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PWAYTEK CL-HT239

PWAYTEK 4K HDMI Extender User Manual

MODEL: CL-HT239**Brand: PWAYTEK**

1. Introduction

The PWAYTEK 4K HDMI Extender (Model CL-HT239) is designed to extend 4K@60Hz HDMI signals over a single Cat5e/6/7 Ethernet cable up to 60 meters (200 feet). This device allows for reliable transmission of high-definition audio and video, supporting features such as HDMI loop out and IR pass-through for remote control of source devices. It is suitable for various applications including home theater systems, monitoring setups, and professional AV installations.

2. Package Contents

Please verify that all items listed below are included in your package:

- 1x HDMI Transmitter Unit
- 1x HDMI Receiver Unit
- 2x Power Adapters (5V/1A)
- 1x User Manual
- 1x After-sales Manual

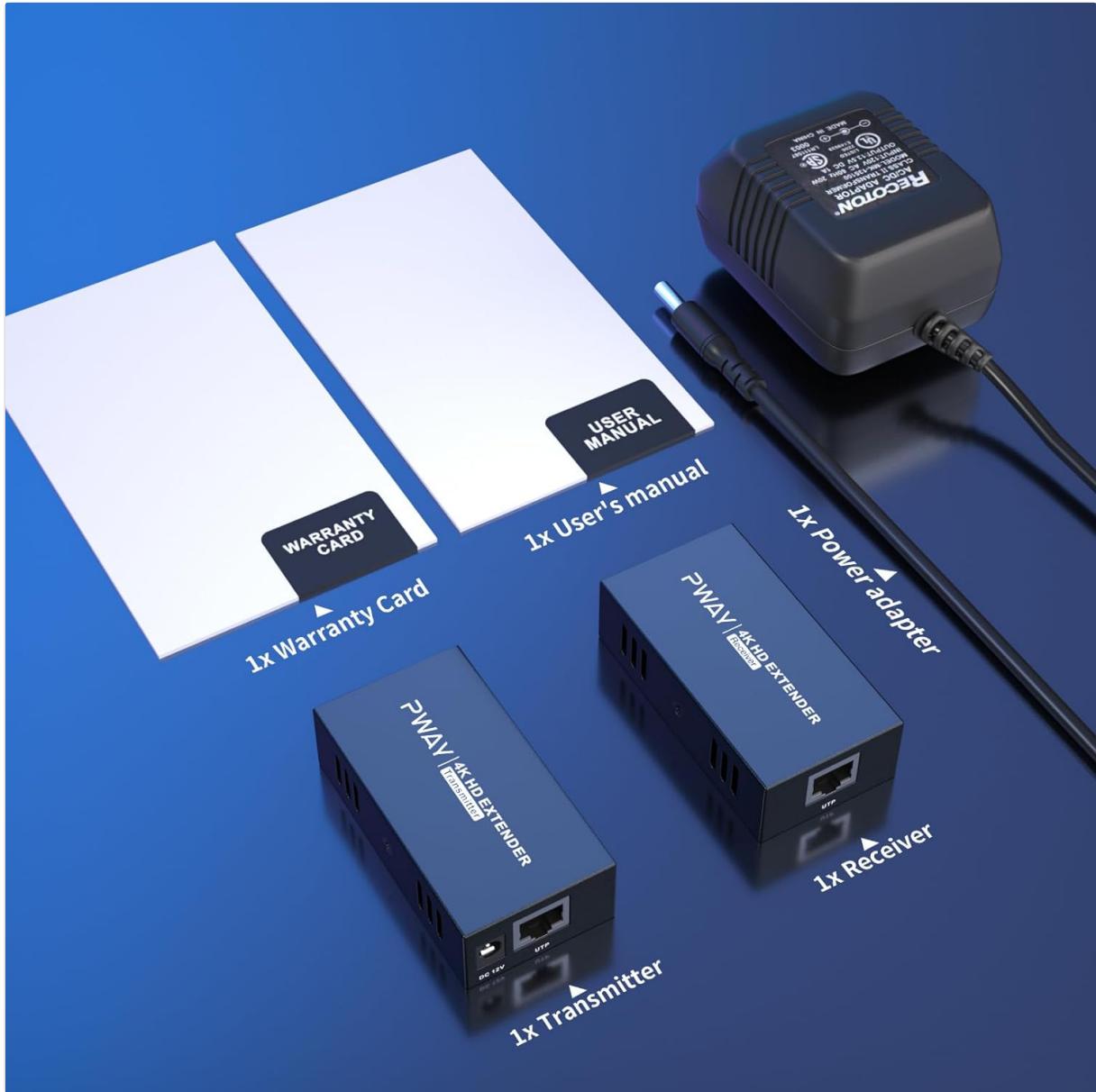


Image 2.1: Contents of the PWAYTEK 4K HDMI Extender package, showing the transmitter, receiver, two power adapters, a user manual, and a warranty card.

3. Product Overview

The PWAYTEK 4K HDMI Extender system consists of two main units: a Transmitter (TX) and a Receiver (RX). These units work in conjunction to extend HDMI signals over a single Ethernet cable.



Image 3.1: The PWAYTEK 4K HDMI Extender Transmitter and Receiver units, showcasing their compact design and port labels.



Image 3.2: Visual representation of the extender's key capabilities: 60-meter extension, 4K@60Hz resolution support, HDMI Loop Out, and IR pass-through.

Key Features:

- **HDMI 2.0 Support:** Compatible with HDMI 2.0 standards, supporting resolutions up to 4K@60Hz.
- **Extended Range:** Transmits 4K@60Hz signals up to 60 meters (200 feet) over Cat5e/6/7 cable.
- **Loop Out:** An additional HDMI output on the Transmitter unit allows for a local display connection.
- **IR Pass-through:** Enables remote control of the source device from the display location.
- **HDCP 2.2/1.4 Compatible:** Supports High-bandwidth Digital Content Protection for secure content transmission.
- **YUV 4:4:4 and RGB 4:4:4 Support:** Ensures high-quality color reproduction.

4. Setup and Installation

Follow these steps for proper installation of your PWAYTEK 4K HDMI Extender:

4.1 Pre-installation Checks:

1. Ensure the output resolution of your HDMI source device is set to not exceed 3840x2160P@60Hz.
2. Connect your HDMI source directly to your display to confirm that both devices are functioning correctly and producing an image output.

4.2 Connection Diagram:

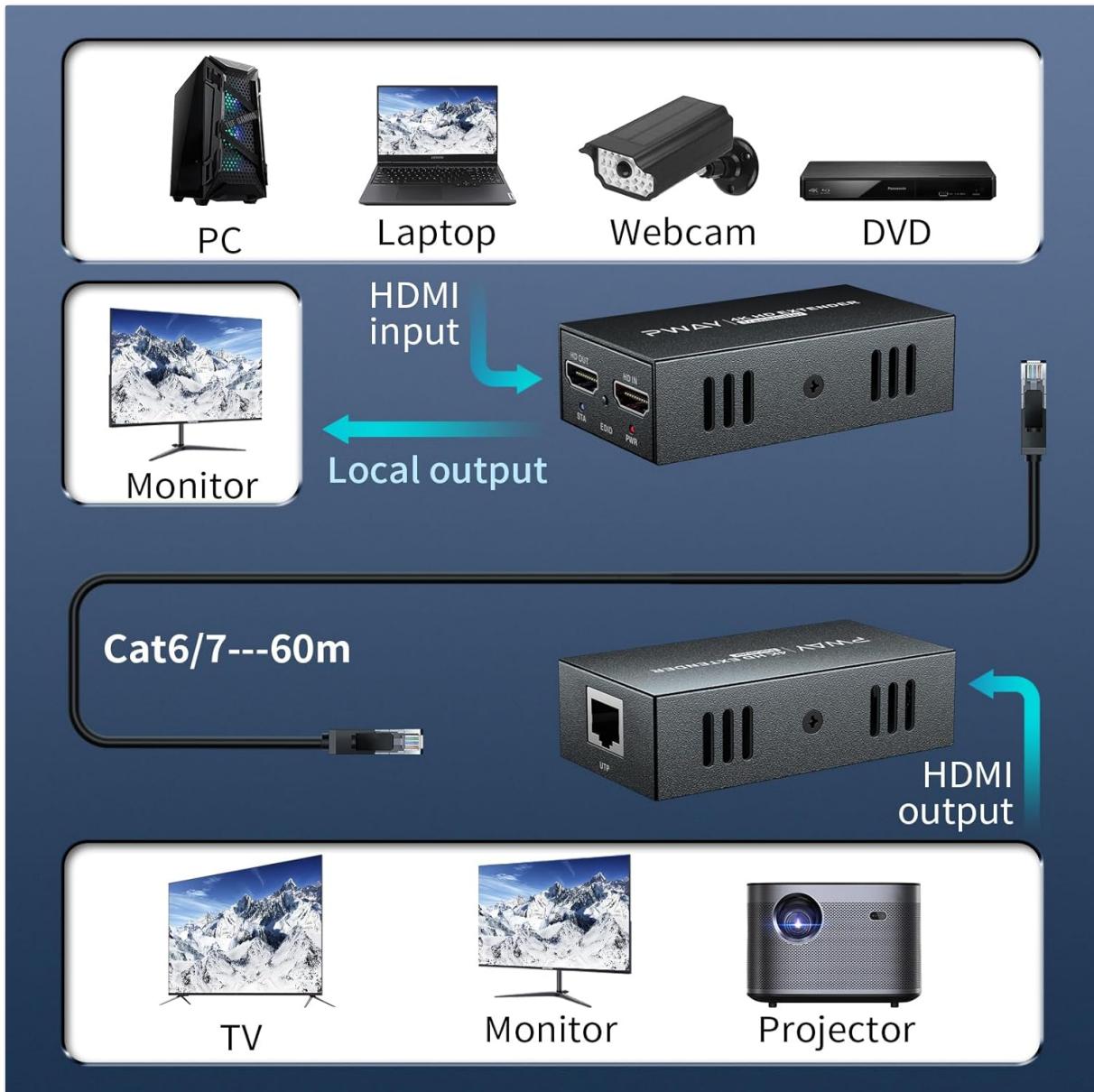


Image 4.1: A detailed connection diagram illustrating how to connect various source devices (PC, Laptop, Webcam, DVD) to the Transmitter, then via a Cat6/7 cable to the Receiver, and finally to display devices (TV, Monitor, Projector).

4.3 Step-by-Step Installation:

- 1. Connect HDMI Source:** Connect an HDMI cable from your source device (e.g., PC, TV Box, Camera) to the **HDMI IN** port on the Transmitter unit.
- 2. (Optional) Local Display Connection:** If a local display is desired, connect an HDMI cable from the **HDMI OUT (Loop Out)** port on the Transmitter unit to your local monitor or TV. This allows you to view the content near the source.

Loop Out

The HDMI OUT on the transmitter is more flexible to apply to your project.



Image 4.2: The HDMI Loop Out feature on the Transmitter unit, demonstrating its use for connecting a local display alongside the extended signal.

3. **Connect Ethernet Cable:** Connect a single Cat5e/6/7 Ethernet cable between the **UTP** port on the Transmitter unit and the **UTP** port on the Receiver unit. Ensure the cable is properly terminated using the 5680B crimping method for optimal performance.
4. **Connect HDMI Display:** Connect an HDMI cable from the **HDMI OUT** port on the Receiver unit to your remote display device (e.g., TV, Monitor, Projector).
5. **Connect IR Cables (Optional):** If using IR pass-through, connect the IR Blaster cable to the **IR OUT** port on the Transmitter unit and position the emitter near your source device's IR sensor. Connect the IR Receiver cable to the **IR IN** port on the Receiver unit and position the receiver where your remote control will be used.
6. **Apply Power:** Connect the provided 5V/1A power adapters to the **DC 5V** ports on both the Transmitter and Receiver units. Power indicators should illuminate.



Image 4.3: An illustrative setup showing the PWAYTEK 4K HDMI Extender in action, extending a video signal from a source to a remote display over a 60-meter Ethernet cable.

5. Operating Instructions

Once all connections are securely made and power is applied to both units, the PWAYTEK 4K HDMI Extender should automatically establish a connection and transmit the HDMI signal. No additional configuration is typically required due to its EDID auto-matching feature.

- **Power On:** Ensure both the Transmitter and Receiver units are powered on. The power indicator lights should be active.
- **Signal Transmission:** The video and audio signal from your source device will be transmitted to the remote display.
- **IR Control:** If IR cables are connected, you can use your source device's remote control from the remote display location to control the source.

6. Troubleshooting

If you encounter issues during operation, please refer to the following troubleshooting tips:

- **No Picture/Signal:**

- Verify that both the Transmitter and Receiver units are powered on and their power indicators are lit.
- Check all HDMI and Ethernet cable connections to ensure they are secure and correctly plugged in.
- Ensure the Ethernet cable is Cat5e/6/7 and is not exceeding the maximum recommended length (60m for 4K@60Hz).
- Confirm that the HDMI source device is outputting a signal and that its resolution is supported by the extender and the display (up to 4K@60Hz).
- Test the HDMI source directly connected to the display to rule out issues with the source or display.

- **Poor Picture Quality/Flickering:**

- Ensure high-quality HDMI cables are used, especially for connections between the source/display and the extender units. HDMI 2.0 cables are recommended, ideally within 3 meters (10 feet).
- Check the quality and termination of the Ethernet cable. A damaged or poorly terminated cable can affect signal integrity.
- Reduce the resolution of the source device to see if the issue persists.

- **IR Control Not Working:**

- Ensure the IR Blaster and IR Receiver cables are correctly connected to their respective ports (IR OUT on TX, IR IN on RX).
- Verify that the IR Blaster emitter is positioned directly over the IR sensor of the source device.
- Ensure the IR Receiver is positioned to receive signals from your remote control.

7. Specifications

Detailed technical specifications for the PWAYTEK 4K HDMI Extender:



Image 7.1: Visual comparison demonstrating the superior clarity and detail of 4K@60Hz YUV 4:4:4 resolution compared to lower resolutions.

Category	Specification
HDMI Version	HDMI 2.0
HDCP Version	HDCP 2.2 / 1.4
Max Resolution	3840x2160P@60Hz (4K@60Hz)
Color Space Support	YUV 4:4:4, RGB 4:4:4
3D Support	Yes
Max Pixel Clock	340MHz
Max Data Transfer Rate	18 Gbps
Ethernet Interface	RJ45
Ethernet Cable Type	Cat5e / Cat6 / Cat7
Max Extension Length (Cat6/7)	50m / 165ft (for 4K@60Hz)

Max Extension Length (Cat5e)	40m / 130ft (for 4K@60Hz)
Max Extension Length (Cat5)	30m / 100ft (for 4K@60Hz)
Power Supply	DC 5V/1A (x2)
Dimensions (L x W x H)	81 x 45 x 23 mm
Item Weight	349 g (total for both units)

8. Maintenance

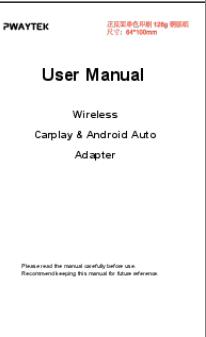
To ensure the longevity and optimal performance of your PWAYTEK 4K HDMI Extender, follow these simple maintenance guidelines:

- Cleaning:** Use a soft, dry cloth to clean the units. Avoid using liquid or aerosol cleaners, as they may damage the device.
- Environment:** Keep the extender in a cool, dry place, away from direct sunlight, high temperatures, and humidity.
- Handling:** Handle the units with care. Avoid dropping or subjecting them to strong impacts.
- Ventilation:** Ensure proper ventilation around the units to prevent overheating. Do not block any ventilation openings.

9. Warranty and Support

For warranty information and technical support, please refer to the included After-sales Manual. This document contains details regarding product warranty, return policies, and contact information for customer service. Keep your purchase receipt for warranty claims.

Related Documents - CL-HT239

	<p>PWAYTEK PWTEK-DT248W Wireless HDMI Extender: User Manual, Setup, and Specifications</p> <p>User manual for the PWAYTEK PWTEK-DT248W Wireless HDMI Extender. This guide details package contents, connection steps, pairing procedures, technical specifications, warranty information, and safety precautions for wireless HDMI signal transmission.</p>
	<p>PWAYTEK Wireless Carplay & Android Auto Adapter User Manual</p> <p>User manual for the PWAYTEK Wireless Carplay & Android Auto Adapter, providing setup instructions, compatibility notes, troubleshooting, and FCC compliance information.</p>

	<p>Robot Coupe CL 50, CL 50 Ultra, CL 51 Vegetable Preparation Machine User Manual</p> <p>Comprehensive user manual for Robot Coupe CL 50, CL 50 Ultra, and CL 51 vegetable preparation machines. Covers operation, safety, cleaning, maintenance, and technical data for professional kitchen use.</p>
	<p>Autonics AiC-D-CL Series: 2-Phase Closed-Loop Stepper Motor Driver Technical Specification</p> <p>Detailed technical specifications, features, ordering information, configuration diagrams, and control I/O for the Autonics AiC-D-CL Series 2-Phase Closed-Loop Stepper Motor Drivers, essential for industrial automation and motion control applications.</p>
	<p>FKI Kogedstyr Pølsekokere/Vandbad CL-serie Brugervejledning</p> <p>Brugervejledning til FKI Pølsekokere og vandbade i CL-serien. Indeholder information om installation, drift, sikkerhed, rengøring og vedligeholdelse.</p>