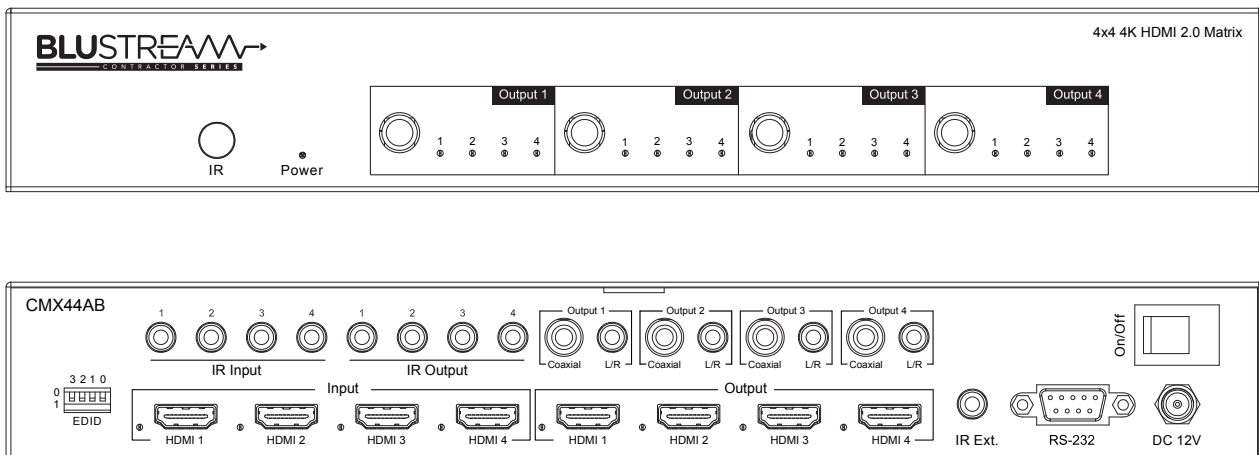


# CMX44AB

## User Manual



## Introduction

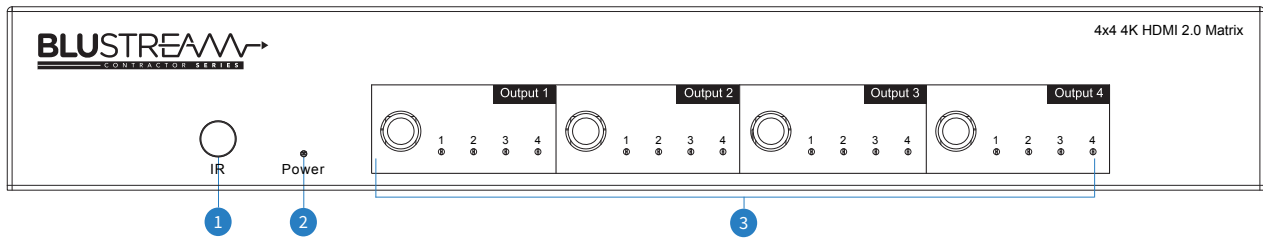
Our Contractor CMX44AB 4K HDMI matrix features HDMI 2.0 chipsets with HDCP 2.2 support, allowing distribution of four HDMI sources to four displays. This enables all sources to be viewed seamlessly as required within a matrix configuration. The unit transmits all HDMI resolutions up to and including 4K 60Hz 4:4:4/HDR. The 4-Way matrix also includes audio breakout and EDID management.

### Key Features:

- Features 4x HDMI inputs which can be independently routed to 4x HDMI outputs
- Supports 4K UHD video (up to 4K @60Hz 4:4:4/HDR)
- Supports all industry standard video resolutions including VGA-WUXGA and 480i-4K
- Supports all known HDMI audio formats including Dolby TrueHD, Dolby Atmos, Dolby Digital Plus and DTS-HD Master Audio transmission
- HDMI audio breakout to associated output analogue L/R audio and coaxial digital outputs concurrently
- Control via front panel, IR and RS-232
- IR routing
- Supplied with Blustream 5V IR receivers and emitters
- 3rd Party drivers available for all major home control brands
- Advanced EDID management
- HDCP 2.2 compliant

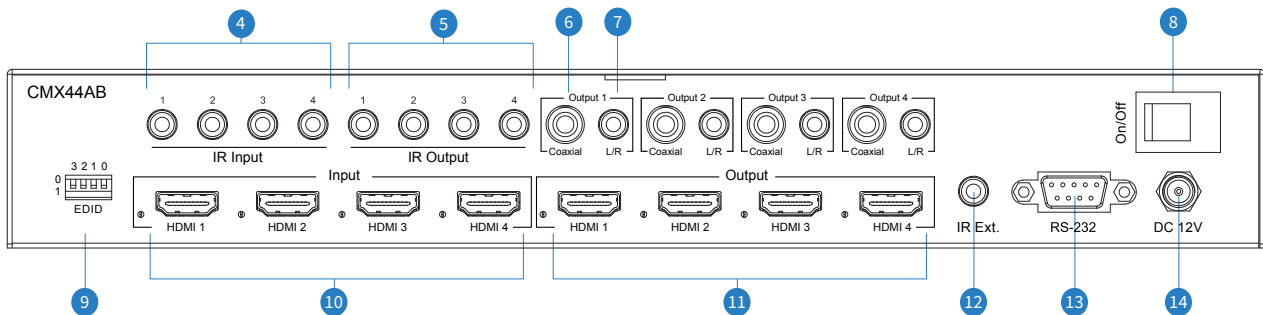
# Panel Description

## Front Panel:



- 1 IR receiver window for matrix control
- 2 Power LED indicator
- 3 HDMI output selection buttons 1-4. Press to scroll through source inputs per HDMI output

## Rear Panel:



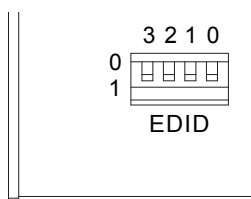
- 4 IR input - 3.5mm stereo jack provides zone specific routed IR receiver input
- 5 IR output - 3.5mm mono jack provides routed IR emitter output for discrete control of sources
- 6 Coaxial digital audio output - RCA (SPDIF)
- 7 Analog L/R audio output - 3.5mm stereo audio jack, Supports 2 channel PCM only
- 8 Power on/off switch
- 9 EDID DIP switch - Used to manage the video and audio resolution output by the connected source device.
- 10 HDMI inputs - connect to HDMI source devices
- 11 HDMI outputs - connect to HDMI display devices
- 12 IR control - IR input for switcher control. Connect 5V Blustream IR receiver.
- 13 RS-232 Serial port - For control of switcher by third party control devices
- 14 Power port - Use included 12V/2A DC power adaptor

# Adjusting The EDID Settings

The EDID configuration can be altered using the dip-switches located on the rear panel of the matrix.

Please see adjacent table for EDID settings. Note: You must power-cycle the HDMI switcher after changes have been made in order for the EDID settings to update.

EDID Dip-switches



## EDID Dip-switches

- [DIP]=0000: HDMI 1080p@60Hz, Audio 2ch PCM
- [DIP]=0001: HDMI 1080p@60Hz, Audio 5.1ch PCM/DTS/DOLBY
- [DIP]=0010: HDMI 1080p@60Hz, Audio 7.1ch PCM/DTS/DOLBY/HD
- [DIP]=0011: HDMI 1080i@60Hz, Audio 2ch PCM
- [DIP]=0100: HDMI 1080i@60Hz, Audio 5.1ch PCM/DTS/DOLBY
- [DIP]=0101: HDMI 1080i@60Hz, Audio 7.1ch PCM/DTS/DOLBY/HD
- [DIP]=0110: HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 2ch PCM
- [DIP]=0111: HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
- [DIP]=1000: HDMI 4K@60Hz 4:2:0+4K@30Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD
- [DIP]=1001: HDMI 4K@60Hz 4:4:4, Audio 2ch PCM
- [DIP]=1010: HDMI 4K@60Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
- [DIP]=1011: HDMI 4K@60Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD
- [DIP]=1100: DVI 1280x1024@60Hz, Audio None
- [DIP]=1101: DVI 1920x1080@60Hz, Audio None
- [DIP]=1110: DVI 1920x1200@60Hz, Audio None
- [DIP]=1111: Software Control EDID

# RS-232 Control Port

The Matrix can be controlled via 9-pin serial RS-232 cable.

BLUSTREAM RS-232		REMOTE CONTROL CONSOLE	
PIN	Assignment	PIN	Assignment
1	NC	1	NC
2	Tx	2	Rx
3	Rx	3	Tx
4	NC	4	NC
5	GND	5	GND
6	NC	6	NC
7	NC	7	NC
8	NC	8	NC
9	NC	9	NC

**Baud Rate:** 57600 bps

**Data Bit:** 8-bit

**Parity:** None

**Stop Bit:** 1-bit

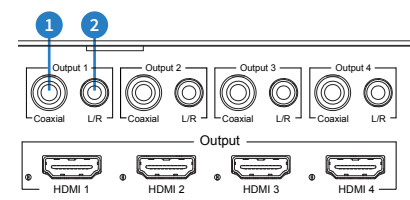
**Flow Control:** None

RS-232 COMMAND	DESCRIPTION
?	Print Help Information
HELP	Print Help Information
STATUS	Print System Status And Port Status
PON	Power On, System Run On Normal Sta
POFF	Power Off, System Run On Power Save State
IRON/OFF	Set System IR Control On Or Off
KEYON/OFF	Set System KEY Control On Or Off
BEEPON/OFF	Set Onboard Beep On Or Off
LEDON/OFF	Set Front Panel LED Always On or Auto Turn Off in Power On State
RESET	Reset System To Default Setting (Type "Yes" To Confirm, "No" To Discard)
OUTxxFRON/OFF OUTxxFRyy	Set OUTPUT:xx On or Off Set OUTPUT:xx From INPUT:yy xx=00: Select All OUTPUT Port xx=[01...04]: Select One OUTPUT Port yy=[01...04]: Select One INPUT Port
EDIDxxCPyy EDIDxxDFzz	xx=00: Select All INPUT Port xx=[01...04]: Select One INPUT Port yy=[01...04]: Select One OUTPUT Port zz=00: HDMI 1080p@60Hz, Audio 2CH PCM zz=01: HDMI 1080p@60Hz, Audio 5.1CH DTS/DOLBY zz=02: HDMI 1080p@60Hz, Audio 7.1CH DTS/DOLBY/HD zz=03: HDMI 1080i@60Hz, Audio 2CH PCM zz=04: HDMI 1080i@60Hz, Audio 5.1CH DTS/DOLBY zz=05: HDMI 1080i@60Hz, Audio 7.1CH DTS/DOLBY/HD zz=06: HDMI 1080p@60Hz/3D, Audio 2CH PCM zz=07: HDMI 1080p@60Hz/3D, Audio 5.1CH DTS/DOLBY zz=08: HDMI 1080p@60Hz/3D, Audio 7.1CH DTS/DOLBY/HD zz=09: HDMI 4K@30Hz 4:4:4, Audio 2CH PCM zz=10: HDMI 4K@30Hz 4:4:4, Audio 5.1CH DTS/DOLBY zz=11: HDMI 4K@30Hz 4:4:4, Audio 7.1CH DTS/DOLBY/HD zz=12: DVI 1280x1024@60Hz, Audio None zz=13: DVI 1920x1080@60Hz, Audio None zz=14: DVI 1920x1200@60Hz, Audio None zz=15: User EDID 1 zz=16: User EDID 2 zz=17: GUI Download EDID zz=18: HDMI 4K@60Hz 4:2:0, Audio 2CH PCM zz=19: HDMI 4K@60Hz 4:2:0, Audio 5.1CH DTS/DOLBY zz=20: HDMI 4K@60Hz 4:2:0, Audio 7.1CH DTS/DOLBY/HD zz=21: HDMI 4K@60Hz 4:4:4, Audio 2CH PCM zz=22: HDMI 4K@60Hz 4:4:4, Audio 5.1CH DTS/DOLBY zz=23: HDMI 4K@60Hz 4:4:4, Audio 7.1CH DTS/DOLBY/HD

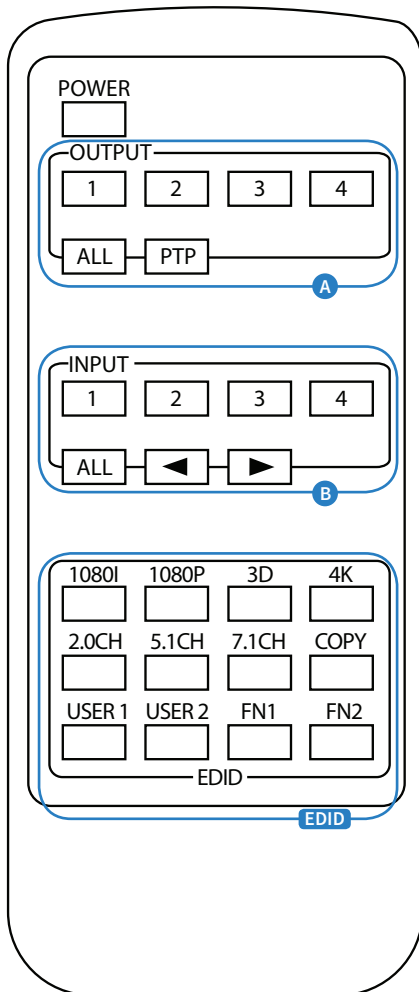
## Audio Breakout

The Matrix includes audio breakout from the selected HDMI input to associated analogue L/R audio and coaxial digital outputs. Extracted audio will be concurrent with the corresponding HDMI video output. Note: Source input must be PCM 2ch audio for analogue audio outputs to work. The Matrix does not down-mix multichannel audio signals.

- 1 Coaxial digital output - Output 1
- 2 Analogue fixed line level output 3.5mm stereo jack - Output 1



# Remote Control Description



### OUTPUT AND INPUT SELECTION

- A** Selects the zone OUTPUT you wish to change the source on (Numbers 1 - 4 correspond to the zone outputs 1 - 4)
- B** Selects the source INPUT you wish to change on the selected zone (Numbers 1 - 4 correspond to the source inputs 1 - 4)

### EXAMPLE

To switch source 2 to zone 4 you would press 4 in the output section (A) followed by pressing 2 in the Input section (B).

**ALL button:** The all button selects all the inputs or outputs in its corresponding box. Example: (The “All” button in the Output box selects all the zones so all zones will change to what source input is selected next)

**PTP:** This button will align all the zone outputs with the like numbered source inputs. Example: Input 1 to output 1, input 2 to output 2, etc

### EDID SET UP

The Matrix provides a comprehensive range of EDID settings. Below are three examples of how to deploy the desired EDID setting when using the supplied remote.

- A. Fix EDID to an Input or ALL inputs:** Press the desired video resolution button (1080I / 1080P / 3D / 4K), then select the desired audio format (2.0CH / 5.1CH / 7.1CH), then select the source input you want this EDID information allocated to by pressing the INPUT 1 - 4 or the ALL button
- B. Copy EDID of Output-X to an Input or ALL:** Press the COPY button then select the OUTPUT you wish to copy the EDID information from, then select the source input you want to copy this EDID to by selecting the INPUT 1-4 or the ALL button.
- C. User defined EDID to an Input or ALL inputs:** Press USER1 / USER2 button then select the source you wish to assign this EDID to by selecting INPUT 1-4 or the ALL button

**NOTE:** THE BUTTON PRESS SEQUENCE SHOULD BE FINISHED IN 5 SECONDS, OTHERWISE THE OPERATION IS DISCARDED

# Infrared (IR) Distribution

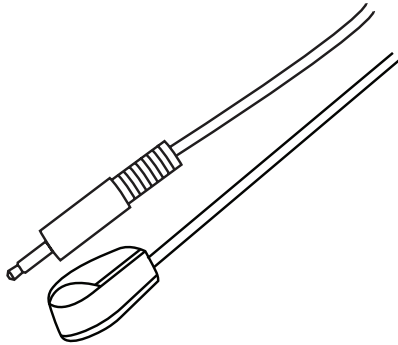
The Blustream range of matrix products include multiple options for control and routing of IR.

**IMPORTANT: Blustream Infrared products are all 5v and NOT compatible with alternative manufacturers Infrared solutions. When using third party 12v IR control solutions please use supplied Blustream IRCAB cable for IR conversion.**

Each Blustream Matrix and HDBaseT receiver is supplied with all necessary IR hardware required and includes:

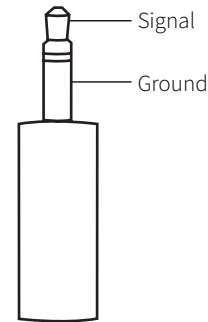
### IR Emitter - IR1 & IR2 (IR2 sold separately)

Blustream 5V IR Emitter designed for discrete IR control of hardware



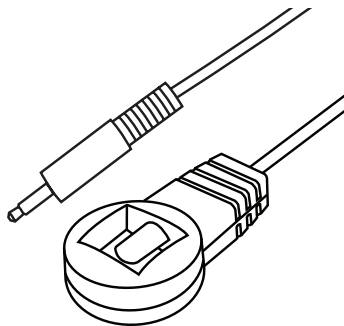
### Infrared 3.5mm Pin-Out

IR Emitter - Mono 3.5mm

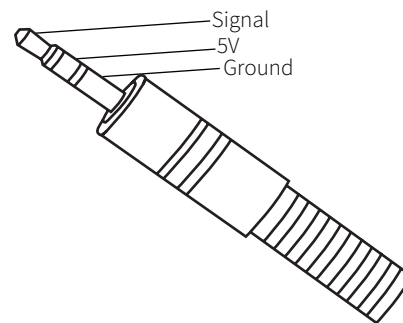


### IR Receiver - IRR

Blustream 5V IR receiver to receive IR signal and distribute through Blustream products



### IR Receiver - Stereo 3.5mm

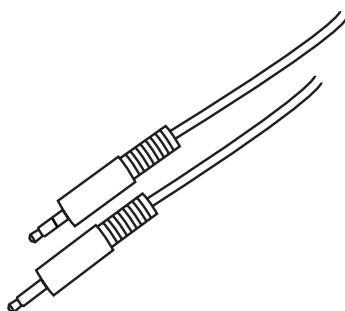


### IR Control Cable - IRCAB

Blustream IR Control cable 3.5mm Mono to 3.5mm Stereo for linking third party control solutions to Blustream products.

Compatible with 12v IR third party products.

Note: Cable is directional as indicated

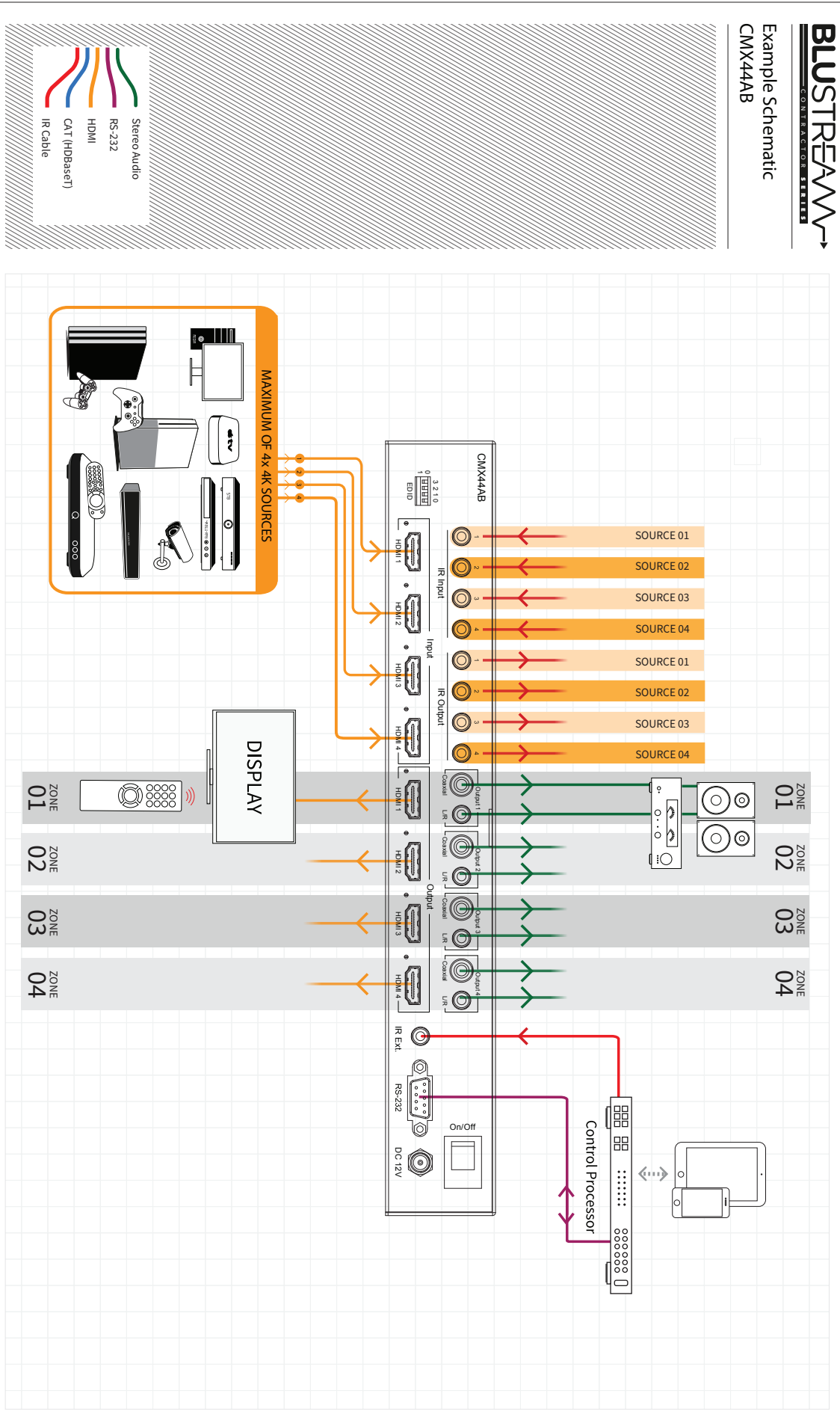






**BLUSTREAM**  
- CONTACTOR SERIES

Example Schematic  
CMX44AB





## Specifications:

**Video Input Connectors:** 4x HDMI Type A, 19-pin, female

**Video Output Connectors:** 4x HDMI Type A, 19-pin, female

**Audio Output Connectors:** 4x RCA (SPDIF), 4x 3.5mm stereo jack (L/R)

**RS-232 Serial Port:** 1x DB-9, female

**IR Input Ports:** 5x 3.5mm stereo jack

**IR Output Ports:** 4x 3.5mm mono jack

**EDID:** 4-Pin DIP switch

**Casing Dimensions (W x D x H):** 313mm x 129mm x 45mm

**Dimensions Inc. Connections (W x D x H):** 313mm x 140mm x 52mm

**Shipping Weight:** 2.0kg

**Operating Temperature:** 32°F to 104°F (0°C to 40°C)

**Storage Temperature :** -4°F to 140°F (-20°C to 60°C)

**Power Supply :** 12V/3A DC

---

## Package Contents:

- 1x CX44AB
- 1x 12V/3A DC power supply
- 1x Remote control
- 4x IR emitter
- 5x IR receiver
- 1x Mounting kit
- 1x Quick reference guide

---

## Maintenance:

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

Components inside this unit are not user serviceable. Do not remove the protective cover from the unit. Removing any panel from this product will invalidate the manufacturers warranty.