

## D6146R D6146C

### HDMI Ultra HD HDBaseT Extender (150m)



D6146R Transmitter



D6146C Receiver

## Description

This HDMI extender can transmit high-definition audio and video signals, RS-232 signals, and bidirectional IR signals up to 150 meters over a single CAT cable between the transmitter and receiver. It supports video resolutions up to 4K2K@60Hz 4:4:4 and provides one HDMI loop-out on the transmitter. On the receiver side, the source device's audio can be de-embedded to the analog audio output (AUDIO OUT). The product also supports POC (Power over Cable) functionality. In addition, this extender supports bidirectional IR control, allowing users to control devices from either the source end or the display end via IR.

The HDMI extender consists of two parts: a transmitter and a receiver. The transmitter is responsible for acquiring HDMI signals, transmitting or receiving IR control signals, and extending signals via CAT cable; the receiver is responsible for receiving HDMI signals and transmitting or receiving IR control signals. By using a single CAT cable, this product offers a convenient solution for HDMI extension applications.

## Features

- Compatible with HDMI 2.0b, HDCP 2.2/1.4, and DVI 1.0
- Supports 18Gbps bandwidth
- Transmission distance: up to 120m/150m for 4K2K/1080P resolutions
- 1x HDMI loop-out (transmitter)
- Audio de-embedding to analog stereo output (receiver)
- Supports bidirectional IR, RS-232, and CEC pass-through
- Supports HDR, HDR10+, Dolby Vision, and HLG
- Supports PoC (Power over Cable)
- Compact design for easy installation

## Specifications

Model	D6146R	D6146C
HDMI Compliance		HDMI 2.0b
HDCP Compliance		HDCP 2.2 / HDCP 1.4
Video Bandwidth		18Gbps
Video Resolutions	4K2K 50/60Hz 4:4:4; 4K2K 50/60Hz 4:2:2; 4K2K 50/60Hz 4:2:0; 4K2K 30Hz 4:4:4; 1080p, 1080i, 720p, 720i, 480p, 480i; All 3D TV Formats;	All Computer Resolutions, including 1920×1200
Color Space	RGB / YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0	
Color Depth	8/10/12-bit (1080P60Hz, 4K30Hz, 4K60Hz YCbCr 4:2:2/4:2:0) 8-bit (4K60Hz 4:4:4)	
HDMI Audio Formats	LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus(DD+), DTS-ES, DTS HD Master, DTS HD-HRA, DTS-X	
L/R Audio Formats	PCM 2.0	
ESD Protection	Human Body Model: ±8kV (air discharge), ±4kV (contact discharge)	
Connection	<p>Input: 1× HDMI IN [Type A, 19-pin female] 1× SERVICE [Mini-USB, firmware upgrade]</p> <p>Output: 1× HDMI OUT [Type A, 19-pin female] 1× HDBT OUT [RJ45, 8-pin female]</p> <p>Control: 1× IR IN [3.5mm stereo mini-jack] 1× IR OUT [3.5mm stereo mini-jack] 1× RS-232 [3-pin Phoenix connector]</p>	<p>Input : 1× HDBT IN [RJ45, 8-pin female] 1× SERVICE [Mini-USB, firmware upgrade]</p> <p>Output: 1× HDMI OUT [Type A, 19-pin female] 1× AUDIO OUT [3.5mm stereo mini-jack]</p> <p>Control: 1× IR IN [3.5mm stereo mini-jack] 1× IR OUT [3.5mm stereo mini-jack] 1× RS-232 [3-pin Phoenix connector]</p>
Product Enclosure	Metal Enclosure	
Color	Black	
Dimension (L×W×H)	140mm×65mm×18mm	140mm×65mm×18mm
Weight	160g	155g
Power Supply	Input: AC 100–240V, 50/60Hz Output: DC 24V/1A (with locking connector)	
Power Consumption	9.36W	
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F	
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F	
Relative Humidity	20% ~ 90% RH (non-condensing)	
Transmission Distance	4K2K: 120 meters	

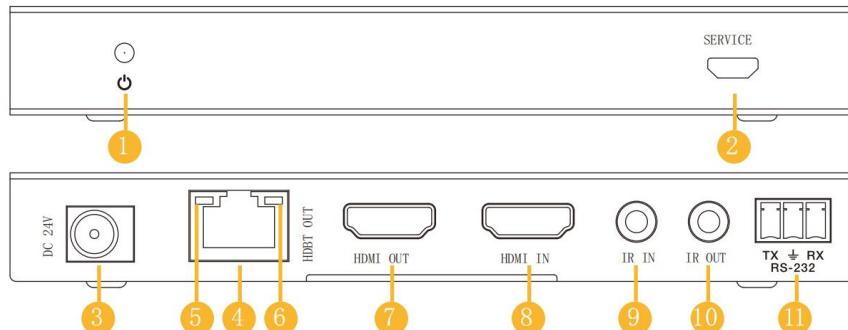
HDMI IN/OUT Cable Length

1080P: 150 meters  
4K60: 3 meters  
4K30: 10 meters  
1080P60: 15 meters

Note: For optimal performance, it is recommended to use a premium high-speed HDMI cable.

## Front / Rear Panel

### D6146R Transmitter



#### 1. Power LED

Power indicator light. Red LED lights up when the transmitter is powered on.

#### 2. SERVICE

Firmware Upgrade Port

#### 3. DC24V

24V 1A Power input.

Note: This extender supports PoC (Power over Cable), meaning only the transmitter or receiver needs to be connected to a 24V/1A power supply; the other end can operate without external power.

#### 4. HDBT OUT

RJ45 Connector: Connects to the receiver's HDBT IN port using a CAT cable.

#### 5. Link Signal Indicator Light (Green)

- On: Transmitter and receiver are properly connected
- Blinking: Connection between transmitter and receiver is unstable
- Off: Transmitter and receiver are not connected

#### 6. Digital Signal Indicator Light (Yellow)

- On: HDMI signal with HDCP detected
- Blinking: HDMI signal without HDCP detected
- Off: No HDMI signal detected

#### 7. HDMI OUT

HDMI loop output port

#### 8. HDMI IN

HDMI signal input port

#### 9. IR IN

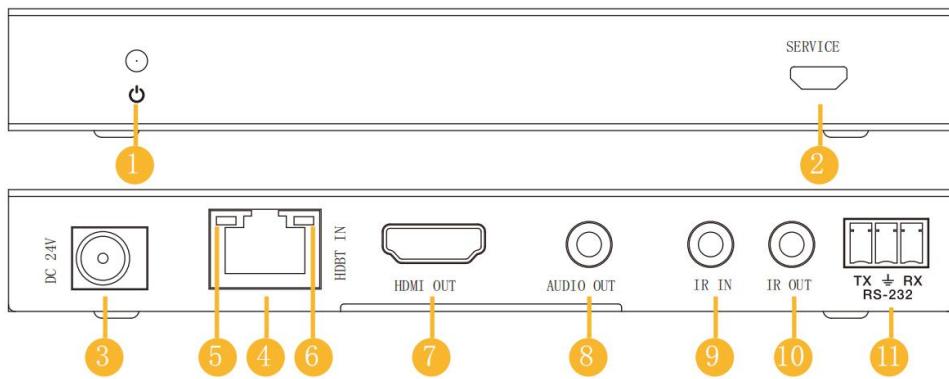
Connect a 20–60 kHz IR receiver cable; the IR signal will be sent to the receiver's IR OUT port.

#### 10. IR OUT

Connect an IR emitter cable; the IR signal originates from the receiver's IR IN port.

#### 11. RS-232

3-pin Phoenix connector for transmitting RS-232 commands between the transmitter and the receiver.



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Power indicator light. Red LED lights up when the transmitter is powered on.

2. SERVICE

Firmware Upgrade Port

3. DC24V

24V 1A Power input.

Note: This extender supports PoC (Power over Cable), meaning only the transmitter or receiver needs to be connected to a 24V/1A power supply; the other end can operate without external power.

4. HDBT IN

RJ45 Connector: Connects to the receiver's HDBT OUT port using a CAT cable.

5. Link Signal Indicator Light (Green)

- On: Transmitter and receiver are properly connected
- Blinking: Connection between transmitter and receiver is unstable
- Off: Transmitter and receiver are not connected

6. Digital Signal Indicator Light (Yellow)

- On: HDMI signal with HDCP detected
- Blinking: HDMI signal without HDCP detected
- Off: No HDMI signal detected

7. HDMI OUT

HDMI signal output port

8. AUDIO OUT

3.5mm analog audio output port

9. IR IN

Connect a 20–60 kHz IR receiver cable; the IR signal will be sent to the receiver's IR OUT port.

10. IR OUT

Connect an IR emitter cable; the IR signal originates from the receiver's IR IN port.

11. RS-232

3-pin Phoenix connector for transmitting RS-232 commands between the transmitter and the receiver.