DIGITUS®

4K/60Hz HDMI® MATRIX SWITCH (4x2) WITH AUDIO EXTRACTOR

Quick Installation Guide

DS-50305

Product Introduction

The DIGITUS® HDMI® Matrix Switch distributes UHD video signals from up to four HDMI® sources to two HDMI® displays such as TV sets, monitors or projectors. The switch can process resolutions of up to 4K with a frequency of 60 Hz, including HDR formats. The high bandwidth of 18 Gbps per HDMI® display ensures smooth reproduction of high-resolution content with optimal quality. Supports HDMI® 2.0 and HDCP 2.2 as well as Full 3D. Conveniently switch between the different sources using the remote control and assign them individually to the two HDMI® outputs. For example, you can distribute video signals to 2 different rooms or record an output signal on a recording device while watching another program at the same time. A broad range of applications are possible: the device can be used for a variety of commercial or private purposes. Using the existing analog and digital audio outputs, you can also tap the audio signal of each HDMI® input and output these signals through an amplifier or loudspeaker. You can easily switch between the various audio features using the remote control. Output is provided through stereo RCA connectors or the optical S/PDIF output. Numerous LEDs on the front side of the switch show you the current configuration at a glance, and you can also manually switch between all functions directly on the device. Spare yourself the trouble of replugging HDMI® cables for devices such as gaming consoles, receivers or Blu-Ray players: get the 4K HDMI® Matrix Switch from DIGITUS®.

Package Content

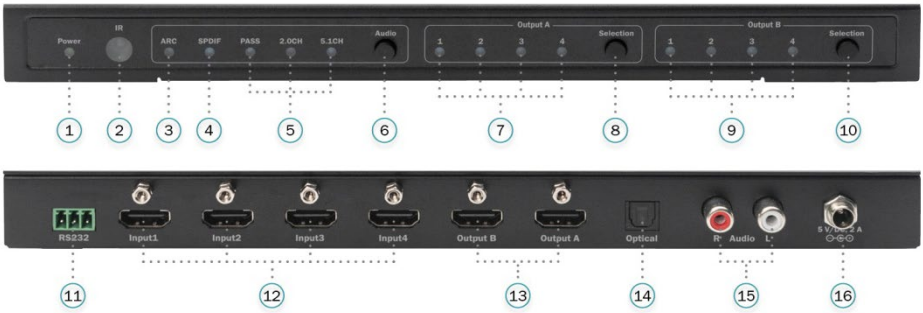
- 4K/60Hz HDMI® Matrix Switch (4x2) with audio extractor
- Remote control
- Contact for RS232 terminal
- User manual

Features

1) Input: HDMI® x 4.
2) Output: HDMI® x 2, Toslink/SPDIF x 1, Stereo RCA x 1.
3) Supports Ultra HD 4Kx2K@60Hz.
4) Supports 3D.
5) Supports Standard Audio,DSD Audio, and HD(HBR) Audio.
6) Supports HDMI® 2.0, HDCP 2.2, HDR Signal format

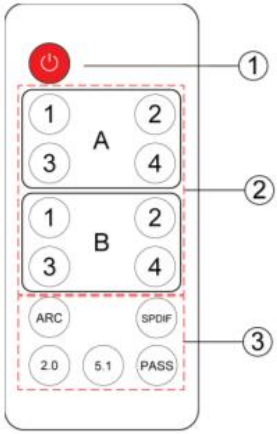
7) Supports 6.0Gbps TMDS/600MHz pixel clock rate per channel, maximum total TMDS through outputs 18Gbps.
8) Supports uncompressed audio such as LPCM.
9) Supports compressed audio such as DTS Digital, Dolby Digital, DTS-HD, and Dolby TrueHD.
10) Supports up to 7.1CH digital surround on HDMI® output.
11) Supports up to 5.1CH digital surround on Toslink output.
12) Supports up to 2.0 channel analog stereo on Stereo output.
13) Support the ARC (Audio Return Channel).

Product overview



1	Power LED	**8/10**	Input Port selection Button
2	Infrared for Remote Control	**11**	RS232 Communication Port
3	Audio Return Channel (ARC) LED Indicator, switch on or off via remote control	**12**	HDMI® Input Ports
4	Optical Digital Output LED Indicator, switch on or off via re mote control	**13**	HDMI® Output Port
5	HDMI® Pass-through / 2.0CH / 5.1CH Audio Channel LED Indicators	**14**	Optical Digital Audio Outptu Port
6	Audio mode selection Button,switch among “PASS”, “2.0 CH” and “5.1CH”	**15**	L/R Analog Stereo Port Audio Output
7/9	HDMI® Input LED Indicators	**16**	Power Input Port

Remote control



1) Power ON/OFF button
2) HDMI® Input Source Selector: Select an input source
3) Audio Output control buttons.

ARC: Enable or disable Audio Return Channel.
ARC & AUDIO EXTRACTION
All the audio out is only from output A. When the ARC LED will light up blue, the ARC is enabled and the OPTICAL can get the audio from TV. When the ARC LED will go out, the ARC is disabled and the OPTICAL can extract the audio from HDMI® source. Please kindly note SPDIF light is on.

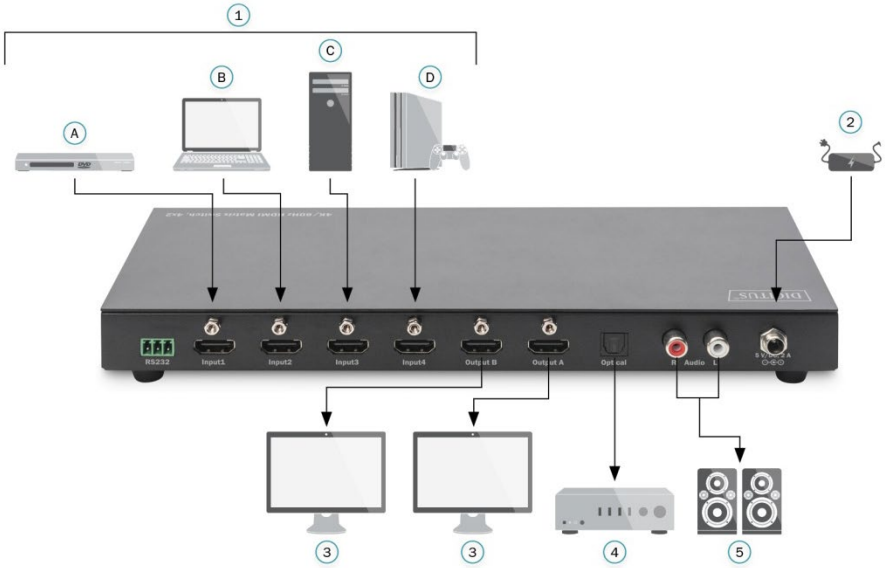
SPDIF: Enable or disable Optical Digital
When the SPDIF LED will light up blue, the SPDIF is enabled and the optical output can get the audio signal from TV or HDMI® source (Please see the ARC details).
When the SPDIF LED will go out, the SPDIF is disabled and the OPTICAL can't output the audio.

2.0: When the 2.0CH LED will light up blue, the HDMI® source will read the matrix's built-in Audio EDID and set audio output mode into 2.0 channel

5.1: Sets audio output mode to 5.1 channel.When the 5.1CH LED will light up blue, the HDMI® source will read matrix's built-in Audio EDID and set audio output mode into 5.1 channel.

PASS: Use the AUDIO EDID from Display device.When the PASS LED will light up blue, the HDMI® source will read Audio EDID from TV. So the audio output mode depends on TV's EDID.

Connection Diagram



1) HDMI Source x4:
   A: DVD Player
   B: Notebook
   C: PC
   D: Gaming Console
2) Power Adapter
3) HDMI Display (HDMI output x2)
4) Amplifier
5) Speaker

How to connect:

1) Use a HDMI® cable to connect a HD source to the HDMI® Input Port.
2) Use a HDMI® cable to connect a HD display to the HDMI® Output Port.
3) For audio connection, choose one from the following options.
   a. To use HDMI® pass-through, use the HDMI® cable from step 2 to connect audio receiver to the HDMI® Output Port. Your audio receiver will have to output video signal to your HD display.
   b. To use Toslink, use a Toslink cable to connect to audio equipment. (***Note:*** Toslink does not support Dolby Digital plus please change the input source's audio output to a different setting, if needed.)
   c. To use R/L, use a R/L cable to connect a stereo audio equipment.

4) Connect the power adapter.
5) ***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.

Specifications

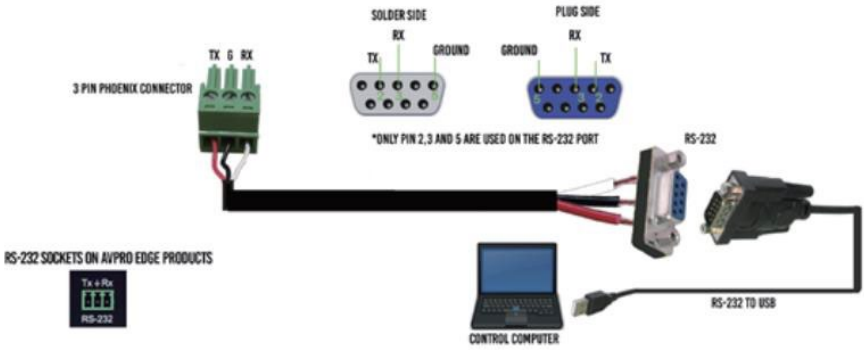
Audio and Video	
HDMI® Resolution	4Kx2K@24/25/30/60fps@60Hz, 3D (1080P@24/60/120Hz), 1080P/1080i/720P/576P/576i/480P/480i@ 24/30/50/60fps@120Hz
HDMI® Version	HDMI® 2.0, HDCP 2.2
Support video color Format	36-bit Deep Color all channels maximum
Audio Output	HDMI® pass-throug Up to 7.1 CH Toslink output up to 5.1 CH RCA L/R output stereo audio
Max bandwidth per channel	600 MHz
Max baud rate per display	18 Gbps
Input/Output TMDS signal	0.5 ~ 1.5V p-p (TTL)
Input / Output DDC Signal	5V p-p (TTL)
Input cable distance	≤ 50ft/15m 24 AWG HDMI® high speed cable at 1080P@24bit 60Hz
Output cable distance	≤ 50ft/15m 24 AWG HDMI® high speed cable at 1080P@24bit 60Hz
Environmental	
Operating temperature range	5F to 131°F / -15°C to 55°C
Operating humidity range	5% to 90% RH (no condensing)
Power reqirement	
Max working current	1A
External Power Supply	DC 5V/2A

Power Adapter Information

Information published	Value and precision	Unit
Manufacturer's name or trade mark, commercial registration number and address	ShenZhenCenwell Technology Co., Ltd.	-
Model identifier	CW0502000EU	-
Input voltage	AC, 100-240V	V
Input AC frequency	50-60	Hz
Output voltage	DC, 5V	V
Output current	2	A
Output power	10	W
Average active efficiency	79.03	%
Efficiency at low load (10 %)	72.92	%
No-load power consumption	0.089	W

RS-232 Control

The matrix can be controlled with either RS-232 commands. Certain switching or format configurations can only be done using these commands. The connection diagram is as follow:



For correct communication, set the RS232 parameters to the following setting:

Baudrate: 19200
Data Bits: 8
Parity: None
Stop Bits: 1

RS-232 Control Command

ASCII Commands	
Command	Functional description
r type#	Get the type information
r status#	Get the current status information
r fw#	Get the firmware version
s power x#	X = 0, power off
	X = 1, power on
S hdmi in x out y#	Y = 1, x = 1, switch the OutputA to Input1
	Y = 1, x = 2, switch the OutputA to Input2
	Y = 1, x = 3, switch the OutputA to Input3
	Y = 1, x = 4, switch the OutputA to Input4
	Y = 2, x = 1, switch the OutputB to Input1
	Y = 2, x = 2, switch the OutputB to Input2
	Y = 2, x = 3, switch the OutputB to Input3
	Y = 2, x = 4, switch the OutputB to Input4
r hdmi in#	Get the currents channel selection status
s arc x#	X = 0, disable the ARC
	X = 1, enable the ARC
r arc#	Get the ARC status
s audio spdif x#	X = 0, disable the optical signal output
	X = 1, enable the optical signal output
s audio spdif#	Get the optical signal output status
s edit x#	X = 1, switch the EDIT to Pass
	X = 2, switch the EDIT to CH
	X = 3, switch the EDIT to 5.1CH
r edit#	Get the EDIT status

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