SC&T

HDMI Matrix Switcher

User Manual

Model : HS42M-4K6G

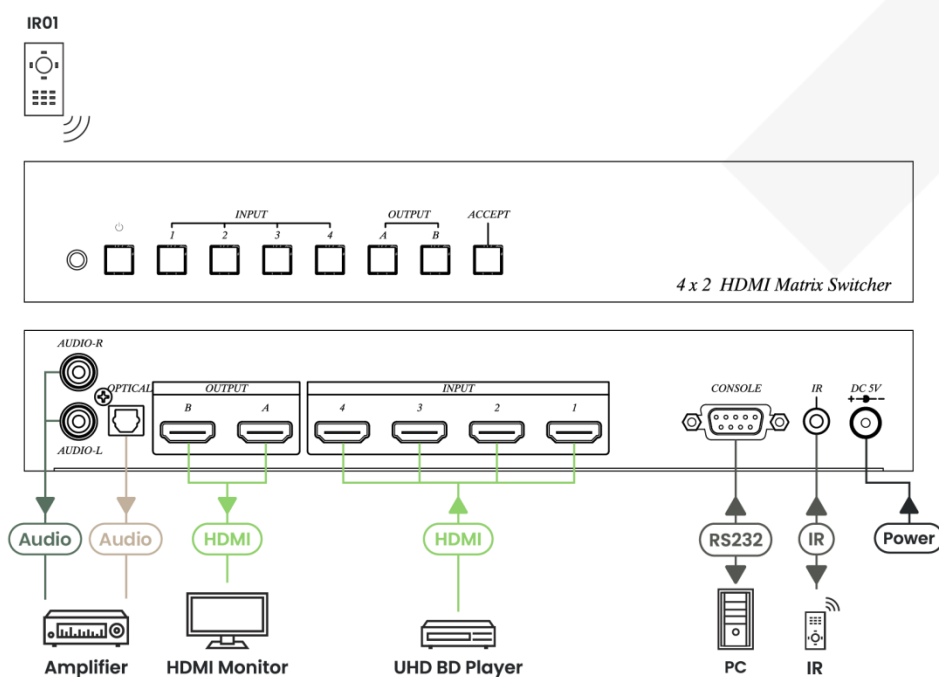4K 60Hz 4 x 2 HDMI Matrix Switcher with Audio Extractor & Scaler

Introduction

HS42M-4K6G is a 4 input 2 output HDMI matrix switch that allows you to route any 4 Hi-res HDMI sources to any 2 HDMI displays. It not only supports 4K60Hz 4:4:4 resolution but LPCM 7.1@192KHz, Dolby TrueHD, DTS-HD MA audio. It also supports ARC and the audio extraction function, making the integration of your HDMI source with an advanced audio system easy and hassle-free. Moreover, the matrix has a built-in video scaler function that can upscale the 1080p resolution to 4K, or down-scale the 4K to 1080p to connect a legacy display — allowing every connected display to show the best resolution it can support. With all the powerful features, you can intuitively control and manage the matrix switcher via an IR remote, RS232 commands, and the front panel buttons, depending on different requirements.
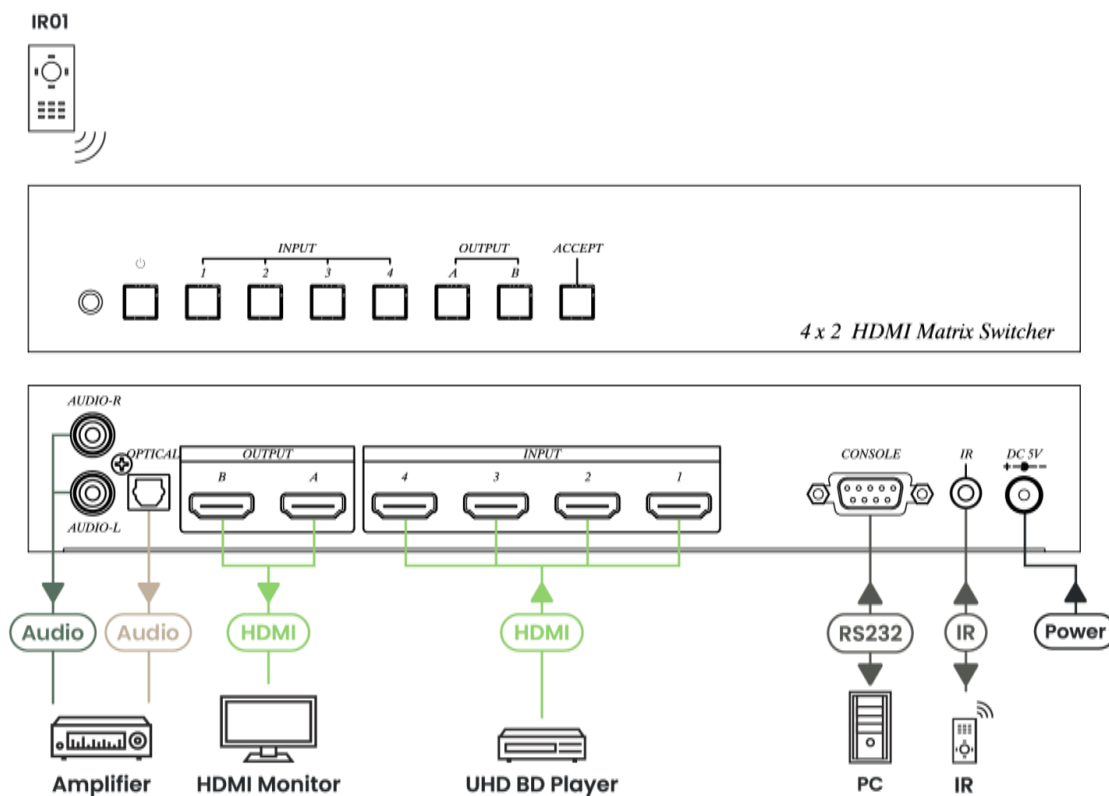
Features

- Resolution up to 4K@60Hz 4:4:4.
- Supports HDMI matrix, distribution, separation (combine video from OUTPUT A with audio from OUTPUT B) modes.
- Built-in optical audio & LPCM audio interfaces.
- Built in IR sensor and 3.5mm phone jack for external IR receiver cable.
- Supports up/ down scaling function, 1080p to 4K or 1080p to 4K.
- Supports Chroma Subsampling conversion, 4:4:4 to 4:2:0.
- Supports ARC (Audio Return Channel) function.
- Built-in OSD (On Screen Display).
- Supports CEC pass-through.
- Panel LED brightness adjustable.
- Managed via RS232, IR remote, and front panel buttons.

Installation View

Panel View

Panel Button Function

No.	Function	LED Status	OSD Status	Description
1	IR	N/A	N/A	Receiving IR remote signal
2	Power	Blue	N/A	Power on
		Red	N/A	Standby
3	Input 1~4	On	Input 1~4	Video input been selected
		Flash		Video input not selected
		Off		No video input
4	Output A~B	On	Output A/B/A+B	Select output to switch (press A and B together to select both) then press INPUT and ENTER to confirm.
5	Enter	On	Input resolution and connection	System status / Confirm input selection

IR Remote

If you use the remote for the first time or change battery for it, please ensure the remote ID of the matrix and the remote is the same before use. The default ID is 0. To configure the ID, please press and hold power button, then press button 0 to complete the setting. ⏻+⓪

Symbol	Function Name	Description	OSD Function
⏻	POWER	Power on / standby	
▲	UP	Reserved	Move menu function up
▼	DOWN	Reserved	Move menu function down
◀	LEFT	Reserved	Reserved
▶	RIGHT	Reserved	Reserved
ENTER	ENTER	System status Confirm input selection	Execution selected function
MENU	MENU	Enter OSD menu Back to upper level of menu	Enter OSD menu Back to upper level of menu
1	Input selection	Press to select input 1	
2	Input selection	Press to select input 2	
3	Input selection	Press to select input 3	
4	Input selection	Press to select input 4	
5	Reserved		
6	Reserved		
7	Reserved		
8	Reserved		
9	Reserved		
0	Reserved		
A	Output A	Select output A in matrix mode	
B	Output B	Select output B in matrix mode	
*	Reserved	Select output A + B in matrix mode	
#	Reserved		

OSD Menu

Main Menu	Sub Menu	Description
Operation Mode	Matrix Mode	Independent input for output A & B
	Splitter Mode	Same input for both output A & B
	Separation Mode	Set output A video only and output B audio only
	Exit	Back to menu
Output A	Up scaling	Upscale 1080p resolution to 4K 60Hz
	4 : 4 : 4 → 4 : 2 : 0	Convert 4K60 4:4:4 to 4K60 4:2:0
	Exit	Back to menu
Output B	Down Scaling	Downscale 4K60 resolution to 1080p
	4 : 4 : 4 → 4 : 2 : 0	Convert 4K60 4:4:4 to 4K60 4:2:0
	Exit	Back to menu
EDID	Output A	Use monitor EDID from output A (When not connected, automatically default to 1080p)
	Output B	Use monitor EDID from output B (When not connected, automatically default to 1080p)
	Merge	Merge EDID from output A and B
	1080p EDID	Default to 1080p
	Exit	Back to menu
CEC	Enable CEC	Enable CEC function at output A
	Power on Sync	Power on when received CEC command "active source" from DVD/STB box
	Standby on Sync	Standby when received CEC command "standby" from monitor
	Exit	Back to menu
	* Only works when CEC is enabled	
Audio Output	HDMI AUDIO	SPDIF and Analog audio from HDMI
	ARC	SPDIF and Analog audio form ARC
	MUTE	Turn off SPDIF and Analog audio output
	EXIT	Back to menu
	*Only works when CEC is enabled	
LED Brightness	Maximum	Set LED brightness to maximum
	Medium	Set LED brightness to medium
	Minimal	Set LED brightness to minimal
	Auto	Auto adjust to maximum in operation or input source changed, after 10 seconds it will back to minimal
	Exit	Back to menu
Miscellaneous	Main MCU V1.01	Show main MCU firmware version
	Sub MCU V1.00	Show sub MCU firmware version
	EXIT	Back to menu

RS232 Control

Connect the RS232 CONSOLE port to the COM port of the host by an F/M RS232 straight cable (pin 2 to pin 2; pin 3 to pin 3, pin 5 to pin 5). Communication format is 9600, 8, N, 1 (9600 bps, 8 data bits, no parity check, 1 stop bit).

RS232 Command

[Command]		[Description]
X	n	Select output A or B from input 1,2,3 4
n	x	Select input & output and disable auto scan.
POWER	y	System activate or standby.
OPERATION	n	Select operation mode, 1=Matrix, 2=Splitter, 3=Separation.
UPSCALING	y	Upscaling function
DOWNSCALING	y	Downscaling function
A_SUBSAMPLING	y	Output A chroma subsampling function
B_SUBSAMPLING	y	Output B chroma subsampling function
A_MUTE	y	Output A Mute in Separation Mode
EDID	n	Select EDID
		Mode 1 : Output A (When not connected, automatically default to 1080p)
		Mode 2 : Output B (When not connected, automatically default to 1080p)
		Mode 3 : Merge Output A & B.
		Mode 4 : 1080p
CEC	y	CEC Function
CEC_POWER_ON_SYNC	y	CEC Power control function
CEC_STANDBY_SYNC	y	CEC Power sync function
AUDIO	n	1=HDMI Audio, 2=ARC, 3=Mute.
LED	n	LED Brightness adjustment, 1=Maximum, 2=Medium, 3=Minimal, 4=Auto.
STATUS		Display Input signal status
VERSION		Display firmware version
?		Show all commands.

[SYMBOL]	[PARAMETER]
n	1 | 2 | 3 | 4
x	A | B
y	ON | OFF

*Space characters between the command and parameters can be ignored.

Package

No.	Item	Quantity
1	HS42M-4K6G	x 1
2	DC 5V 2A Adapter	x 1
3	IR Receiver Cable	x 1
4	IR01	x 1

Specification

ITEM NO.	HS42M-4K6G
Support	
Compliance	HDMI 2.0, HDCP 2.2, HDCP 1.4, 3D, HDR, CEC
Max. HDMI Resolution	4K@60Hz 4:4:4
Video Bandwidth	18 Gbps
Audio Format	LPCM 7.1@192KHz, Dolby TrueHD, DTS-HD MA
RS232 Baud Rate	9600 bps
IR Support	45°, 5M
Ports & Interfaces	
Video Input	4 x HDMI Type A
Video Output	2 x HDMI Type A
Digital Audio Output	1 x TOSLINK
Analog Audio Output	2 x RCA Jack
RS232 Interface	1 x DB9 (Female)
IR Interface	1 x 3.5mm Phone Jack
Power Interface	1 x (5.5 x 2.5mm) DC Jack
Power	
Power Supply	DC 5V 2A
Power Consumption	6W
Ambient Temperature	
Operation	0 to 55℃
Storage	-20 to 85℃
Humidity	up to 95%
Physical Characteristics	
Dimensions	253 x 144 x 40mm
Weight	840g

RoHS CE