HB-30 HDBaseT Twisted Pair Extender Operation Manual V1.0

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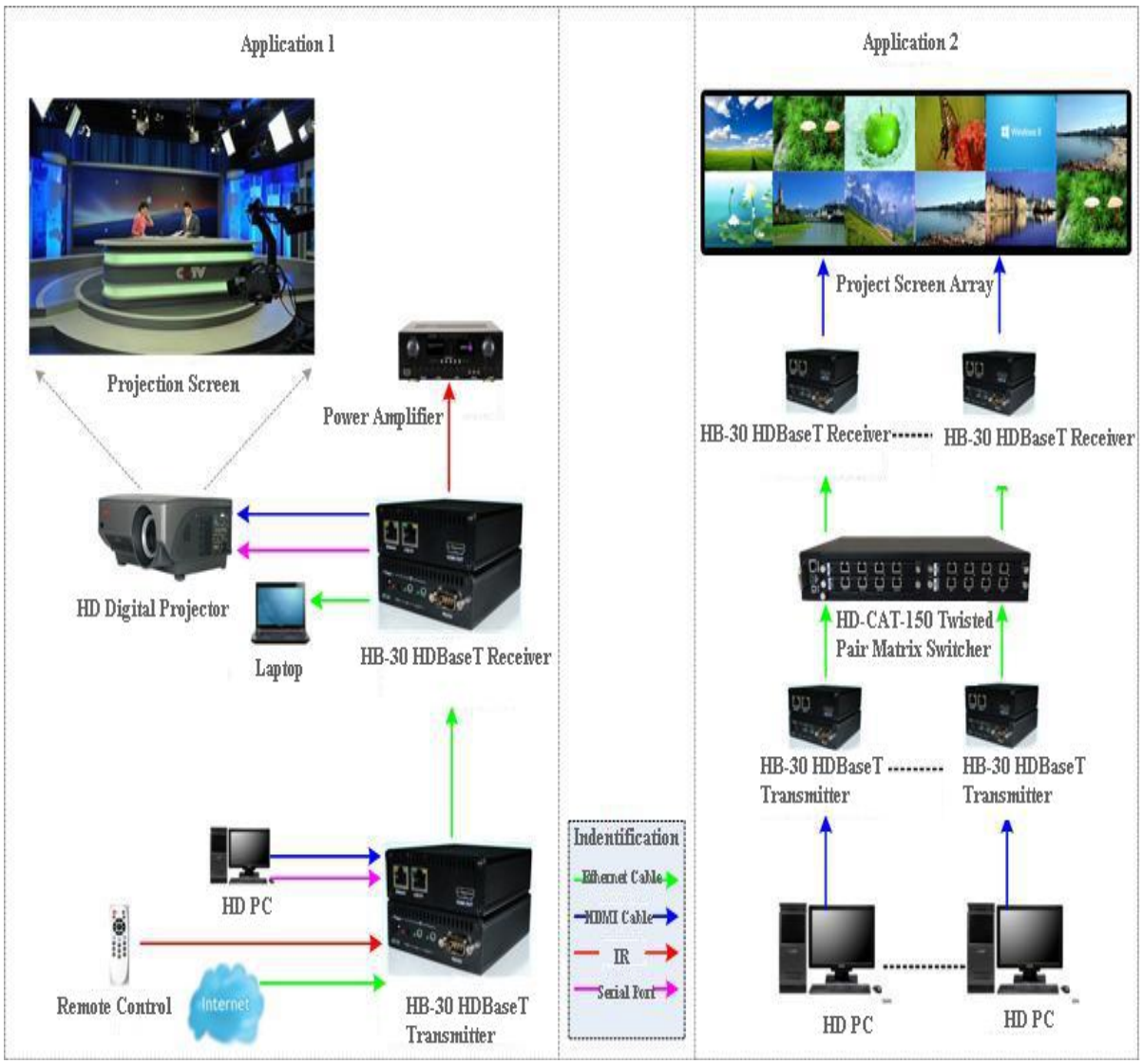
1. Introduction

1.1 Overview

HB-30 is an integrated HDBaseT technology extender, used with transmitter and receiver. It adopts common CAT.5e/6 cable as transmission wire.It extends the HDMI signal transmission distance and improves the image quality.The transmission distance is up to 100M. It supports all uncompressed 1080p and embedded audio signal transmission simultaneously. It also supports 4K * 2K ultra HD signal transmission.

HB-30 HDBaseT extender transmits not only HDMI signal over a single cable, but also synchronously transmit 100M Ethernet, RS232 and bi-directional IR signals.It is wildly used in the command center, multimedia teaching,etc. Details below:



1.2 Connector Introduction

The front and back view of the HB-30 transmitter as shown in Figure2.The front and back view of HB-30 receiver as shown in Figure 3.

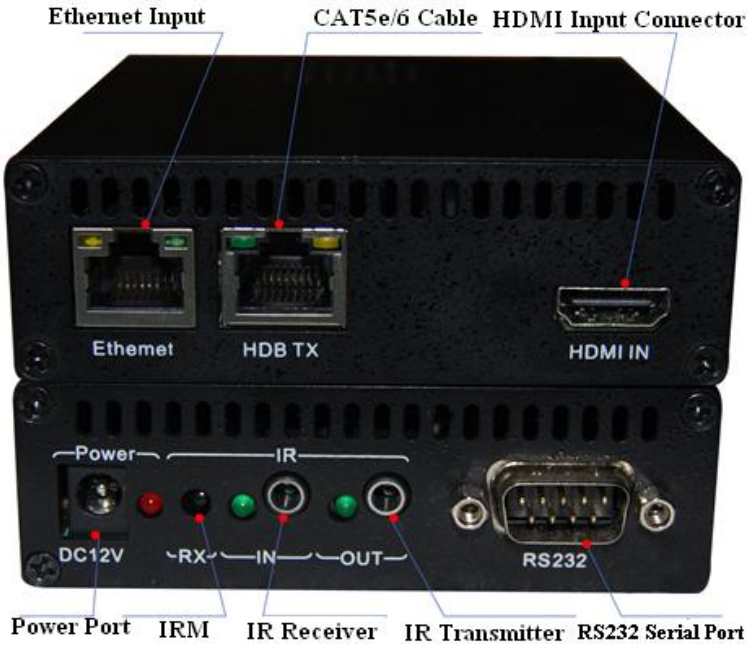


Figure 2 The transmitter front and back view

Figure 3 The receiver front and back view

1.3 Resolution and Transmission Distance

HB-30 can not influenced by the performance of the signal device, display device and CAT5e/6 cable. The maximum transmission distance is up to 100M and the maximum transmission rate is 10.2Gbps. Its maximum supported resolution is up to 3840×2160@30Hz.

1.4 Ethernet Signal

HB-30 supports 100M Ethernet signal transmission. The maximum transmission distance is up to 100M.

1.5 Serial Signal

HB-30 supports 100M RS232 or RS485 serial signal transmission. The maximum transmission distance is up to 100M

1.6 Bi-directional IR Signal

HB-30 supports bi-directional IR transmission. Both transmitter and receiver can receive IR signal and output IR signal to the device.
Both the HB-30 IRM and IR receiver can be used as the IR receiver. After connecting the IR receiver to the IR receive interface, its function is equivalent to the IR receiver.
Connect the IR transmitter to the IR transmitter port and output IR signal in the IR receiver.Then the IR transmitter can transmits the IR signal to the device.

2. Operation Introductions

2.1 Connection Diagram

Connect the HDBTX connector of the transmitter to the HDBRX connector of the receiver through CAT5e/6 cable. Connect each signal input connector to the signal source,connect each output connector of the receiver to the output device. As shown in Figure 4 and Figure 5 respectively:

Figure 4 The front view of connection

Figure 5 The back view of connection

2.2 Power

The DC Offset of HB-30 is DC 12V / 1A. If the connection is complete, provides 12V / 1A power for both transmitter and receiver respectively and then it begin working.

3. Precautions:

1) It supports HDCP compliant.
2) Resolutions below 640 * 480 may cause noise on the screen.
3) Keep away from the equipment that can generate electromagnetic waves, such as microwave ovens, radio equipment, high voltage lines, etc.
4) Please use high quality CAT.6, including cable and crystal head. Cable material may affect the maximum transmission distance.
5) Network wiring cannot use STP wire or flat wire. Otherwise it will result in no images.
6) Transmitter and receiver cannot be mixed, and need to be connected by rules. Otherwise it will result in no images.
7) During use please do not hot plug. Otherwise, the device will be damaged.

4. Q&A

Q: Why the output images have no sound?

A:

1) ✓ Check whether the cable is CAT.5e / CAT.6.
2) ✓ Check whether the connection sequence of crystal head is correct.
3) ✓ Check if the HDMI cable is well connected.
4) ✓ Replace the HDMI cable.
5) ✓ Check whether the source is correctly output.
6) ✓ Replace the signal source.
7) ✓ Check whether the entire connection system is properly operating with charging.