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OREI EX-170C

OREI 4K HDMI over Ethernet Extender (EX-170C) User Manual

Model: EX-170C

Overview	Setup	Introduction	Features	Package Contents	Product
		Operation	Specifications	Troubleshooting	Maintenance
			Support		Warranty &

1. INTRODUCTION

The OREI EX-170C is a 4K HDMI over Ethernet Extender designed to transmit HDMI signals up to 50 meters (164 feet) over a single CAT5e/6/7 cable. This device supports 4K@30Hz and 1080P Full HD resolutions, offering a stable and reliable connection for various applications. It includes an HDMI loop-out on the transmitter unit and supports IR pass-through for remote control of source devices.

2. KEY FEATURES

- **Extended Transmission:** Transmits 4K HDMI and Full HD 1080P signals up to 50 meters (164 feet) over a single CAT 6/7 cable.
- **HDMI Loop-Out:** Features an additional HDMI output on the transmitter for local display monitoring.
- **4K Resolution Support:** Supports resolutions including 4K@30Hz, 1080p@60Hz, 720p, 576p, and 480p.
- **IR Pass-Through:** Allows remote control of the source device from the receiver location.
- **M-JPEG Compression:** Utilizes M-JPEG compression for efficient video processing and clear 4K visuals.
- **Power over Cable (PoC):** Only one power adapter is needed to power both the transmitter and receiver units.
- **Compact Design:** Small and lightweight units for easy installation and concealment.
- **Plug & Play:** Simple setup with no complex configuration required.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1x HDMI Transmitter Unit (TX)
- 1x HDMI Receiver Unit (RX)
- 1x IR Blaster Cable (IR Tx)

- 1x IR Receiver Cable (IR Rx)
- 2x 5V DC Power Adapters
- 1x User Manual

Note: HDMI cables and CAT5e/6/7 Ethernet cables are not included and must be purchased separately.



Image: Illustration of the package contents, showing the transmitter, receiver, two power adapters, IR Tx/Rx cables, and a user manual icon.

4. PRODUCT OVERVIEW

4.1 Transmitter (TX) Unit

- **HDMI In:** Connects to the HDMI source device (e.g., Blu-ray player, game console).
- **HDMI Out (Loop-Out):** Connects to a local display for monitoring the source signal.
- **CAT5/6/7 Out:** Connects to the receiver unit via an Ethernet cable.
- **IR Out:** Connects to the IR Blaster cable to control the source device.
- **DC5V:** Power input for the transmitter unit.
- **EDID Switch:** For EDID management (see Section 6.2).

4.2 Receiver (RX) Unit

- **CAT5/6/7 In:** Connects to the transmitter unit via an Ethernet cable.
- **HDMI Out:** Connects to the remote display (e.g., TV, projector).
- **IR In:** Connects to the IR Receiver cable to receive signals from a remote control.
- **EQ Switch:** For signal equalization (see Section 6.3).



Image: Top-down view of the OREI EX-170C transmitter and receiver units, highlighting their respective ports such as HDMI In/Out, CAT5/6/7, IR In/Out, and DC5V power input.

5. SETUP INSTRUCTIONS

Follow these steps to set up your OREI EX-170C HDMI Extender:

- 1. Connect HDMI Source to Transmitter:** Use an HDMI cable to connect your HDMI source device (e.g., DVD player, PC, game console) to the **HDMI In** port on the Transmitter (TX) unit.
- 2. (Optional) Connect Local Display:** If you wish to monitor the source signal locally, connect an HDMI cable from the **HDMI Out (Loop-Out)** port on the TX unit to a local display.
- 3. Connect Remote Display to Receiver:** Use an HDMI cable to connect your remote display (e.g., TV, projector) to the **HDMI Out** port on the Receiver (RX) unit.
- 4. Connect Ethernet Cable:** Connect a single CAT5e/6/7 Ethernet cable between the **CAT5/6/7 Out** port on the TX unit and the **CAT5/6/7 In** port on the RX unit. Ensure the cable is properly terminated and within the recommended length (up to 164 feet).
- 5. Connect IR Cables:**
 - Plug the IR Blaster cable into the **IR Out** port on the TX unit and position the IR emitter eye near the IR sensor of your HDMI source device.

- Plug the IR Receiver cable into the **IR In** port on the RX unit and position the IR receiver eye where your remote control will be used.

6. **Apply Power:** Connect one of the provided 5V DC power adapters to the **DC5V** port on the Transmitter (TX) unit. Due to Power over Cable (PoC) functionality, only the TX unit requires power, and it will power the RX unit through the Ethernet cable.

7. **Power On Devices:** Power on your HDMI source device and all connected displays. The extender should automatically establish the connection.

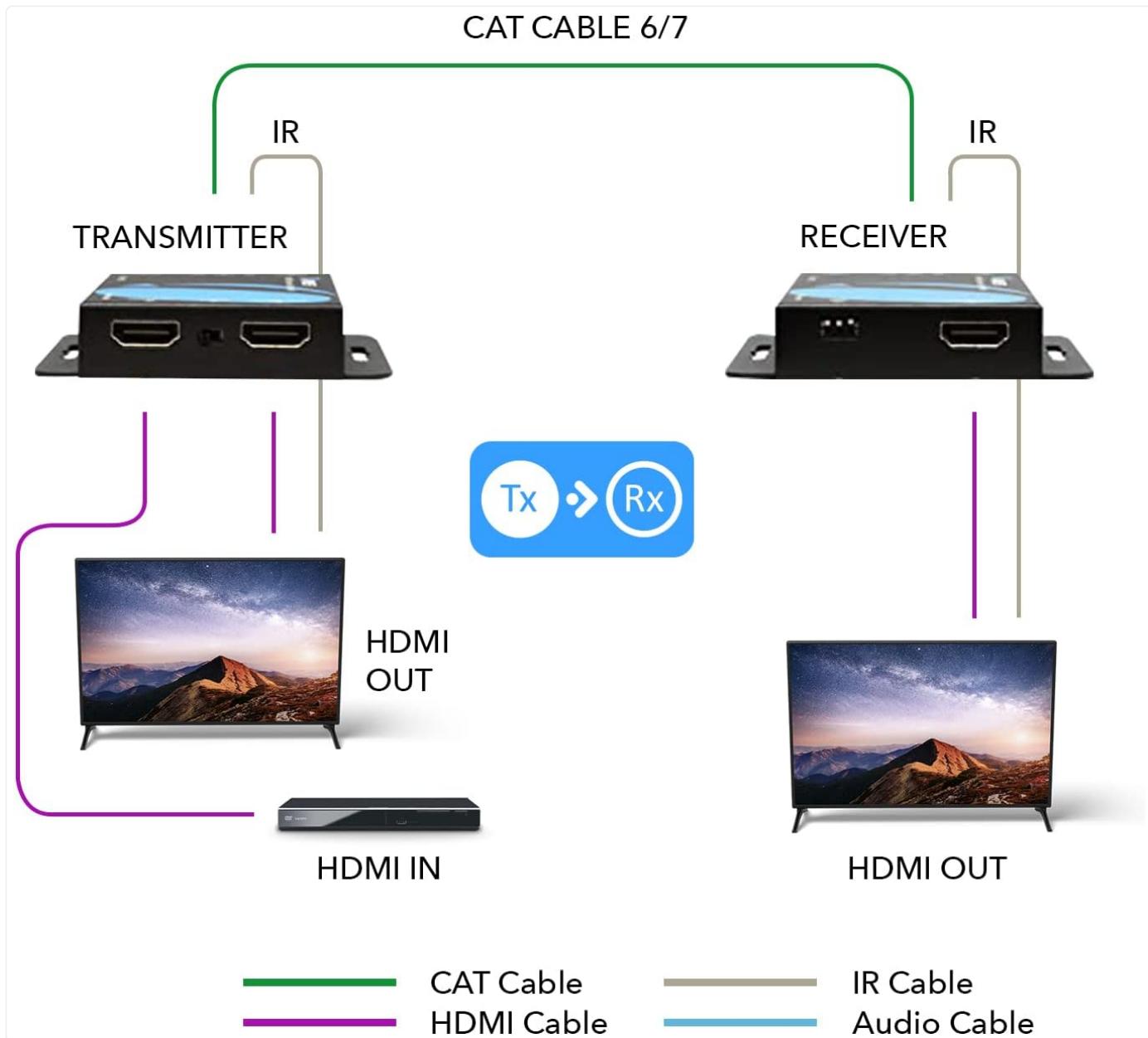


Image: A detailed connection diagram illustrating how to connect the HDMI source to the transmitter, the transmitter to the receiver via a CAT cable, and the receiver to the display. IR connections are also shown.

6. OPERATION

6.1 Basic Operation

Once all connections are made and power is applied, the extender will automatically detect the HDMI signal and transmit it to the remote display. Ensure both the source and display devices are powered on and set to the correct HDMI input.

6.2 EDID Management (Transmitter Unit)

The EDID (Extended Display Identification Data) switch on the transmitter unit allows you to manage the display's

capabilities reported to the source device. This can be useful in resolving compatibility issues or ensuring the desired resolution is outputted. Refer to the specific EDID settings in the full PDF manual if you encounter display issues.

6.3 EQ Adjustment (Receiver Unit)

The EQ (Equalization) switch on the receiver unit is used to compensate for signal degradation over long Ethernet cable runs. If you experience flickering, signal loss, or poor picture quality, adjust the EQ switch to optimize the signal. Start with the lowest setting and gradually increase it until a stable and clear picture is achieved.

6.4 IR Control

The IR pass-through feature allows you to control your HDMI source device from the remote display location. Point your source device's remote control at the IR Receiver eye connected to the RX unit. The signal will be transmitted back to the IR Blaster connected to the TX unit, which will then relay the command to your source device.



Image: Visual representation of the HDMI extender's compatibility with various media devices such as laptops, Apple TV, game consoles, and DVD players, emphasizing IR support for playback control.

7. SPECIFICATIONS

Parameter	Value
Model Number	EX-170C
HDMI Version	HDMI 1.4
HDCP Version	HDCP 2.2
Supported Resolutions	4K@30Hz, 1080p@60Hz, 720p, 576p, 480p
Transmission Distance	Up to 50 meters (164 feet) over CAT5e/6/7
IR Frequency	20-60KHz
Power Supply	DC 5V (one adapter powers both units via PoC)
Product Dimensions (each unit)	2.8 x 2.6 x 1 inches
Item Weight	14.9 ounces (total for both units)
Manufacturer	Orei

EX-170C

TECHNICAL SPECIFICATIONS



COMPACT SIZE

Weight: 1.12 pounds



Lifetime OREI Tech Support &
12-Month Manufacturer's Warranty

Image: Diagram showing the compact dimensions (2.8" length, 2.6" width, 1" height) and weight (1.12 pounds) of the EX-170C units, along with a note about the 12-month manufacturer's warranty.

8. TROUBLESHOOTING

If you encounter issues with your OREI EX-170C HDMI Extender, please refer to the following common solutions:

- **No Picture/Signal Loss:**

- Ensure all HDMI and Ethernet cables are securely connected.
- Verify that the power adapter is correctly connected to the TX unit and that the power indicator light is on.
- Check if the HDMI source and display devices are powered on and set to the correct input.
- Try a different HDMI cable or Ethernet cable to rule out cable defects.
- Adjust the EQ switch on the receiver unit to compensate for signal loss over long distances.
- Test with a shorter Ethernet cable if possible.

- **Poor Picture Quality (Flickering, Distortion):**

- Ensure you are using high-quality CAT6/7 Ethernet cables for optimal performance.

- Adjust the EQ switch on the receiver unit.
- Check the EDID settings on the transmitter unit if resolution issues persist.
- Reduce the resolution of the source device to see if the issue is resolved.

- **IR Control Not Working:**

- Ensure the IR Blaster eye is directly aligned with the IR sensor on your source device.
- Ensure the IR Receiver eye is positioned correctly to receive signals from your remote control.
- Check that the IR cables are securely plugged into the correct ports (IR Out on TX, IR In on RX).

- **Intermittent Signal:**

- This can often be caused by poor quality or overly long Ethernet cables. Use shielded (STP) CAT6/7 cables for best results.
- Ensure there are no strong electromagnetic interference sources near the cable run.

9. MAINTENANCE

To ensure the longevity and optimal performance of your OREI EX-170C HDMI Extender, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the units. Avoid using liquid cleaners or aerosols, which may damage the components.
- **Environment:** Keep the extender in a cool, dry place away from direct sunlight, heat sources, and excessive moisture.
- **Ventilation:** Ensure adequate airflow around the units to prevent overheating. Do not block ventilation openings.
- **Cable Management:** Avoid bending or kinking HDMI and Ethernet cables sharply, as this can damage the internal wires and affect signal quality.
- **Power Off When Not in Use:** If the extender will not be used for an extended period, it is advisable to disconnect the power adapter.

10. WARRANTY AND SUPPORT

The OREI EX-170C HDMI Extender is backed by a **12-Month Manufacturer's Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

OREI also offers **Lifetime Technical Support**. If you require assistance with setup, troubleshooting, or have any questions regarding your product, please contact OREI customer support. Refer to the official OREI website or the contact information provided in your product packaging for support details.

OVER 10 YEARS EXPERIENCE



**FULL 1 YEAR
LIMITED WARRANTY**



WE OFFER LIFETIME LOCAL SUPPORT IN INDIA

Image: Graphic indicating OREI's over 10 years of experience, a full 1-year limited warranty, and that the company is based in the U.S.A., offering lifetime local support.

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Product Model: EX-170C

Related Documents - EX-170C

<p>HDMI Extender over single 50m/164ft UTP Cables with IR Control</p> <p>User manual V08.1.1</p>	<p>OREI EX-170C HDMI Extender User Manual</p> <p>User manual for the OREI EX-170C HDMI Extender over single 50m/164ft UTP Cables with IR Control. This manual provides an introduction, package contents, features, specifications, panel descriptions, connection diagrams, and operating instructions for the device.</p>
	<p>OREI ipcolor 4K HDR HDMI 1x8 Splitter Extender Over 70 Meter Cat6 User Manual</p> <p>This user manual provides detailed information on the OREI ipcolor 4K HDR HDMI 1x8 Splitter Extender, including features, specifications, function settings, and connection diagrams. It supports zero latency transmission, up to 4K@60Hz resolution, and transmission distances up to 70 meters over Cat6/6A/7 cables.</p>
	<p>OREI UHD-IPC165-K 4K HDMI Extender with Loop Out - User Manual</p> <p>User manual for the OREI UHD-IPC165-K, a 4K@60Hz 18Gbps 4:4:4 HDR HDMI Extender over Cat6 cable up to 50 meters, featuring loop out and IR control.</p>
	<p>OREI X4UH-KVM: 4K HDMI Extender & AV-over-IP User Manual</p> <p>User manual for the OREI X4UH-KVM, a versatile 4K HDMI extender and AV-over-IP solution with KVM support, featuring long-distance transmission, HDCP 2.2 compliance, and flexible control options for professional AV environments.</p>
	<p>OREI UHD-EX230-KVM 18Gbps HDMI Extender (70m) with KVM User Manual</p> <p>User manual for the OREI UHD-EX230-KVM, an 18Gbps HDMI Extender with KVM functionality, supporting 4K@60Hz resolution up to 70 meters over a single CAT6/6a cable. Features include EDID copy, POC, and USB KVM pass-through for remote control.</p>
<p>H220268000000 (OREI) : 0106020147623 备注 机架: 1000宽机架 尺寸: 111x146mm 装订方式: 钢钉订</p>	<p>OREI UHD-IPC230-WPE 4K@60Hz HDR HDMI Wall Plate Extender User Manual</p> <p>User manual for the OREI UHD-IPC230-WPE 4K@60Hz 18Gbps 4:4:4 HDR HDMI Wall Plate Extender. Details features, specifications, operation, and connection diagrams for extending HDMI signals over Cat6 cable up to 70 meters.</p>