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HDMI MATRIX 4×2 WITH AUDIO EXTRACTOR

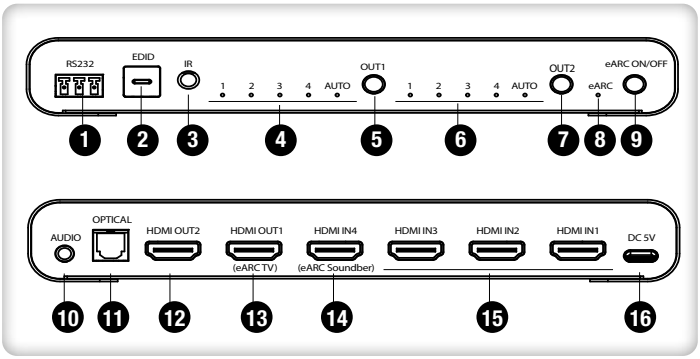
INTRODUCTION

This switch is a true 8K@60Hz 4x2 HDMI matrix switch. Supporting HDMI 2.1,HDCP 2.3. This switch allows any source (Blu-ray,UHD Blu-ray, satellite receiver, game consoles, PCs, etc...) to be shown on any of the connected displays. Support 2 way audio extraction and eARC function, it can provide independent Analog audio output by 3.5mm phone jack and digital audio output by Optical, Support the EDID management function for better compatibility.

FEATURES

- Supports uncompressed audio such as LPCM.
- Supports 4Kx2K@120Hz, 8Kx4K@60Hz and 10Gbps transmission.
- Work for SONOS ARC/BOSE 500/BOSE 700 and ANY eARC/ARC AVR and Soundbar.
- Supports Standard Audio,DSD Audio, and HD(HBR) Audio.
- Supports HDMI2.1, HDCP2.3/HDCP1.4.
- Supports compressed Audio Formats:PCM2.0,PCM5.1/7.1,Dolby Digital Dolby Digital plus,Dolby True HD, Dolby Atmos, DTS 5.1/6.1,DTS HRA, DTS HD Master, DTS:X.
- Supports Audio/video EDID management.
- eARC/ARC from HDMI OUT1 pass through to eARC/ARC HDMI IN port.
- eARC/ARC from HDMI OUT1 extract to audio port(Connect to Optical).

PRODUCT OVERVIEW

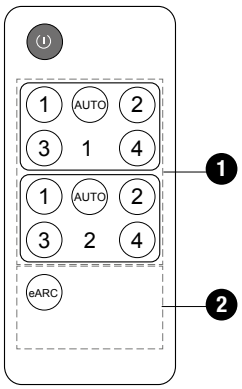


1	RS232 Communication Port
2	DIAL EDID management Switsh
3	Infrared for Remote Control
4	HDMI OUT1 selection input LED
5	HDMI OUT1 selection Input Button
6	HDMI OUT2 selection Input LED
7	HDMI OUT2 selection Input Button
8	eARC LED Indicators
9	eARC switch button
10	3.5mm Audio Output
11	Spdif Audio Output
12	HDMI OUT 2
13	HDMI OUT1 (eARC TV)
14	eARC(soundbar) input port
15	HDMI Input Ports
16	Power Input Port

PACKAGE CONTENTS

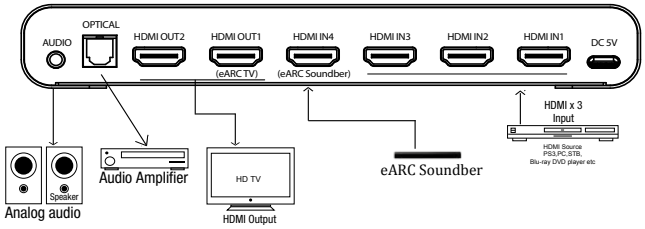
• 1x Main unit • 1x Remote Control • 1x User Manual • 1x USB Power cable

REMOTE CONTROL



1	HDMI Input Source Selector: Select an input source. AUTO: Turn Auto-Detection on or off
2	eARC: Enable or disable Audio Return Channel.

CONNECTION DIAGRAM

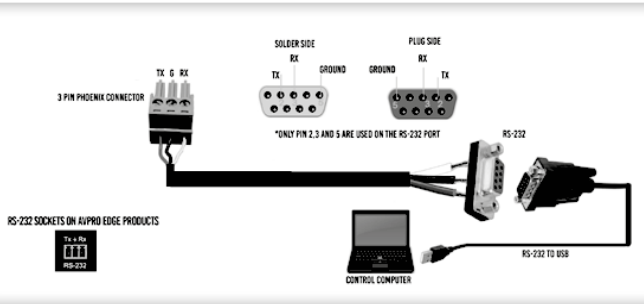


HOW TO CONNECT

1. Use a HDMI cable to connect a HD source to the HDMI IN1-3 Port.
2. Use a HDMI cable to connect a eARC Soundber to the HDMI IN4 Port.
3. Use a HDMI cable to connect a eARC TV to the HDMI OUT1 Port.
4. Use a HDMI cable to connect a HD TV to the HDMI OUT2.
5. Connect the power cable.
6. Note: If using Toslink cable, please make sure the rubber protective tip cover has already been removed from both ends before connecting them to devices. Audio port no sound when eARC working.

RS232 CONNECT

The matrix can be controlled with either RS-232 commands. Certain switching or format configurations can only be done using these commands. We recommend using either the MyUART app as it is very easy to use for sending commands to the machine. The connection diagram is as follow:



For correct communication, set the RS232 parameters to the following setting:
Baudrate: 115200
Data Bits: 8
Parity: None
Stop Bits: 1

RS232 CONTROL COMMANDS

ASCII COMMANDS	
Command	**Functional Description**
?/EZH	Show Help Informations
EZSTA	Show System Status
EZS REBOOT	Reboot System
EZS RST	Restore System
EZS STANDBY ON/OFF	System Standby
EZS OUTx VS INy	Set Output x To Input y {x=[0~2](0=ALL), y=[1~4]}
EZS OUT EXA EN	Set Ex-Audio Output Enable
EZS OUT EXA DIS	Set Ex-Audio Output Disable
EZS OUTx STREAM ON	Set Output x Stream ON {x=[0~2](0=ALL)}
EZS OUTx STREAM OFF	Set Output x Stream OFF{x=[0~2](0=ALL)}
EZS INx EDID y	Set Input EDID{x=[0~4]y=[0~28]} ***note1**
EZS IN AUD EDID y	Set Input Audio EDID{y=[2.0/5.1/7.1/out2/out1/eARC]}
EZS EARC ON	Set eARC/ARC ON
EZS EARC OFF	Set eARC/ARC OFF
EZG EARC MODE	Get Audio return mode
EZS OUTx AUTO SWITCH ON	Set Output x Auto switch ON {x=[0~2](0=ALL)}
EZS OUTx AUTO SWITCH OFF	Set Output x Auto switch OFF {x=[0~2](0=ALL)}
EZG OUTx AUTO SWITCH	Get Output x Auto switch
*note1:EDID	
0: 1080p,Stereo Audio 2.0	15: 4K2K60_444,Stereo Audio 2.0
1: 1080p,Dolby/DTS 5.1	16: 4K2K60_444,Dolby/DTS 5.1
2: 1080p,HD Audio 7.1	17: 4K2K60_444,HD Audio 7.1
3: 1080i,Stereo Audio 2.0	18: 4K2K60_444,Stereo Audio 2.0 HDR
4: 1080i,Dolby/DTS 5.1	19: 4K2K60_444,Dolby/DTS 5.1 HDR
5: 1080i,HD Audio 7.1	20: 4K2K60_444,HD Audio 7.1 HDR
6: 3D,Stereo Audio 2.0	21: 4K2K120_444,Stereo Audio 2.0 HDR VRR
7: 3D,Dolby/DTS 5.1	22: 4K2K120_444,Dolby/DTS 5.1 HDR VRR
8: 3D,HD Audio 7.1	23: 4K2K120_444,HD Audio 7.1 HDR VRR
9: 4K2K30_444,Stereo Audio 2.0	24: 8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 2ch PCM VRR
10: 4K2K30_444,Dolby/DTS 5.1	25: 8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 5.1ch PCM/DTS/DOLBY VRR
11: 4K2K30_444,HD Audio 7.1	26: 8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 7.1ch PCM/DTS/DOLBY/HD VRR
12: 4K2K60_420,Stereo Audio 2.0	27: EDID COPY TX1
13: 4K2K60_420,Dolby/DTS 5.1	28: EDID COPY TX2
14: 4K2K60_420,HD Audio 7.1	

DIAL EDID MANAGEMENT:A

Num	Position 1	Position 2	Position 3	Position 4	Functional description
0	0	0	0	0	EDID Copy from HDMI Out 1 (default)
1	0	0	0	1	EDID Copy from HDMI Out 2
2	0	0	1	0	1080p@60Hz, Audio 2ch PCM
3	0	0	1	1	1080p@60Hz, Audio 5.1ch PCM/DTS/DOLBY
4	0	1	0	0	1080p@60Hz, Audio 7.1ch PCM/DTS/DOLBY/HD
5	0	1	0	1	4K@60Hz 4:2:0, 4K@30Hz 4:4:4, Audio 2ch PCM
6	0	1	1	0	4K@60Hz 4:2:0, 4K@30Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
7	0	1	1	1	4K@60Hz 4:2:0, 4K@30Hz 4:4:4, Audio 7.1ch PCM/DTS/DOLBY/HD
8	1	0	0	0	4K@60Hz 4:4:4, 12-bit HDR, Audio 2ch PCM
9	1	0	0	1	4K@60Hz 4:4:4, 12-bit HDR, Audio 5.1ch PCM/DTS/DOLBY
A	1	0	1	0	4K@60Hz 4:4:4, 12-bit HDR, Audio 7.1ch PCM/DTS/DOLBY/HD
B	1	0	1	1	4K@120Hz 4:4:4, 10-bit HDR, Audio 2ch PCM
C	1	1	0	0	4K@120Hz 4:4:4, 10-bit HDR, Audio 7.1ch PCM/DTS/DOLBY/HD
D	1	1	0	1	8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 2ch PCM
E	1	1	1	0	8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 5.1ch PCM/DTS/DOLBY
F	1	1	1	1	8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 7.1ch PCM/DTS/DOLBY/HD

SPECIFICATIONS

HDMI resolution	8Kx4K@60Hz, 4Kx2K@120Hz, 10Gbps transmission
HDMI version	HDMI2.1/HDCP2.3.
Input/Output TMDS signal	0.5~1.5V p-p (TTL)
Input/Output DDC signal	5V p-p (TTL)
Operating Temperature range	5°F to 131°F / -15°C to 55°C
Operating Humidity range	5% to 90% RH (No Condensation)

In compliance with EU Directive WEEE this product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a separate collections system for these products in compliance with WEEE directive, otherwise contaminative and hazardous substances can pollute the environment.

CE With the CE sign, Techly® ensures that the product is conformed to the basic European standards and directives.

TECHLY® The Modern IT brand

MATRICE HDMI 4X2 CON ESTRATTORE AUDIO

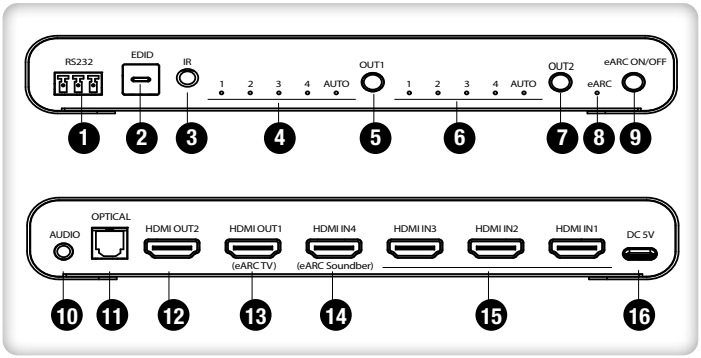
INTRODUZIONE

Questo switch è un Matrix HDMI 4x2 8K@60Hz reale. Supporta HDMI 2.1, HDCP 2.3. Permette a qualsiasi sorgente (Blu-ray, UHD Blu-ray, ricevitore satellitare, console di gioco, PC, ecc...) di essere visualizzata su uno qualsiasi dei due schermi collegati. Supporta estrazione audio 2 vie e funzione eARC, fornisce uscita audio analogico indipendente tramite jack da 3.5mm e uscita audio digitale tramite connettore ottico. Supporta gestione EDID per una migliore compatibilità.

CARATTERISTICHE

- Supporta audio non compresso come LPCM.
- Supporta risoluzione 4Kx2K@120Hz, 8Kx4K@60Hz e trasmissione a 10Gbps.
- Lavora con SONOS ARC/BOSE 500/BOSE 700 e dispositivi A/V eARC/ARC e Soundbar.
- Supporta Standard Audio, DSD Audio, e HD(HBR) Audio.
- Supporta HDMI2.1, HDCP2.3/HDCP1.4.
- Supporta formati audio compresso: PCM2.0, PCM5.1/7.1, Dolby Digital Dolby Digital plus, Dolby True HD, Dolby Atmos, DTS 5.1/6.1, DTS HRA, DTS HD Master, DTS:X.
- Supporta gestione Audio/video EDID.
- Le porta HDMI IN inviano segnale passante eARC/ARC alla porta HDMI out1.
- eARC/ARC dalla porta HDMI OUT1 estrae l'audio (Collegato ad audio digitale).

PANORAMICA PRODOTTO

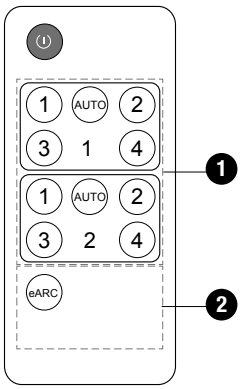


1	Porta di comunicazione RS232
2	Switch di gestione EDID
3	Connessione per controllo remoto
4	LED selezione ingresso HDMI OUT1
5	Tasto selezione ingresso HDMI OUT1
6	LED selezione ingresso HDMI OUT2
7	Tasto selezione ingresso HDMI OUT2
8	Indicatori LED eARC
9	Accensione/Spegnimento eARC
10	Uscita audio 3.5mm
11	Uscita audio Spdif
12	HDMI OUT 2
13	HDMI OUT1 (eARC TV)
14	Porta ingresso eARC (soundbar)
15	Porte ingresso HDMI
16	Porta ingresso alimentazione

CONTENUTO CONFEZIONE

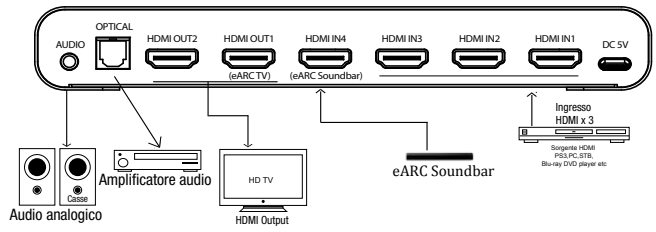
- 1x Unità principale • 1x Telecomando • 1x Manuale utente
- 1x Cavo USB di alimentazione

TELECOMANDO



1	Selettore sorgente in ingresso HDMI: Seleziona qualsiasi sorgente in ingresso. AUTO: attiva o disattiva il rilevamento automatico
2	eARC: Attiva o disattiva Audio Return Channel.

SCHEMA DI COLLEGAMENTO

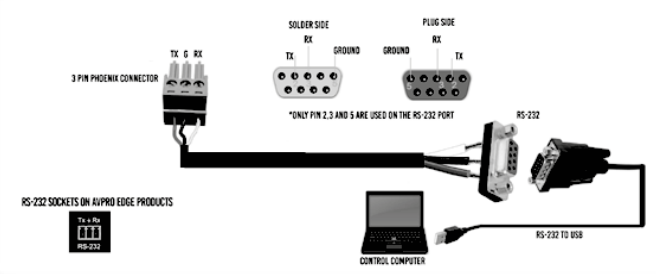


COME COLLEGARE IL DISPOSITIVO

1. Usare un cavo HDMI per collegare la sorgente alla porta HDMI IN 1-3.
2. Usare un cavo HDMI per collegare una Soundbar eARC alla porta HDMI IN4.
3. Usare un cavo HDMI per collegare una TV eARC TV alla porta HDMI OUT1.
4. Usare un cavo HDMI per collegare una HD TV alla porta HDMI OUT2.
5. Collegare un alimentatore.
6. Nota: se si usa un cavo Toslink, assicurarsi che la punta protettiva in gomma sia stata rimossa da entrambi i lati prima di collegare il cavo ai dispositivi. La porta audio non produce alcun suono quando l'eARC funziona.

CONNESSIONE RS232

Il matrix può essre controllato anche tramite comandi RS-232. Alcune configurazioni di commutazione o formato possono essere eseguite solo utilizzando questi comandi.Si consiglia di utilizzare l'app MyUART poiché è molto facile da usare per inviare comandi alla macchina. Lo schema di collegamento è il seguente:



Per una corretta comunicazione, configurare i parametri RS232 con le seguenti impostazioni:
Baudrate: 115200
Data Bits: 8 Parity: None Stop Bits: 1

COMANDI CONTROLLO RS232

ASCII COMANDI	
Comando	**Descrizione funzione**
?/EZH	Mostra informazioni aiuto
EZSTA	Mostra stato Sistema
EZS REBOOT	Riavvia Sistema
EZS RST	Ripristina Sistema
EZS STANDBY ON/OFF	Standby Sistema
EZS OUTx VS INy	Imposta uscita x per ingresso y {x=[0~2] (0=ALL), y=[1~4]}
EZS OUT EXA EN	Imposta abilita uscita Audio esterno
EZS OUT EXA DIS	Imposta disabilita uscita Audio esterno
EZS OUTx STREAM ON	Imposta uscita x Stream ON {x=[0~2] (0=ALL)}
EZS OUTx STREAM OFF	Imposta uscita x Stream OFF{x=[0~2] (0=ALL)}
EZS INx EDID y	Imposta ingresso EDID{x=[0~4]y=[0~28]} ***nota1**
EZS IN AUD EDID y	Imposta ingresso audio EDID{y=[2.0/5.1/7.1/ out2/out1/eARC]}
EZS EARC ON	Imposta eARC/ARC ON
EZS EARC OFF	Imposta eARC/ARC OFF
EZG EARC MODE	Ottieni la modalità audio di ritorno
EZS OUTx AUTO SWITCH ON	Imposta uscita x Auto switch ON {x=[0~2] (0=ALL)}
EZS OUTx AUTO SWITCH OFF	Imposta uscita x Auto switch OFF {x=[0~2] (0=ALL)}
EZG OUTx AUTO SWITCH	Ottieni uscita x Auto switch
*nota1:EDID	
0: 1080p,Stereo Audio 2.0	15: 4K2K60_444,Stereo Audio 2.0
1: 1080p,Dolby/DTS 5.1	16: 4K2K60_444,Dolby/DTS 5.1
2: 1080p,HD Audio 7.1	17: 4K2K60_444,HD Audio 7.1
3: 1080i,Stereo Audio 2.0	18: 4K2K60_444,Stereo Audio 2.0 HDR
4: 1080i,Dolby/DTS 5.1	19: 4K2K60_444,Dolby/DTS 5.1 HDR
5: 1080i,HD Audio 7.1	20: 4K2K60_444,HD Audio 7.1 HDR
6: 3D,Stereo Audio 2.0	21: 4K2K120_444,Stereo Audio 2.0 HDR VRR
7: 3D,Dolby/DTS 5.1	22: 4K2K120_444,Dolby/DTS 5.1 HDR VRR
8: 3D,HD Audio 7.1	23: 4K2K120_444,HD Audio 7.1 HDR VRR
9: 4K2K30_444,Stereo Audio 2.0	24: 8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 2ch PCM VRR
10: 4K2K30_444,Dolby/DTS 5.1	25: 8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 5.1ch PCM/DTS/DOLBY VRR
11: 4K2K30_444,HD Audio 7.1	26: 8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 7.1ch PCM/DTS/DOLBY/HD VRR
12: 4K2K60_420,Stereo Audio 2.0	27: EDID COPY TX1
13: 4K2K60_420,Dolby/DTS 5.1	28: EDID COPY TX2
14: 4K2K60_420,HD Audio 7.1	

SPECIFICHE

Risoluzione HDMI	8Kx4K@60HZ, 4Kx2K@120Hz, trasmissione 10Gbps
Versione HDMI	HDMI2.1/HDCP2.3.
Ingresso/Uscita segnale TMDS	0.5~1.5V p-p(TTL)
Ingresso/Uscita segnale DDC	5V p- p(TTL)
Intervallo temperature d'esercizio	Da -15°C a 55°C
Intervallo umidità d'esercizio	Da 5% a 90% RH (senza condensa)

INTERRUTTORE GESTIONE EDID: A

Num	Posizione 1	Posizione 2	Posizione 3	Posizione 4	Descrizione funzione
0	0	0	0	0	EDID Copy from HDMI Out 1 (default)
1	0	0	0	1	EDID Copy from HDMI Out 2
2	0	0	1	0	1080p@60Hz, Audio 2ch PCM
3	0	0	1	1	1080p@60Hz, Audio 5.1ch PCM/DTS/DOLBY
4	0	1	0	0	1080p@60Hz, Audio 7.1ch PCM/DTS/ DOLBY/HD
5	0	1	0	1	4K@60Hz 4:2:0, 4K@30Hz 4:4:4, Audio 2ch PCM
6	0	1	1	0	4K@60Hz 4:2:0, 4K@30Hz 4:4:4, Audio 5.1ch PCM/DTS/DOLBY
7	0	1	1	1	4K@60Hz 4:2:0, 4K@30Hz 4:4:4, Audio 7.1ch PCM/DTS/ DOLBY/HD
8	1	0	0	0	4K@60Hz 4:4:4, 12-bit HDR, Audio 2ch PCM
9	1	0	0	1	4K@60Hz 4:4:4, 12-bit HDR, Audio 5.1ch PCM/ DTS/DOLBY
A	1	0	1	0	4K@60Hz 4:4:4, 12-bit HDR, Audio 7.1ch PCM/ DTS/DOLBY/HD
B	1	0	1	1	4K@120Hz 4:4:4, 10-bit HDR, Audio 2ch PCM
C	1	1	0	0	4K@120Hz 4:4:4, 10-bit HDR, Audio 7.1ch PCM/DTS/DOLBY/HD
D	1	1	0	1	8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 2ch PCM
E	1	1	1	0	8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 5.1ch PCM/ DTS/DOLBY
F	1	1	1	1	8K@60Hz 4:2:0, 8K@30Hz 4:4:4, 10-bit HDR, Audio 7.1ch PCM/ DTS/DOLBY/HD

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