

Installation Guide

SY-HDBT-70P Extender Set

with

HDMI, IR, RS232 and Power

over 60m of cat6 Cable



HDBaseT HDMI Extenders

SY-HDBT-70T / SY-HDBT-70R

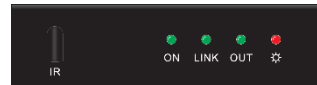
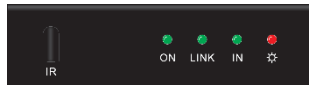
The **SY-HDBT-70PT** and **SY-HDBT-70PR** HDBaseT transmitter / receiver pair broadcast HDMI, two-way IR control, bi-directional RS232 data and power up to 60m with perfect quality. These extenders are suited to a wide range of applications in AV industry, digital signage and at home.

Features

- Extend HDMI and data up to 60m with HDCP support and HDMI 1.4 compatibility
- Only one 24V DC power supply required (at the Transmitter or Receiver)
- Provides transmission of IR and RS232 control signals over the same cable in both directions
- Status indicators for Link, HDMI and HDCP
- Supports all HDMI resolutions up to 4K x 2K (including: 1080p, 1080i,, 480p and 480i)
- Supports 3D and CEC

Connectors and Controls

Front



Name	Transmitter	Receiver
IR Sensor	Built-In IR sensor	
ON LED	HDMI signals present. See Troubleshooting for more information.	
LINK LED	Indicates the transmitter / receiver pair are linked and communicating.	
IN or OUT LED	Always on: HDCP currently active Flashing: HDCP not present	
POWER LED	Unit powered	

Rear



Name	Transmitter	Receiver
HDBaseT	HDBaseT RJ45 connection (with Power over Cable)	
HDMI	HDMI input from HDMI source	HDMI output to HDMI display
RS232	3 way plug-in RS232 terminal connector	
IR IN	Input from IR detector (3.5mm Jack)	
IR OUT	Output to IR emitter (3.5mm Jack)	
Power	24V DC power connector	

Using the HDBaseT HDMI Extenders

HDMI Extender

Connect a HDMI source to the HDMI IN socket on the HDBT-70PT and connect a HDMI display to the HDMI OUT socket on the HDBT-70PR. Connect a cat6 UTP cable to the HDBaseT sockets of both the transmitter and receiver units. Connect the 24V Power supply to either the transmitter or the Receiver unit.



SY-HDBT-70T / SY-HDBT-70R

A Flashing HDCP LED indicates the HDMI signal does not support HDCP. A Solid ON HDCP LED indicates HDCP is active.

The LINK LED indicates that the transmitter and receiver units are communicating (Solid ON).

A Flashing HDMI LED indicates that HDMI data is being sent from the transmitter to the receiver, and also to the HDMI display (normal operation). The HDMI LED will remain OFF for any of the following conditions:

1. The HDMI source is not outputting data, or the HDMI cable is either not connected or it is faulty.
2. The HDMI display is not connected or powered up, or the HDMI cable is faulty.
3. The HDMI display is not set to use its HDMI input.

IR – Dual Bidirectional

To use the IR Extender option, either point your IR remote control device at the extender unit or connect the IR detector to the IR IN socket of either the SY-HDBT-70PR or the SY-HDBT-70PT as required and the IR emitter to the corresponding transmitter or receiver IR OUT socket. Locate the IR emitter close to the device you wish to control. All IR control functions are now possible from the remote location.

RS232 - Bidirectional

To use the RS232 Extender option, connect the RS232 equipment to the RS232 terminal blocks with the cables provided and ensure that any RS232 handshake modes are set to none. The SY-HDBT-70P Extender set supports all standard RS232 baud rates up to 115.2 K baud without setting any switches or special configuration options.

PoC

The SY-HDBT-70P Extender set have a Power over Cable (PoC) capability, allowing both the Transmitter and Receiver units to be powered using only one power supply. The set can be powered from either the Transmitter side or the Receiver side.

For best results, use only solid copper cat6 cables.

SY-HDBT-70T / SY-HDBT-70R

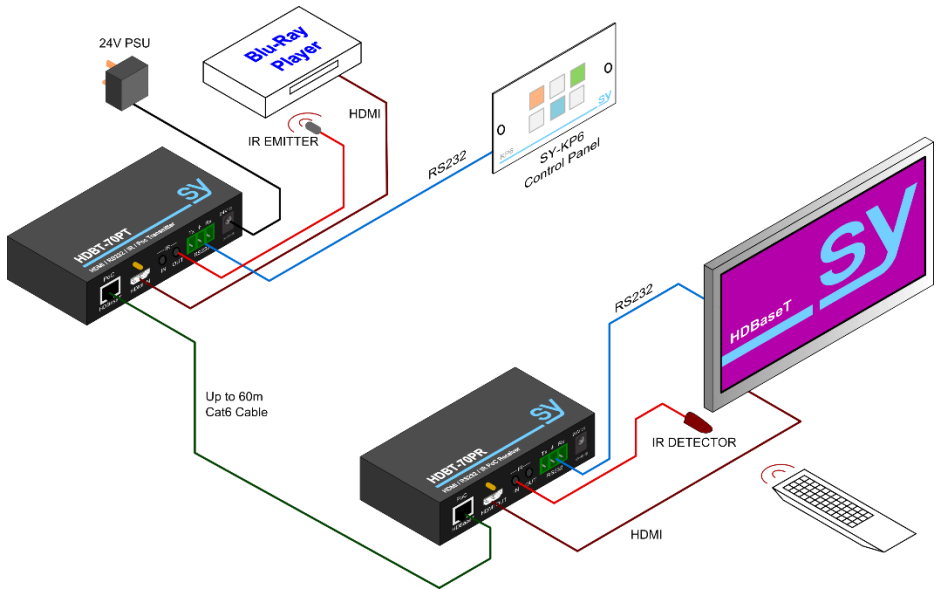


Figure 1 - Configuration Example

SY-HDBT-70T / SY-HDBT-70R

Specifications

General

HDMI Resolutions	480i, 480p, 720i, 720p, 1080i, 1080p, 1920 x 1200, 4K x 2K
HDMI Standard	HDMI 1.4
HDMI Link Mode	HDBaseT, synchronous switching
Link Transmission Distance	Up to 60 metres with Power over Cable (PoC)
IR Control	38kHz carrier frequency for any control protocol
RS232	Supports Tx and Rx only – Any RS232 baud rates up to 115.2 Kb
Power Supply	24V DC
Power Consumption	SY-HDBT-70P Set: 7.3 W max

Environmental

Operating Temperature	0 – 40 °C non condensing
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Physical

Dimensions (W x H x D)	110 x 30 x 77 mm	
Weight	SY-HDBT-70PT: 220 g	SY-HDBT-70PR: 230 g

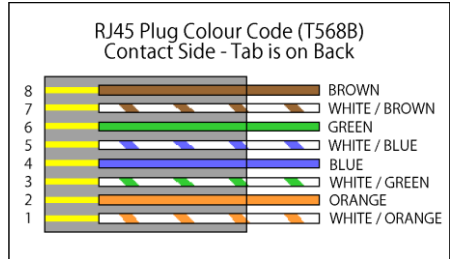
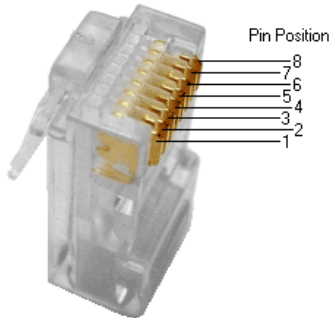
Troubleshooting

Problem	Possible Cause
Power LED is off	<p>Check that correct power supply as provided with the product is used.</p> <p>Check the PSU connections and ensure that the PSU is switched on.</p> <p>If the PSU is at the other end of the RJ-45 cable, check that the cable is correctly wired and is connected to the local unit.</p>
LINK LED is off	<p>Check that the RJ-45 cable between the transmitter and receiver is connected with a direct connection and within specified distance.</p> <p>Check the terminating connectors are wired correctly.</p>
HDMI LED is off	<p>For the transmitter:</p> <p>Check that the LINK LED is on.</p> <p>Check that the HDMI source is connected to the HDBT-70PT.</p> <p>Check that the HDMI source is powered.</p> <p>For the receiver:</p> <p>Check that the LINK LED is on.</p> <p>Check that the HDMI display is connected to the HDBT-70PR.</p> <p>Check that the HDMI display is powered.</p> <p>Check that the HDMI display is set to use its HDMI input.</p>

SY-HDBT-70T / SY-HDBT-70R

RS-45 Wiring

Both connectors must be wired identically.



HDBaseT will not pass through any Ethernet device, the HDBaseT port on the SY-HDBT-70PT must be connected directly to the HDBaseT port on the SY-HDBT-70PR.

Please do make sure that the Cat6 cable uses 4 pairs of 23AWG solid copper wires. Do not use inferior copper clad cables as these exhibit high resistances.

Safety Instructions

To ensure reliable operation of these products 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, as these products generate heat while operating.
4. Repair of the equipment should only be carried out by qualified professionals as these products contain sensitive devices that may be damaged by any mistreatment.
5. Only use these products in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with these products.

After Sales Service

1. Should you experience any problems while using these products, 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. These products have a two year standard warranty, beginning from the date of purchase as stated on the sales invoice. Online registration of these products is required to activate the full three year extended warranty. 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.