Cable Matters

4x2 18Gbps Audio/Video Matrix Switch

Model 103087

♦ Distribute any combination of four A/V sources to two displays

User Manual

- Download the user manual at:
  www.cablematters.com/dl/103087

support@cablematters.com

Table of Contents

1. INTRODUCTION

1.1 Introduction

Thank you for your purchase from Cable Matters® Inc., the 'Reliable Connectivity' company. This User Manual provides an overview of the features and installation of your new

4x2 18Gbps Audio/Video Matrix Switch

Please read these instructions carefully before connecting, operating or configuring this product. Please keep this manual for future reference.

Contact **support@cablematters.com** for questions or product support.

1.2 Copyright and Trademarks

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1.3 FCC Compliance Statement

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

2. PRODUCT OVERVIEW

2.1 Package Contents

Please check that the following items are contained in the package:

- 1x 4x2 Matrix Switch
- 1x AC Power Adapter
- 1x IR Remote with battery
- 2x Mounting Brackets and 8 Mounting Screws
- 2x HDMI® Cables
- 1x User Manual

2.2 Product Description

The Cable Matters 4x2 18Gbps Audio/Video Matrix is the perfect solution for connecting a computer, video streamer, Blu-ray player or set-top box to a display with limited HDMI ports. Connect up to four devices to two separate displays. Control each device independently with either push buttons on the matrix or a handheld remote.
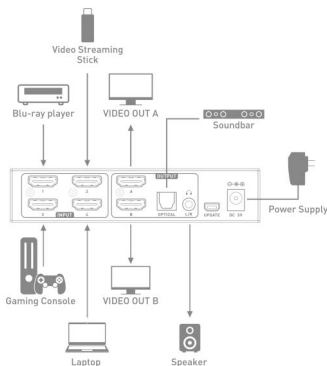
2.3 Product Features

- Connect up to 4 input sources with HDMI output
- Switch sources between 2 output displays with HDMI input
- Simultaneous switching between inputs with a handheld remote or manual buttons
- Supports up to 4K@60Hz resolution
- Supports 8/10/12 bit color
- 18 Gbps bandwidth for HDMI 2.0 compatibility
- HDCP 2.2 support for viewing protected content
- 16 EDID configurations for maximum compatibility
- Output B supports 4K source to 1080p display downscaling
- Audio support for 2.1, 5.1 and 7.1 surround sound
- LCPM, Dolby TrueHD, and DTS HD-Master Audio support
- Output A supports audio de-embedding for a soundbar, external speaker or headphone
- Rugged metal housing construction reduces EMI/RFI noise
- Includes a 2-Pack of 4K rated HDMI cables
- Supports HDR color

3. CONNECTION AND OPERATION

3.1 Installation Checklist

Please review this information before installing the 4x2 Matrix

- Installation with a surge protector is recommended
- Power-off the source and display equipment before connecting
- Check for a nearby AC outlet for the power adapter
- Recommended maximum total HDMI cable distance In/Out is 15/15ft (4K) and 25/25ft (HD)
- 4K displays require 4K-rated HDMI cables
- Test the Matrix and cabling before installing in a permanent location
- Review the port definitions below when connecting external audio devices

3.2 Front Panel Connections
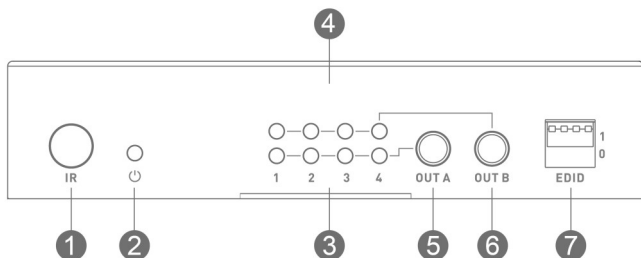
1. **IR Receiver Window**: Remote must have line-of-sight to this reader
2. **Power LED**: Green
3. **LED OUT A**: Green LED shows the selected source 1-4 to Display A
4. **LED OUT B**: Green LED shows the selected source 1-4 to Display B
5. **OUT A Button**: Manually switch from source 1, 2, 3, or 4
6. **OUT B Button**: Manually switch from source 1, 2, 3, or 4
7. **EDID**: Extended Display Identification Data dip switch selector

3.3 Rear Panel Connections
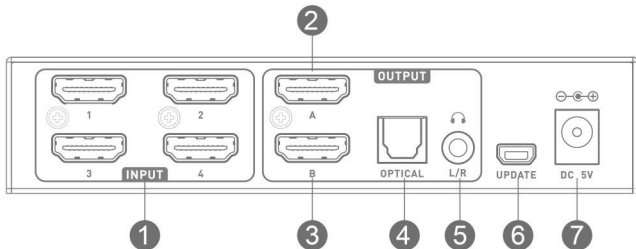
1. **HDMI INPUT Ports**: Connect from 1 to 4 devices with HDMI
2. **HDMI A OUTPUT Port**: Connect to a display with HDMI (Mirrors audio to 3.5mm and Optical)
3. **HDMI B OUTPUT Port**: Connect to a display with HDMI (Supports 4K to HD downscaling for a 4K source connected to an HD display)
4. **OPTICAL S/PDIF Output Port**: Audio is mirrored from Output A
5. **3.5mm Aux Stereo Port**: Audio is mirrored from Output A
6. **UPDATE Port**: Firmware update (when available)
7. **DC 5V**: Connect to AC power cord

3.4 Connection Instructions

1. Connect the AC power adapter to the unit and an electrical outlet
2. Power off all the source equipment and output displays
3. Connect the HDMI cables to the input sources and output displays
4. Select the EDID Mode (Page 8) to match video and audio sources and displays
5. Use the remote or manual buttons on the Matrix to select INPUT and OUTPUT

Notes:
- Use the OUTPUT A port to mirror the audio to the 3.5mm or Optical audio ports
- Use the OUTPUT B port when connecting a 4K source to an HD 1080p display

3.5 IR Remote Control
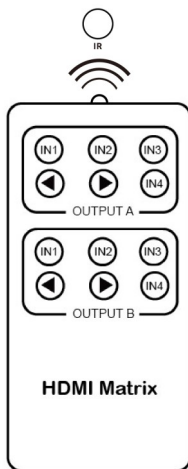
OUTPUT A Display:

- Directly select input source IN1, IN2, IN3 or IN4
- Arrow forward or back between input sources

OUTPUT B Display:

- Directly select input source IN1, IN2, IN3 or IN4
- Arrow forward or back between input source

Important Notes:

- Remote must have line-of-site to the IR window on the Matrix
- Transmission angle +/- 45°
- Maximum distance from IR remote to matrix is 22 feet
- Remove the protection tab on the battery before using
- View removal and installation instructions for the CR2025 battery on the back of the remote

3.6 EDID Management

This 4x2 HDMI Matrix can connect HDMI source equipment and output displays with different video resolutions and audio output settings. These settings can be individually programmed using the EDID management function.

Number	EDID Mode	EDID Description
1	0000	AUTO
2	0001	Copy HDMI OUT A
3	0010	Copy HDMI OUT B
4	0011	720p, 2 Channel Audio
5	0100	1080p, 2 Channel Audio
6	0101	1080p, Dolby, DTS 5.1
7	0110	1080p, HD Audio 7.1
8	0111	4K@30Hz/ 2 Channel Audio
9	1000	4K@30Hz/ Dolby, DTS 5.1 Audio
10	1001	4K@30Hz/ HD 7.1 Audio
11	1010	4K@60Hz (4:2:0), 2 Channel Audio
12	1011	4K@60Hz (4:2:0), Dolby, DTS 5.1 Audio
13	1100	4K@60Hz (4:2:0)/ HD 7.1 Audio
14	1101	4K@60Hz, 2 Channel Audio
15	1110	4K@60Hz, Dolby, DTS 5.1 Audio
16	1111	4K@60Hz, HD 7.1 Audio

EDID Selection Notes: Set the dip switches for the audio/video setting above. The Matrix should adjust to the new settings within a few seconds.

3.7 Troubleshooting Notes

- Check that the Matrix and all connected equipment have power. The power LED should be lit.

- Check that all cables are connected to the correct input and output ports.

- Use a short HDMI extension cable to connect a media streaming stick if the space is too tight.

- Check that the correct video input source and output display is selected. Check the green LED indicators on the front panel of the Matrix.

- All connected equipment must support HDCP to view protected content.

- Directly connect the video source to a display to test for compatibility.

- Check the audio output settings from the source device or computer.

- Test each HDMI cable by connecting it with other equipment.

- Recommended maximum total HDMI cable distance In/Out is 15/15ft (4K) and 25/25ft (HD).

- Connecting through an HDMI coupler or wall plate may degrade the signal transmission.

- Place the Matrix away from fluorescent lighting or equipment that generates electrical noise.

- A 'Not Supported' error message may indicated that the connected equipment does not support HDCP (or more than 2 outputs) for view content-protected video.

- Check that the IR window on the front panel is not blocked.

- Reboot the video source and output displays after making changes if the display is not detected.

Contact **support@cablematters.com** with any questions.

4. TECHNICAL SPECIFICATIONS Model 103087

Matrix Ports	
HDMI Input	4x HDMI Female
HDMI Output	2x HDMI Female
AUDIO Output 1	S/PDIF Optical - LCPM-2/5.1 Ch, Dolby Digital 2/5.1 Ch, DTS 2/5.1 Ch
AUDIO Output 2	3.5mm TRS stereo - 2 Ch Female (CTIA & OMTP headset compatible)
Service	Mini-USB Female
Power	DC 5V
Audio/Video Compatibility	
HDMI Compatibility	HDMI 2.0b and below
HDCP Compatibility	HDCP 2.2, 1.4
Video Resolution	Up to 4Kx2K@60Hz
Color Spaces	RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depth	8-bit, 10-bit, 12-bit
HDMI Audio Formats	PCM 2.0/5.1/7.1 Ch, Dolby 5.1, DTS 5.1, Dolby TrueHD, DTS, HD
Mechanical	
Matrix Housing	(LxWxH) 5.1 x 3.7 x 1.1 Inches / 13.6 Ounces
Power Supply	Input: 100-240VAC, 50/60Hz, Output: DC 5V/1A
Operating Temperature	32F - 140F
Miscellaneous	
Regulatory Compliance	C E, FCC, RoHS
Warranty	Limited One-Year

Note: Specifications are subject to change without notice

5. WARRANTY AND SUPPORT

5.1 Customer Support and Contact Information

Cable Matters offers lifetime technical support as an integral part of our commitment to provide industry leading solutions.

Email us with any questions at **support@cablematters.com.**

5.2 Warranty Information

This product is backed by a limited one-year warranty. The warranty covers parts and labor costs only. Cable Matters does not warrant its products from defects or damages arising from misuse, abuse, or normal wear.

5.3 Limitation of Liability

In no event shall Cable Matters Inc. (including their officers, directors, employees or agents) be liable for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, loss of data, or any pecuniary loss, arising out of, or related to the use of this product exceeding the actual price paid for the product (as allowed by state law.

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Certified Premium HDMI® Cable

Model 300016

Toslink S/PDIF Optical Audio Cable

Model 120001

3.5mm Stereo Audio Cable

Model 500001