

# **BLACKBIRD™**

## **4K 4x4 HDMI® Matrix**



P/N 43623

## **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 remove it from its power source 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 excessive vibration or extreme force, shock, or fluctuations in temperature or humidity.
- Do not expose this device to excessively high temperatures. Do not place it in, on, or near a heat source, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- Do not place or install this device in an area where it can be exposed to excessive amounts of dust, humidity, oil, smoke, or combustible vapors.
- 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.
- Remove the batteries from the controller if it will go unused for a lengthy period of time.
- The remote control contains a Lithium battery. Dispose of it only in accordance with local, state, or federal regulations for electronic waste.
- 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 4x4 HDMI® Matrix can distribute any of up to four HDMI video sources to any of up to four HDMI displays. It supports video resolutions up to 4K@60Hz with the YCbCr 4:4:4 color space. It supports multichannel audio, including 7.1-channel LPCM, Dolby TrueHD™, and DTS-HD Master Audio™. It can independently downscale each output from 4K to 1080p. It features a 4-position DIP switch on the rear panel for setting the EDID® for the source devices.

## 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](http://www.monoprice.com)** or via email at **[support@monoprice.com](mailto:support@monoprice.com)**. Check the website for support times and links.

# FEATURES

- Independently distributes any of up to four HDMI® video sources to up to four HDMI displays
- Supports video resolutions up to 4K@60Hz with YCbCr 4:4:4 color space, including 4K@30Hz and 1080p@60Hz
- Complies with the HDMI 2.0 and HDCP™ 2.2/1.x standards
- Delivers up to 18Gbps video bandwidth
- Supports EDID® management using a 4-position DIP switch
- Supports independent 4K to 1080p downscaling for greater flexibility when using 1080p displays
- Supports HDR, HDR10, HDR10+, and Dolby Vision™ passthrough
- Supports multichannel audio, including LPCM 7.1, Dolby TrueHD™, DTS-HD Master Audio™, Dolby® 5.1, and DTS® 5.1
- Includes a multifunction IR remote control

# 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 4K 4x4 HDMI® Matrix

1x IR Remote Control

1x AC Power Adapter (12 VDC, 2.5A)

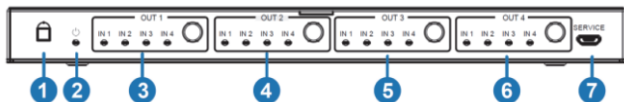
2x Rackmount Ears

4x Rackmount Screws

1x User's Manual

# PRODUCT OVERVIEW

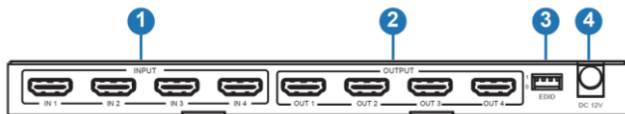
## Front Panel



1. **IR:** IR "eye" for receiving signals from the included IR Remote Control.
2. **POWER:** The LED illuminates red when power is applied.

3. **OUT 1:** This section includes a button and four LEDs. Momentarily press the button to cycle forward through the available inputs. One of the LEDs will illuminate to indicate the selected input. Press and hold the button for about 3 seconds to enable or disable the **4K to 1080p Downscaler** for **OUT 1**. The Downscaler is disabled by default.
4. **OUT 2:** The functionality of the **OUT 2** section is identical to that of the **OUT 1** section.
5. **OUT 3:** The functionality of the **OUT 3** section is identical to that of the **OUT 1** section.
6. **OUT 4:** The functionality of the **OUT 4** section is identical to that of the **OUT 1** section.
7. **SERVICE:** Micro USB port for performing a firmware update, in the event that one is available.

## Rear Panel

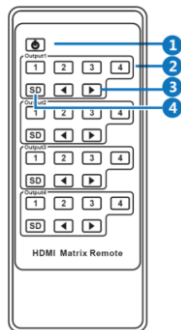


1. **INPUT:** Four HDMI® ports for connecting up to four HDMI video source devices.

2. **OUTPUT:** Four HDMI ports for connecting up to four HDMI displays.
3. **EDID:** Four DIP switches for setting the EDID® used by the source devices.
4. **DC 12V:** DC barrel connector for connecting the included AC Power Adapter.

## IR Remote Control

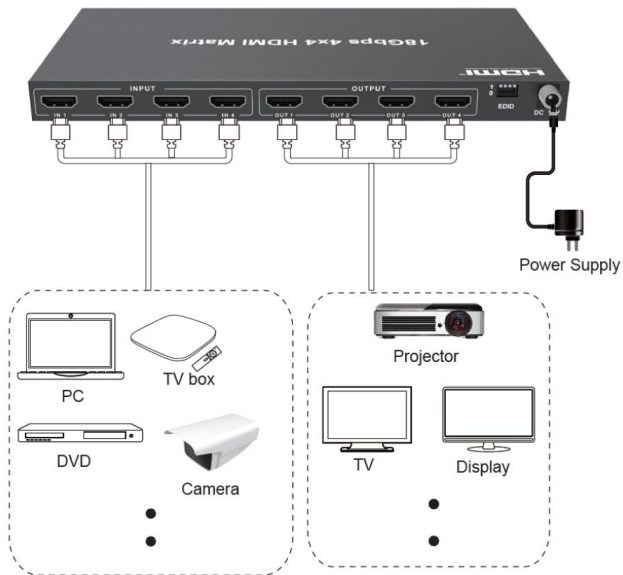
1. **POWER:** Press the button to turn the matrix on or to put it into standby mode.
2. **1/2/3/4:** Press one of the four numbered buttons to directly select that input for **Output1**.
3. **◀/▶:** Press the ◀ button to cycle backward through the available inputs. Press the ▶ button to cycle forward through the available inputs.
4. **SD:** Press the button to enable or disable the **4K to 1080p Downscaler** for **Output1**. The Downscaler is disabled by default.



The functionalities of the buttons in the **Output2**, **Output3**, and **Output4** sections are identical to those in the **Output1** section.



# SAMPLE CONNECTION DIAGRAM



## EDID SETTINGS

Use the information in the following table to determine the DIP switch settings for the desired EDID®. You should choose an EDID in which all the settings are supported by all the displays. Note that when setting the DIP switches, the switch is on (1) when it is up and off (0) when it is down.

DIP Switches	Video/Audio Settings
0000	1080p, Stereo Audio 2.0
0001	1080p, Dolby®/DTS® 5.1
0010	1080p, HD Audio 7.1
0011	4K@30Hz, Stereo Audio 2.0
0100	4K@30Hz, Dolby/DTS 5.1
0101	4K@30Hz, HD Audio 7.1
0110	4K@60Hz, Stereo Audio 2.0 SDR*
0111	4K@60Hz, Dolby/DTS 5.1 SDR
1000	4K@60Hz, HD Audio 7.1 SDR
1001	4K@60Hz, Stereo Audio 2.0 HDR**
1010	4K@60Hz, Dolby/DTS 5.1 HDR
1011	4K@60Hz, HD Audio 7.1 HDR
1100	Copy Output 1

DIP Switches	Video/Audio Settings
1101	Copy Output 2
1110	Copy Output 3
1111	Copy Output 4

\*SDR = Standard Dynamic Range

\*\*HDR = High Dynamic Range

## 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](http://www.monoprice.com)** or through email by sending a message to **[tech@monoprice.com](mailto:tech@monoprice.com)**. Check the website for support times and links.

To download the latest drivers, firmware, manuals, etc., go to **[www.monoprice.com](http://www.monoprice.com)** and type the **P/N** into the search bar. If available, support files are linked at the bottom of the product page.

# SPECIFICATIONS

P/N	43623
Inputs	4x HDMI®
Outputs	4x HDMI
HDMI Version	2.0
HDCP™ Version	2.2/1.x
Maximum Video Resolution	4K@60Hz
Video Bandwidth	18Gbps
Supported Color Spaces	RGB, YCbCr 4:4:4/4:2:2/4:2:0
Supported Color Depths	1080p@60Hz: 8-bit, 10-bit, 12-bit 4K@60Hz YCbCr 4:4:4: 8-bit 4K@60Hz YCbCr 4:2:2/4:2:0: 8-bit, 10-bit, 12-bit
Supported HDMI Audio Formats	LPCM 7.1, Dolby TrueHD™, DTS-HD Master Audio™, Dolby® 5.1, DTS® 5.1
High Dynamic Range (HDR) Support	HDR, HDR10, HDR10+, Dolby Vision™
Input Power	12 VDC, 2.5A
AC Adapter Input Power	100 ~ 240 VAC, 50/60 Hz

Maximum Power Consumption	11.04 watts
Operating Temperature	+32 ~ +104°F (0 ~ +40°C)
Storage Temperature	-4 ~ +140°F (-20 ~ +60°C)
Operating Humidity	20 ~ 90% RH, noncondensing
Dimensions	8.7" x 8.1" x 0.7" (220 x 205 x 19 mm)
Weight	18.9 oz. (535g)

## 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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