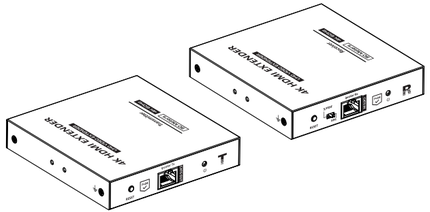
CableTronix

User Manual

HDMI EXTENDER

Point to Point Extender

Model No: CT-HDEXT-295-4K



HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

• Important Safety Notice

- Do not mix up the HDMI-to-RJ45 transmitter and the RJ45-to-HDMI receiver during installation.
- Do not hot-plug the device while it is operating.
- Use a DC 5V/1A power supply only. If using a third-party adapter, ensure it meets the correct specifications.
- Static electricity can damage the device. Use proper ESD protection when handling.

• Introduction

This HDMI Extender includes both a transmitter and a receiver unit. It enables HDMI signals to be transmitted up to 295 feet (90 meters) at 4K resolution using a CAT6/6A/7 network cable. Ideal for outdoor advertising, video presentations, monitoring systems, home entertainment, conferencing,
and more.

• Features

- **Zero latency**
- Supports **CAT6/6A/7** network cables:
  - **4K@60Hz** transmission up to **295 Feet (90 meters)**
  - **1080p@60Hz** transmission up to **393 Feet (120 meters)**
- Receiver extracts **digital audio** from the transmitter via **S/PDIF port**
- Supports **HDR10**
- EDID passthrough and auto downscaling
- Transmitter supports **HDMI loop-out**
- IR Control – Control source from TV location via IR pass-through.
- Built-in **lightning protection, surge protection, and ESD protection**

• Package Contents

Transmitter unit x1pc

Receiver unit x1pc

DC5V/1A x2pcs

User manual x1pc

IR blaster extension cable x1pc

IR receiver extension cable x1pc

Mounting brackets x4pcs

Screw x10pcs

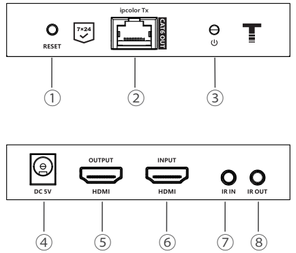
Screw x2pcs

• Installation Requirements

- **HDMI Source Device:**
  Devices such as a cable or satellite receiver, laptop, DVD/Blu-ray player, or other HDMI output sources.
- **HDMI Display Device:**
  Includes SDTVs, HDTVs, projectors, or any display with an HDMI port.
- **Network Cable:**
  Use UTP/STP CAT6, CAT6A, or CAT7 cable. Follow the IEEE-568B wiring standard.
  For best performance, choose cables with low signal loss and minimal crosstalk.

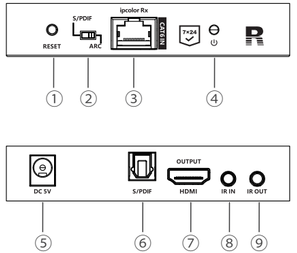
• Interfaces

1. Transmitter (TX)



①	Reset button	Press to restart the device
②	RJ45 signal output	Connect with network cable
③	Power/Signal indicator	When there is power and no HDMI signal, the indicator will flash, when there is HDMI signal, the indicator will light solid blue
④	DC5V input	Connect with DC5V/1A power adapter
⑤	HDMI output	Connect with HDMI display device
⑥	HDMI input	Connect with the source device
⑦	IR in	Connect with IR receiver extension cable, please make sure the remote control used is within the effective range
⑧	IR out	Connect with IR blaster extension cable, please get closer to the source device while using

2. Receiver (RX)



①	Reset button	Press to restart the device
②	Audio switch	Choose to decode audio from HDMI or ARC output from fiber optic interface
③	RJ45 signal input	Connect with network cable
④	Power/Signal indicator	When there is power and no HDMI signal, the indicator will flash, when there is HDMI signal, the indicator will light solid blue
⑤	DC5V input	Connect with DC5V/1A power adapter
⑥	S/PDIF out	Output digital audio signal
⑦	HDMI output	Connect with HDMI display device
⑧	IR in	Connect with IR receiver extension cable, please make sure the remote control used is within the effective range
⑨	IR out	Connect with IR blaster extension cable, please get closer to the source device while using

Disclaimer

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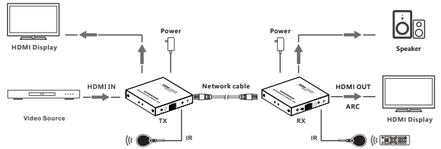
• Installation Procedures

1. Connection

one to one:



Follow the standard of IEEE-568B, It is recommended to select a network cable with less loss and crosstalk.

1-Orange/white	2-Orange	3-Green/white
4-Blue	5-Blue/white	6-Green
7-Brown/white	8-Brown	

2. Connection instruction

1. **HDMI Connections:**
   Connect the source device to the **HDMI IN** port on the transmitter using an HDMI cable. Then connect the **HDMI OUT** port on the receiver to the display device with another HDMI cable.
2. **Network Cable Connection:**
   Use a CAT6, CAT6A, or CAT7 network cable to connect the **CAT OUT** port on the transmitter to the **CAT IN** port on the receiver.

3. **HDMI Loop-Out (Optional):**
   If using the HDMI loop-out feature, connect a display device to the HDMI OUT port on the transmitter
4. **Power Up:**
   Plug the power supply into the device to begin operation.
   latency

3. IR User Guide

1. Connect the **IR blaster extension cable** to the **IR OUT** port on both the transmitter and receiver. Connect the **IR receiver extension** cable to the **IR IN** port on both units.
2. Position the **emitter** of the IR blaster cable as close as possible to the **IR receiving window** of the source device.
3. Ensure the **receiver head** of the IR receiver cable is facing the user for optimal remote control performance.

• FAQ

Q: There is no output on the screen, but all connections are correct.

A:

1. Ensure the HDMI cables support 4K x 2K resolution if your source device is outputting 4K.

2. Confirm the network cable is securely inserted into the RJ45 ports on both the transmitter and receiver.

3. Press the reset button on the transmitter or receiver to restart the connection.

Q: The screen is black on the display or monitor.

A:

1. Check if the network cable length is within the recommended distance.

2. Press the reset button on the transmitter to re-establish the connection.

Q: The display shows distorted colors or there is no sound.

A:

1. Reset the transmitter or receiver to re-establish the connection.

2. Make sure the HDMI cables are firmly connected.

3. Reconnect the network cable to ensure a stable connection.

• Specification

Items		Specification
Power Supply	Voltage/Current	DC5V/1A
	Power consumption	TX < 4W RX < 4W
HDMI Performance And Interface	HDMI compliance	HDMI 2.0
	HDCP compliance	HDCP 2.2
	HDMI resolution	480i@60Hz、480p@60Hz、576i@50Hz、576p@50Hz、720p@50/60Hz、1080i@50/60Hz、1080p@50/60Hz、3840x2160@24/25/30/50/60Hz 4096x2160@ 24/25Hz、3440x1440、2560x1440、 2560x1080、2048x1080、1920x1440、1280x960、1280x800、1280x768、1680x1050、1360x768、1366x768、1600x900、1024x768、800x600
	Supports audio formats	LPCM/DTS-H D/DTS-Audi / Dolby Digital 5.1CH / Dolby Atmos
	Input and output TMDS signal	0.7~1.2Vp-p(TMDS)
	Input and output DDC signal	5Vp-p(TTL)
	Input cable length	≤8m(AWG24)
	Output cable length	≤8m(AWG24)
Transmission Distance	CAT6/6A/7	4K@60Hz transmission 90m 1080p@60Hz transmission 120m
Protection Level	Electrostatic protection of the whole machine	1a Contact discharge level 3 1b Air discharge level 3 Implementation of the standard: IEC61000-4-2
Operating Environment	Working temperature	-4 -140 °F (-20 - 60°C)
	Storage temperature	-22 - 158°F (-30~70°C)
	Humidity (no condensation)	0-90% RH
Body Properties	Dimension	4.15 x 4.03 x 0.79 (105.5 x 102.5 x 20mm)
	Material	Iron
	Color	Black
	Weight	TX: 0.53 lbs. (243g) Rx: 0.53 lbs. (243g)