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› Monoprice 4K HDBaseT Extender User Manual

Monoprice 121669

Monoprice 4K HDBaseT Extender User Manual

Model: 121669

1. INTRODUCTION

The Monoprice Blackbird 4K HDBaseT Extender is designed to extend uncompressed HDMI® video, audio, USB 2.0 connectivity, control signals (RS232), and power over a single Cat5e/Cat6 cable. Utilizing the latest HDBaseT™ 2.0 technology, this extender system allows for reliable transmission of 4K video resolutions up to 328 feet (100 meters). Its Power over Cable (PoC) feature simplifies installation by allowing the receiver unit to be powered directly from the transmitter, eliminating the need for a separate power adapter at the display end. The receiver also includes three USB 2.0 ports for connecting peripherals such as a keyboard, mouse, or external drive, making it ideal for KVM applications.

2. FEATURES

- Supports video resolutions up to 4K@60Hz (4:2:0).
- Utilizes HDBaseT 2.0 technology for robust signal transmission.
- Extends signals up to 328 feet (100 meters) over a single Cat5e/Cat6 cable.
- Compliant with HDCP 2.2 for secure content transmission.
- Features Power over Cable (PoC), allowing the receiver to be powered by the transmitter.
- Includes RS232 control option for device management.
- Three downstream USB 2.0 ports on the receiver for KVM functionality.
- Supports EDID pass-through for optimal display compatibility.

3. PACKAGE CONTENTS

Please ensure all items listed below are present in your package:

- 1x HDBaseT Transmitter Unit
- 1x HDBaseT Receiver Unit
- 1x 12V DC Power Adapter
- Mounting Brackets and Screws
- User Manual (this document)



Image: Contents of the Monoprice 4K HDBaseT Extender package. Shown are the transmitter and receiver units, a power adapter with interchangeable plugs, mounting brackets, and screws.

4. PRODUCT OVERVIEW

4.1 Front Panel Indicators

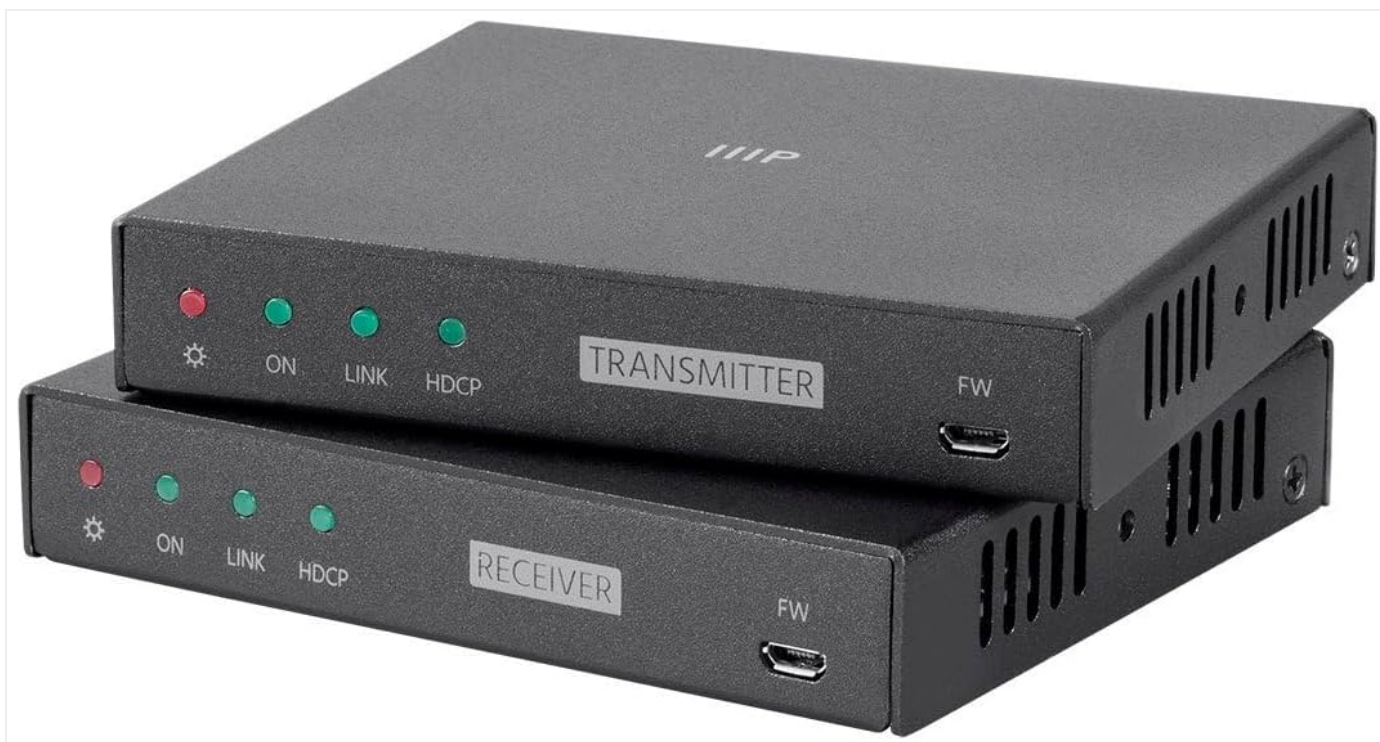


Image: Front view of the Monoprice HDBaseT Extender units. Both the Transmitter (top) and Receiver (bottom) units display LED indicators for Power (ON), Link status, and HDCP status. A micro-USB port labeled 'FW' is also visible on the front of each unit for firmware updates.

- **ON LED:** Illuminates when the unit is powered on.
- **LINK LED:** Illuminates when a stable HDBaseT link is established between the Transmitter and Receiver.
- **HDCP LED:** Illuminates when HDCP (High-bandwidth Digital Content Protection) is successfully negotiated.
- **FW (Firmware) Port:** Micro-USB port for firmware updates.

4.2 Rear Panel Connections



Image: Rear view of the Monoprice HDBaseT Extender units. The Transmitter (top) features HDMI IN, HDBT OUT (RJ45), USB OUT (Type B), RS232 (3-pin terminal block), and DC 12V power input. The Receiver (bottom) features HDMI OUT, HDBT IN (RJ45), three USB IN (Type A) ports, and RS232 (3-pin terminal block).

- **Transmitter Unit:**

- **HDMI IN:** Connects to your HDMI source device (e.g., Blu-ray player, PC).
 - **HDBT OUT:** RJ45 port for connecting to the Receiver unit via Cat5e/Cat6 cable.
 - **USB OUT:** USB Type B port for connecting to a host PC for KVM functionality.
 - **RS232:** 3-pin terminal block for serial control.
 - **DC 12V:** Power input for the transmitter unit.
- **Receiver Unit:**
 - **HDMI OUT:** Connects to your HDMI display device (e.g., TV, monitor).
 - **HDBT IN:** RJ45 port for connecting to the Transmitter unit via Cat5e/Cat6 cable.
 - **USB IN (x3):** USB Type A ports for connecting USB peripherals (e.g., keyboard, mouse, USB drive).
 - **RS232:** 3-pin terminal block for serial control.

5. SETUP AND INSTALLATION

1. **Power Off Devices:** Ensure all source devices, displays, and the extender units are powered off before making any connections.
2. **Connect HDMI Source to Transmitter:** Use a high-quality HDMI cable to connect your HDMI source device (e.g., PC, Blu-ray player) to the **HDMI IN** port on the Transmitter unit.
3. **Connect HDMI Display to Receiver:** Use a high-quality HDMI cable to connect your HDMI display device (e.g., TV, monitor) to the **HDMI OUT** port on the Receiver unit.
4. **Connect USB Host to Transmitter (Optional KVM):** If using KVM functionality, connect a USB Type A to Type B cable (not included) from your host PC's USB port to the **USB OUT** port on the Transmitter unit.
5. **Connect USB Peripherals to Receiver (Optional KVM):** Connect your USB peripherals (e.g., keyboard, mouse, USB drive) to the **USB IN** ports on the Receiver unit.
6. **Connect Cat5e/Cat6 Cable:** Connect a single, high-quality Cat5e or Cat6 Ethernet cable (straight-through, TIA/EIA 568B wiring recommended) between the **HDBT OUT** port on the Transmitter unit and the **HDBT IN** port on the Receiver unit. Ensure the cable is properly terminated.
7. **Connect RS232 (Optional):** If using RS232 control, connect your RS232 devices to the respective 3-pin terminal blocks on both the Transmitter and Receiver units.
8. **Apply Power:** Connect the included 12V DC power adapter to the **DC 12V** input on the Transmitter unit. Due to PoC (Power over Cable), the Receiver unit will receive power directly from the Transmitter via the HDBaseT cable.
9. **Power On Devices:** Power on the display device first, then the source device. Finally, ensure the extender units are powered on (ON LED should illuminate).

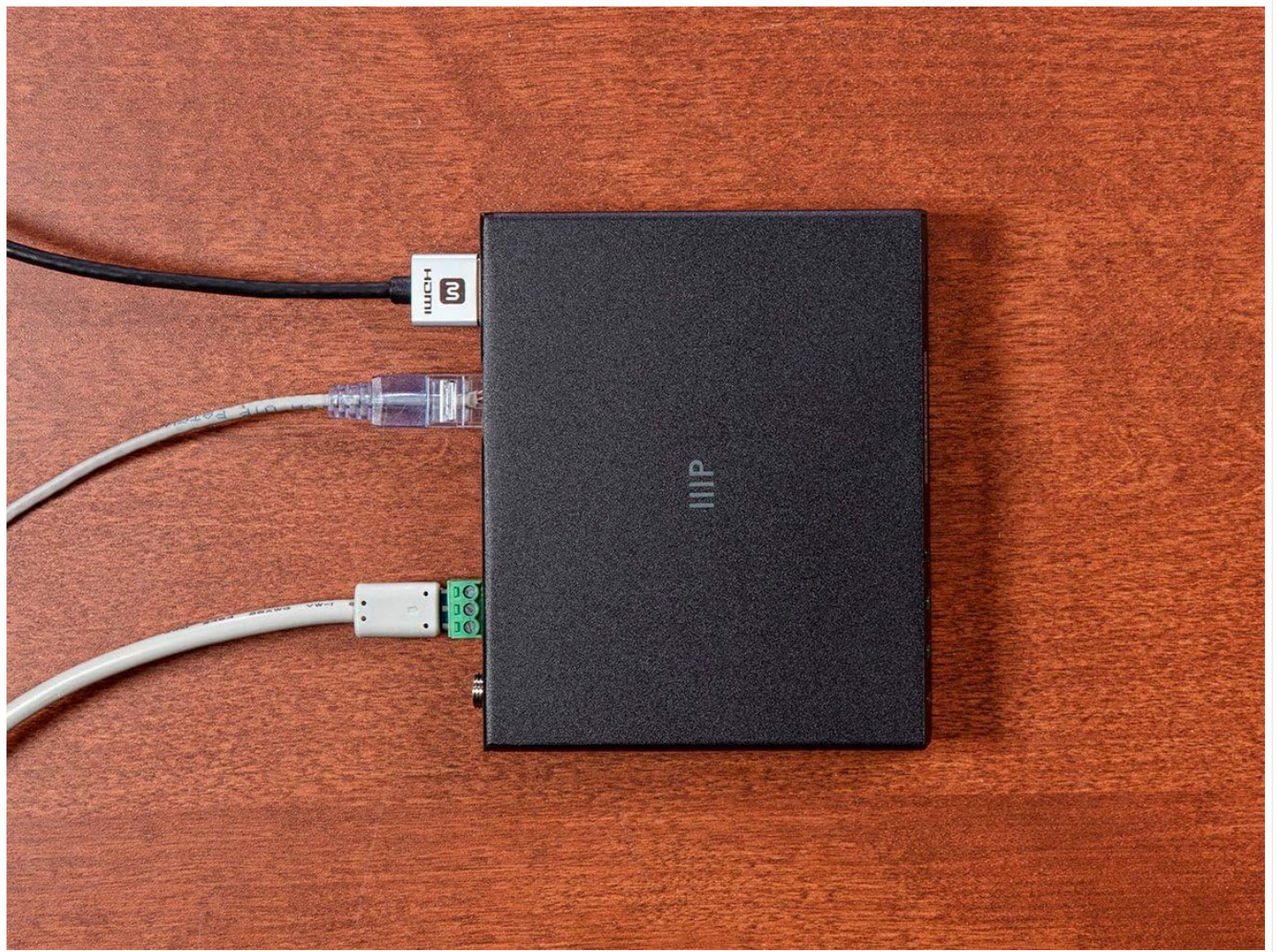


Image: Top-down view of a connected Monoprice HDBaseT Extender unit, demonstrating typical cable connections for HDMI, HDBaseT (Ethernet), and RS232. This illustrates a compact setup.

6. OPERATING INSTRUCTIONS

Once all connections are made and power is applied, the Monoprice 4K HDBaseT Extender will automatically detect the input and output signals.

- **Signal Transmission:** The extender will transmit the HDMI video and audio signal from the source connected to the Transmitter's HDMI IN port to the display connected to the Receiver's HDMI OUT port.
- **KVM Functionality:** If USB devices are connected to the Receiver's USB IN ports and the Transmitter's USB OUT port is connected to a host PC, the connected USB devices will function as if directly connected to the host PC.
- **RS232 Control:** The RS232 ports provide a pass-through for serial control signals, allowing for remote control of devices connected at either end.
- **EDID Management:** The extender supports EDID pass-through, meaning the display's EDID information is sent directly to the source, ensuring optimal resolution and audio format compatibility. No manual EDID settings are typically required.

7. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the units. Do not use liquid cleaners or aerosols.
- **Ventilation:** Ensure the units have adequate ventilation and are not placed in enclosed spaces that could lead to overheating.
- **Cable Management:** Keep cables neatly organized and avoid sharp bends or excessive tension to prevent

damage.

- **Firmware Updates:** Periodically check the Monoprice website for any available firmware updates for your model to ensure optimal performance and compatibility.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No video or audio output.	Loose cable connections.	Check and re-secure all HDMI and HDBaseT cable connections. Ensure a high-quality Cat5e or Cat6 cable is used. Verify source and display are powered on and selected to the correct HDMI input. Check the HDCP LED. If off, try power cycling all devices. Ensure cable length is within 100 meters (328 feet).
	Incorrect cable type (e.g., Cat5e/Cat6).	
	Source/display not powered on or set to correct input.	
	HDCP issue.	
Flickering or intermittent video.	Cable length exceeds maximum.	Replace the HDBaseT cable with a certified, high-quality Cat6 cable. Ensure the HDBaseT cable is not run parallel to power lines or other sources of interference. Try a lower resolution or refresh rate on the source device.
	Poor quality or damaged Cat5e/Cat6 cable.	
	Electromagnetic interference (EMI).	
USB devices not working.	Resolution/refresh rate incompatibility.	Verify the USB Type A to Type B cable is securely connected between the Transmitter and host PC. Try connecting a different USB device. For high-power devices, an externally powered USB hub may be required. Ensure necessary drivers are installed on the host PC.
	USB cable not connected or faulty.	
	USB device drawing too much power.	
Power LED is off.	Driver issues on host PC.	Ensure the 12V DC power adapter is securely connected to the Transmitter unit and plugged into a working power outlet. Test the power outlet with another device.
	Power adapter not connected or faulty.	
No power from outlet.		

9. SPECIFICATIONS

Model Number	121669
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2
HDBaseT Compliance	HDBaseT 2.0
Supported Resolutions	Up to 4K@60Hz (4:2:0)
Transmission Distance	100 meters (328 feet) for 4K, 1080p
USB Standard	USB 2.0
Power Supply	DC 12V/2A (Transmitter), PoC (Receiver)

Power Consumption	Max 10W
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90% RH (non-condensing)
Product Dimensions (each unit)	7.3 x 6.35 x 5.2 inches (approximate, based on product dimensions)
Item Weight	1.9 ounces (approximate, for one unit)

10. WARRANTY AND SUPPORT

Monoprice stands behind its products. This Monoprice 4K HDBaseT Extender is covered by a limited warranty. For detailed warranty information, including terms and conditions, please refer to the official Monoprice website or contact Monoprice Customer Service.

For technical support, troubleshooting assistance, or to inquire about warranty service, please visit the Monoprice support page or contact their customer service team directly.

- **Monoprice Website:** www.monoprice.com
- **Support Page:** Refer to the support section on the Monoprice website for FAQs, drivers, and contact information.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

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