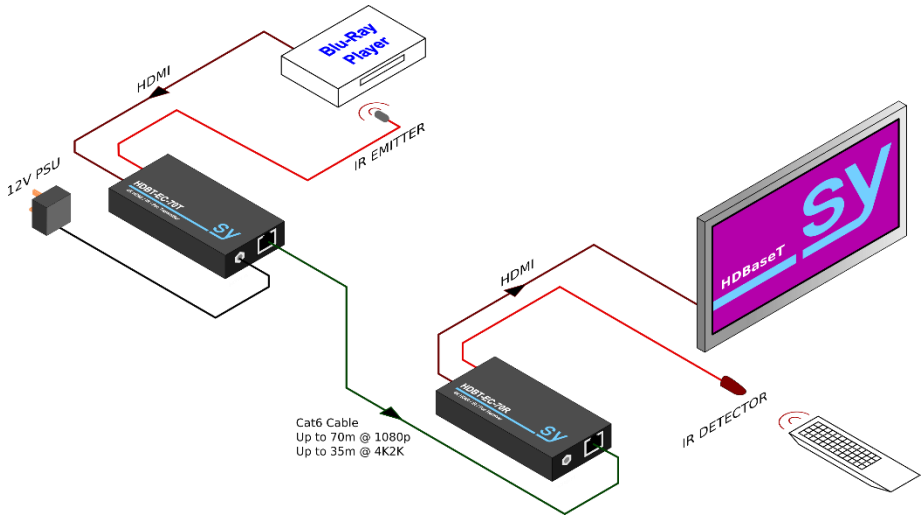- Only 16mm thick

Panel Connectors

Tx   Rx

Name	Description
12V DC	12V DC PSU Input – Only one side needs the PSU connection LED On – Unit is powered up
RJ45	HDBaseT Connection – Direct connection from Tx to Rx units
HDCP Led	Solid – HDCP ON Flashing – HDCP OFF
Link Led	Solid – Transmitter Receiver pair are linked
HDMI	HDMI input (Tx) and Output (Rx)
IR In	IR Input from IR Eye
IR Out	IR Output to IR Emitter

Using the HDBT-EC Extender Set

- Connect the cat5e/cat6 cable directly between the RJ45 connector on the transmitter and receiver pair.
- Connect the HDMI source to the HDMI IN connector on the HDBT-EC transmitter.
- Connect the HDMI display device to the HDMI OUT connector on the HDBT-EC receiver.
- Connect the 12V DC PSU to either the transmitter or the receiver. Only one PSU is required, as the other end will be powered via the cat5e/cat6 cable.
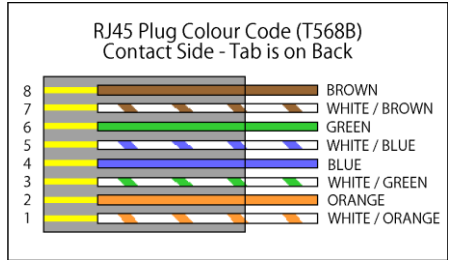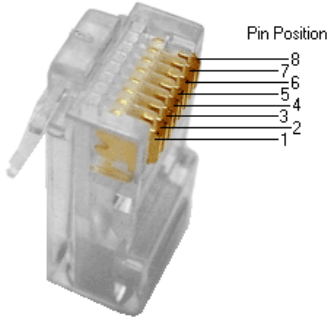

Specification

HDMI Resolutions	VESA and SMPTE 480p to 2160p (4K UHD) with 3D. (All resolutions to: 4096x2160p @60Hz 4:2:0 8bit, 3840x2160p @30Hz 4:4:4 8bit) All PC resolutions to 1920x1200
HDMI Standard	HDMI 1.4
HDCP Standard	HDCP 1.4 & HDCP 2.2
HDMI Bandwidth	HDBaseT – 10.2Gbps
Transmission Distance	Up to 70 metres @ 1080p or 40m @ 4K2K 60Hz 4:2:0 (30Hz 4:4:4) With Power over Cable (PoC)
IR Control	28-60kHz carrier frequency for any control protocol
Power Supply	12V DC @ 1A
Power Consumption	SY-HDBT-EC Set: 9 W max
Operating Temperature	0 – 45 °C non condensing
Dimensions (W x H x D)	120 x 16 x 74 mm
Weight	240 g

RJ45 Wiring

Both connectors must be wired identically, to T568B standard.

Note:

You may use cat5e, cat6 UTP (cat6 preferred) in conjunction with the HDBaseT output; however for best performance use cat6a or cat7 (particularly in electrically noisy environments). The maximum distances & transmission performance for HDMI and HDBT may be compromised by cable quality, patch panels, poor termination, wall plates, cable kinks and electrical interferences. Generally ensure the cat cable is solid copper core of 23AWG (avoid CCA type), in one straight run (avoid/minimise patches) and avoid close proximity to any noisy electrical sources.

Only one 12V DC power supply is required and may be connected to either the transmitter to the receiver.

Do NOT connect to any other network or any other HDBaseT extender type. To do so may damage the device beyond repair.

Safety Instructions

To ensure reliable operation of this product as well as protecting the safety of any person using or handling these devices while powered, please observe the following instructions.

1. Use the power supplies provided. If an alternate supply is required, check Voltage, polarity and that it has sufficient power to supply the device it is connected to.
2. Do not operate either of these products outside the specified temperature and humidity range given in the above specifications.
3. Ensure there is adequate ventilation to allow this product to operate efficiently.
4. Repair of this equipment should only be carried out by qualified professionals as this product contains sensitive devices that may be damaged by any mistreatment.
5. Only use this product in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with this product.

After Sales Service

1. Should you experience any problems while using this product, firstly refer to the Troubleshooting section in this manual before contacting SY Technical Support.
2. When calling SY Technical Support, the following information should be provided:
   - Product name and model number
   - Product serial number
   - Details of the fault and any conditions under which the fault occurs.
3. This product has a two year standard warranty, beginning from the date of purchase as stated on the sales invoice. For full details please refer to our Terms and Conditions.
4. SY Product warranty is automatically void under any of the following conditions:
   - The product is already outside of its warranty period
   - Damage to the product due to incorrect usage or storage
   - Damage caused by unauthorised repairs
   - Damage caused by mistreatment of the product
5. Please direct any questions or problems you may have to your local dealer before contacting SY Electronics