

Single-Gang HDMI 2.0 HDBaseT Wall Plate Extender Kit with IR, RS-232 & PoC — 70M

The KanexPro **WP-EXTHDBTKIT** is a single-gang HDMI 2.0 HDBaseT wall plate transmitter and receiver set for professional AV installations requiring robust signal extension with full bidirectional control. Supporting 18Gbps bandwidth with HDCP 2.2, it extends 4K/60Hz 4:4:4 up to 40m and 1080p/60 up to 70m over a single CAT5e/6 cable — with bidirectional IR and RS-232 control signals on the same cable.

Designed for courtrooms, boardrooms, and classrooms where device control is as important as signal delivery, the WP-EXTHDBTKIT eliminates separate control cable runs. Bidirectional IR allows display control from the source position; RS-232 enables integration with Crestron or AMX systems. PoC can be supplied from either the transmitter or receiver end. Includes IR cables, Phoenix connectors, mounting ears, and 24V/1A adapter. CE, FCC, UL certified.

Surge Protection Recommended — This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, or lightning strikes. Use of surge protection systems is highly recommended.

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FEATURES

- ✓ Single-gang, one HDMI input wall plate over HDBaseT
- ✓ Extend 4K/60 with 4:4:4 up to 40 meters (130ft)
- ✓ Extend 1080p/60 with 4:4:4 up to 70 meters (230ft)
- ✓ Supports HDMI 2.0 with 18Gbps bandwidth
- ✓ Digital audio support up to 7.1 channels of HD audio
- ✓ HDCP 2.2/1.4 compliant
- ✓ Bi-directional IR and RS-232C control
- ✓ Remote power via PoC (either Transmitter or Receiver)
- ✓ POC power consumption less than 10W
- ✓ Simple point-to-point transmission over CAT5e/6
- ✓ Active LED status indicator

PACKAGE CONTENTS

1× HDMI Wall Plate Transmitter • 1× HDBaseT Receiver • 2× Phoenix connector (2-pin) • 3× Phoenix connector (3-pin) • 1× IR Receiver cable • 1× IR Transmitter cable • 2× Mounting ears • 1× 24V/1A Power Adapter • 1× User Manual



Specifications

TECHNICAL	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 1.4 and HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	4K2K@50/60Hz (YUV 4:4:4), 4K2K@30Hz, 1080p@120Hz, 1080p 3D@60Hz
Color Space	RGB/YCbCr 4:4:4, YCbCr 4:2:2
Color Depth	10-bit, 12-bit
HDMI Audio Formats	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Optical Audio Formats	LPCM 2CH, LPCM 5.1, Dolby Digital 2/5.1CH, DTS 2/5.1CH
Transmission Distance	4K/60 4:4:4: up to 40m (130ft) • 1080p/60: up to 70m (230ft)
ESD Protection	Human body model ±8kV (Air-gap) & ±4kV (Contact discharge)

CONNECTION — TRANSMITTER	
Inputs	1× HDMI Type A [19-pin female], 1× IR INPUT [Phoenix jack], 1× RS-232 [Phoenix jack]
Outputs	1× HDBaseT Out [RJ45], 1× IR OUTPUT [Phoenix jack], 1× RS-232 [Phoenix jack]
Power	DC 24V [Phoenix jack]

CONNECTION — RECEIVER	
Inputs	1× HDBaseT In [RJ45], 1× IR IN [3.5mm Stereo Mini-jack], 1× RS-232 [Phoenix jack], 1× Service [Mini-USB]
Outputs	1× HDMI Type A [19-pin female], 1× IR OUTPUT [3.5mm Stereo Mini-jack]

MECHANICAL	
Housing	Metal Enclosure
Color	Black
Dimensions — TX	4.07" × 1.81" × 1.18" (103.5 × 46 × 30mm)
Dimensions — RX	6.18" × 3.54" × 0.79" (157 × 90 × 20mm)
Weight — TX	0.36 lbs (163g)
Weight — RX	0.73 lbs (330g)

POWER	
Power Supply	Input: AC 100–240V 50/60Hz • Output: DC 24V/1A
Power Consumption	9W max

CERTIFICATIONS	
Regulatory	CE, FCC, UL

ENVIRONMENT	
Operating Temperature	32–104°F / 0–40°C
Storage Temperature	–4–140°F / –20–60°C
Relative Humidity	20–90% RH (no condensation)

PACKAGE CONTENTS	
1×	HDMI Wall Plate Transmitter
1×	HDBaseT Receiver
2×	Phoenix connector (2-pin)
3×	Phoenix connector (3-pin)
1×	IR Receiver cable

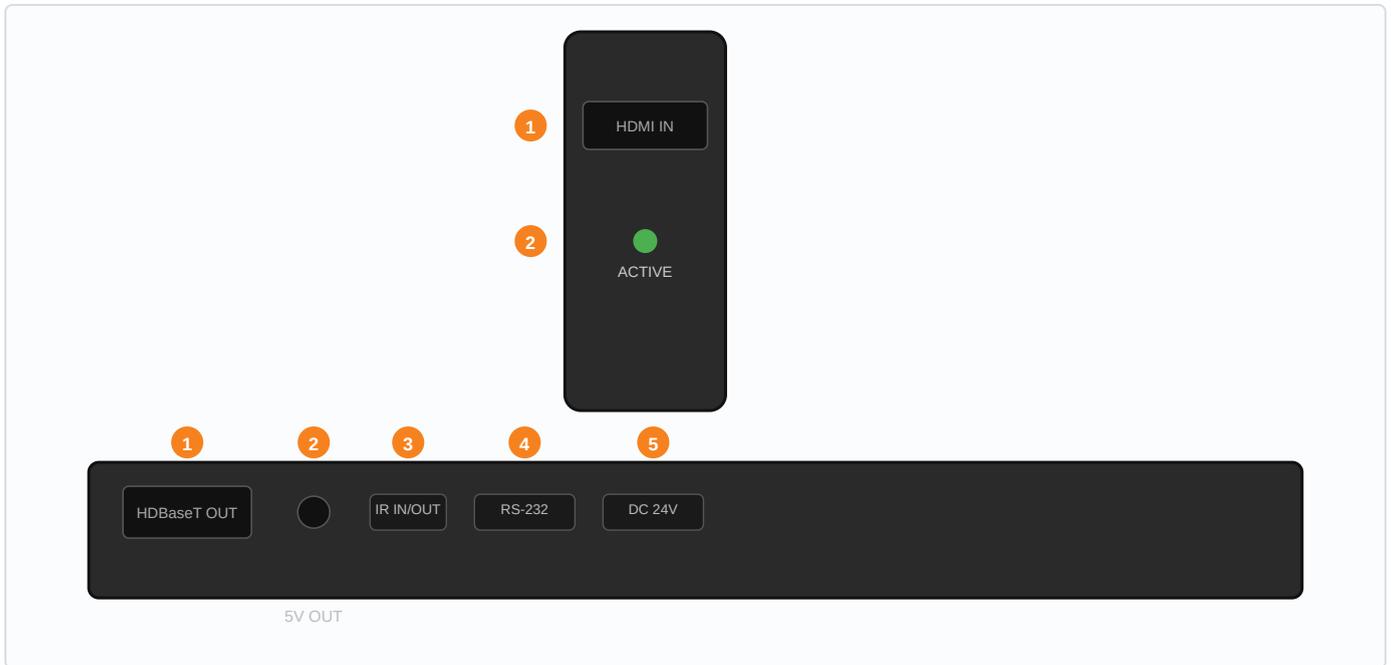


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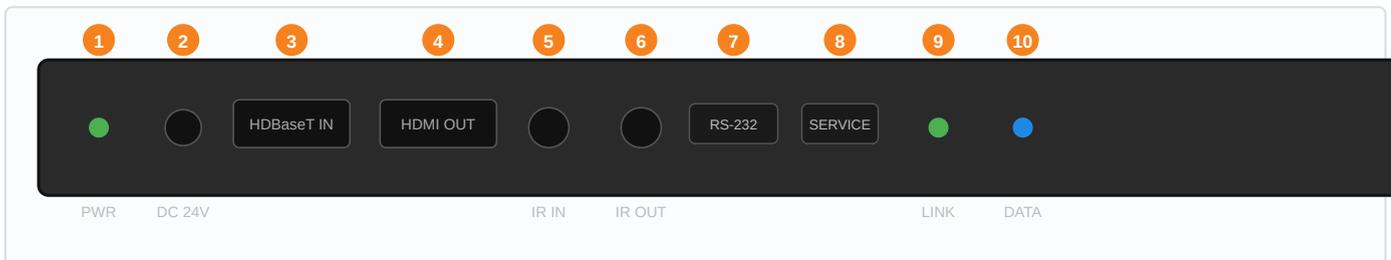
Operation Controls

TRANSMITTER PANEL



No.	Name	Function Description
1	HDMI IN	Connect to HDMI source device such as Blu-ray player or laptop.
2	ACTIVE LED	Green LED input signal indicator — illuminates when HDMI signal is active.
1	HDBaseT OUT	HDBaseT output — connect to HDBaseT Receiver with UTP cable.
2	5V OUT	Supplies 5V power for external IR emitter.
3	IR IN/OUT	Phoenix jack for IR input or output signal.
4	RS-232	Phoenix jack — connect PC or control system for RS-232 commands.
5	DC 24V	Phoenix jack — connect 24V power supply.

RECEIVER PANEL



No.	Name	Function Description
1	Power LED	System power indicator.
2	DC 24V	Connect 24V/1A adapter to AC outlet for power.
3	HDBaseT In	HDBaseT signal input — connect Transmitter with UTP cable.
4	HDMI Out	HDMI output — connect to display with HDMI cable.
5	IR In	Channel 1 IR Receiver. Connect Wideband IR Rx cable.
6	IR Out	Channel 2 IR Transmitter. Connect Wideband IR Tx cable.
7	RS-232	Phoenix jack — serial control signal from or to receiver.



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connection
Signal

Manufacturer firmware update port only.

Illuminated: good link. Flashing: poor connection. Dark: disconnected.

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10 Data Signal Illuminated: HDMI with HDCP. Flashing: HDMI without HDCP. Dark: no signal

Application Example

Controlled Boardroom — HDMI Extension with Bidirectional IR & RS-232



How it works: Install the WP-EXTHDBTKIT at the source position. Connect the HDMI source. Signal, bidirectional IR, and RS-232 control all travel over the same CAT5e/6 cable to the receiver at the display. IR allows display control from the transmitter end. RS-232 integrates with the room control system — no separate control run required. PoC can power the transmitter from the receiver side.

TROUBLESHOOTING

Q: No video on display

A: Verify all cables are securely connected. Use CAT6 or better — avoid patch cables and couplers. Power cycle source and display.

Q: No signal after switching source

A: EDID mismatch or handshake failure. Reconnect CAT cable at both ends. Power cycle the source device.

Q: Power LED not illuminating on TX

A: Verify receiver is powered and the CAT cable is properly connected from RX to TX. Check POC/POE is enabled.

Q: Image flickering or intermittent signal

A: Use shielded CAT6/6a with metal RJ45 connectors. Verify cable length does not exceed rated distance.

