



Blackbird™ 4K HDMI® Extender



P/N 24281

User's Manual

SAFETY WARNINGS AND GUIDELINES

Please read this entire manual before using this device, paying extra attention to these safety warnings and guidelines. Please keep this manual in a safe place for future reference.

- This device is intended for indoor use only.
- Do not expose this device to water or moisture of any kind. Do not place drinks or other containers with moisture on or near the device. If moisture does get in or on the device, immediately unplug it from the power outlet and allow it to fully dry before reapplying power.
- Do not touch the device, the power cord, or any other connected cables with wet hands.
- Do not expose this device to excessively high temperatures. Do not place it in, on, or near heat sources, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- Prior to operation, check the unit and power cord for physical damage. Do not use if physical damage has occurred.
- Before plugging the unit into a power outlet, ensure that the outlet provides the same type and level of power required by the device.
- Unplug this device from the power source when not in use.
- Take care to prevent damage to the power cord. Do not allow it to become crimped, pinched, walked on, or become tangled with other cords. Ensure that the power cord does not present a tripping hazard.
- Never unplug the unit by pulling on the power cord. Always grasp the connector head or adapter body.
- Ensure that power is turned off and disconnected before making any electrical connections.
- Clean using a soft, dry cloth only. Do not use chemical cleaners, solvents, or detergents. For stubborn deposits, moisten the cloth with warm water.

- This device has no user serviceable parts. Do not attempt to open, service, or modify this device.

INTRODUCTION

This Blackbird™ 4K HDMI® Extender can extend HDMI signals to distances up to 164 feet (50 meters) over a single Cat6 Ethernet cable. It supports video resolutions up to 4K@60Hz YCbCr 4:4:4 with support for HDCP™ 2.2/1.4. It features 18Gbps bandwidth and supports all the features of the HDMI 2.0 specification. It also features one-way IR pass-through, which allows for video source control from the remote location. The transmitter has an HDMI loop-through output, so you can connect a local display.

FEATURES

- Compliant with the HDMI® 2.0, HDCP™ 2.2/1.4, and DVI™ 1.0 specifications
- Supports 18Gbps bandwidth
- Supports input and output video resolution up to 4K@60Hz YCbCr 4:4:4
- Extends HDMI signals to distances up to 229 feet (70 meters) over a single Ethernet cable
- Includes an HDMI loop-through output
- Supports one-way IR pass-through
- Supports IR signals in the 20-60 kHz range
- Supports HDR video
- Supports the Power over Cable (PoC) feature, allowing the transmitter or receiver to get its power over the Ethernet cable
- Supports automatic EDID® copy from the connected display

CUSTOMER SERVICE

The Monoprice Customer Service department is dedicated to ensuring that your ordering, purchasing, and delivery experience is second to none. If you have any problem with your order, please give us an opportunity to make it right. You can contact a Monoprice Customer Service representative through the Live Chat link on our website www.monoprice.com or via email at support@monoprice.com. Check the website for support times and links.

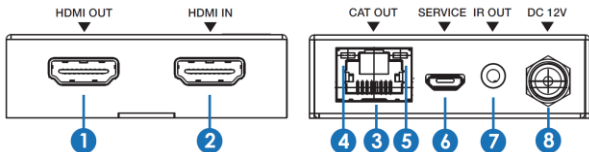
PACKAGE CONTENTS

Please take an inventory of the package contents to ensure you have all the items listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

- 1x HDMI® Extender Transmitter
- 1x HDMI Extender Receiver
- 1x IR Transmitter
- 1x IR Receiver
- 1x AC Power Adapter (12 VDC, 1A)
- 4x Mounting Ears
- 1x User's Manual

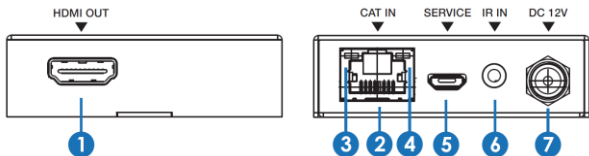
PRODUCT OVERVIEW

Transmitter



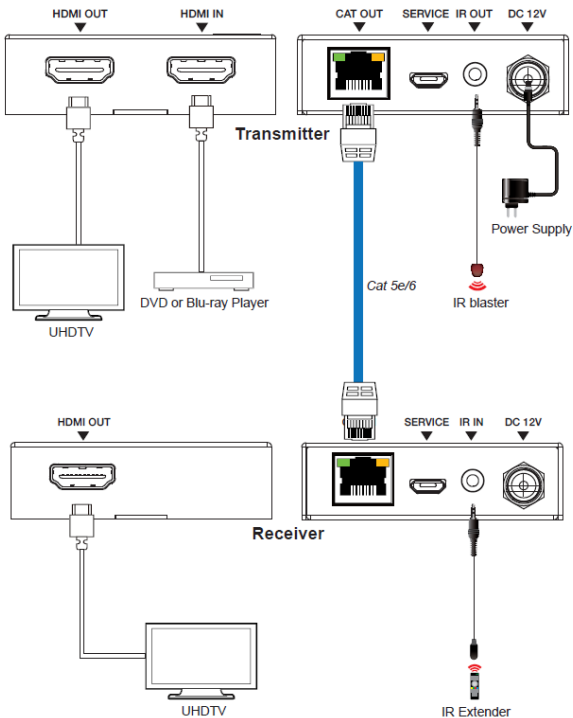
1. **HDMI OUT:** HDMI® loop-through output for connecting a local display.
2. **HDMI IN:** HDMI input for connecting a video source device.
3. **CAT OUT:** RJ45 Ethernet connector for connecting an Ethernet cable to the receiver.
4. **POWER LED:** The LED illuminates green when the transmitter is powered on.
5. **DATA LED:** The LED illuminates orange when a valid signal exists between the transmitter and receiver.
6. **SERVICE:** Micro USB port for connecting a USB flash drive to perform firmware updates.
7. **IR OUT:** 3.5mm jack for connecting the IR transmitter.
8. **DC 12V:** DC barrel connector for connecting the included AC power adapter.
Note that the system supports the PoC feature, which means that the transmitter can receive power from the receiver, if the receiver is powered using the included AC power adapter.

Receiver



1. **HDMI OUT:** HDMI® port for connecting the remote display.
2. **CAT IN:** RJ45 Ethernet connector for connecting an Ethernet cable from the transmitter.
3. **POWER LED:** The LED illuminates green when the receiver is powered on.
4. **DATA LED:** The LED illuminates orange when a valid signal exists between the transmitter and receiver.
5. **SERVICE:** Micro USB port for connecting a USB flash drive to perform firmware updates.
6. **IR IN:** 3.5mm jack for connecting the IR receiver.
7. **DC 12V:** DC barrel connector for connecting the included AC power adapter.
Note that the system supports the PoC feature, which means that the receiver can receive power from the transmitter, if the transmitter is powered using the included AC power adapter.

SAMPLE CONNECTION DIAGRAM



TECHNICAL SUPPORT

Monoprice is pleased to provide free, live, online technical support to assist you with any questions you may have about installation, setup, troubleshooting, or product recommendations. If you ever need assistance with your new product, please come online to talk to one of our friendly and knowledgeable Tech Support Associates.

Technical support is available through the online chat button on our website **www.monoprice.com** or through email by sending a message to **tech@monoprice.com**.

Check the website for support times and links.

SPECIFICATIONS

Model	24281
Maximum Video Resolution	4K@60Hz
Video Bandwidth	18Gbps
Color Spaces	RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depths	8-bit, 10-bit, and 12-bit for 1080p, 4K@30Hz, and 4K@60Hz YCbCr 4:2:2/4:2:0 8-bit for 4K@60Hz YCbCr 4:4:4
HDMI® Version	2.0
HDCP™ Version	2.2 and 1.4
4K@60Hz Transmission Distances	Up to 164 feet (50 meters) using Cat5e or 196 feet (60 meters) using Cat6/6a/7
4K@30Hz/1080p Transmission Distances	Up to 164 feet (50 meters) using Cat5e or 229 feet (70 meters) using Cat6/6a/7
Input Power	12 VDC, 1A or Power over Cable (PoC)
AC Adapter Input Power	100 ~ 240 VAC, 50/60 Hz

Maximum Power Consumption	3.84 watts
Operating Temperature	+32 ~ +104°F (0 ~ +40°C)
Storage Temperature	-4 ~ +140°F (-20 ~ +60°C)
Operating Humidity	20 ~ 90%% RH, noncondensing
Dimensions (each)	2.4" x 3.5" x 0.7" (61 x 88 x 18 mm)
Transmitter Weight	5.6 oz. (160g)
Receiver Weight	5.5 oz. (155g)

REGULATORY COMPLIANCE

Notice for FCC



This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Modifying the equipment without Monoprice's authorization may result in the equipment no longer complying with FCC requirements for Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a

particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice for Industry Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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HDCP™ is a trademark of Digital Content Protection LLC.

DVI™ is a trademark of the Digital Display Working Group.

EDID® is a registered trademark of the Video Electronics Standards Association.