



4K@60hz 4:4:4 HDMI HDR Matrices with Audio de-embedding

Model: MA-HD-HD0402AD



INTRODUCTION

MA-HD is an 18G HDMI video switcher with 4 HDMI inputs and 2 scaling HDMI outputs. Each input and output supports up to 4K60 444 HDMI 18G video. The outputs can be individually scaled for 1080p or HDBaseT compatibility. De-embedded audio as analogue L+R and optical TosLink is available for both outputs. The Matrix Switcher can automatically control the display device using RS232, CEC or IR when the last input signal is lost, or when the first video input is detected.

I/O INTERFACE

Input Ports: 4×HDMI Type A

Output Ports: 2×HDMI Type A、2×L/R audio out、2×OPTICAL audio out、2×RS232 A/B

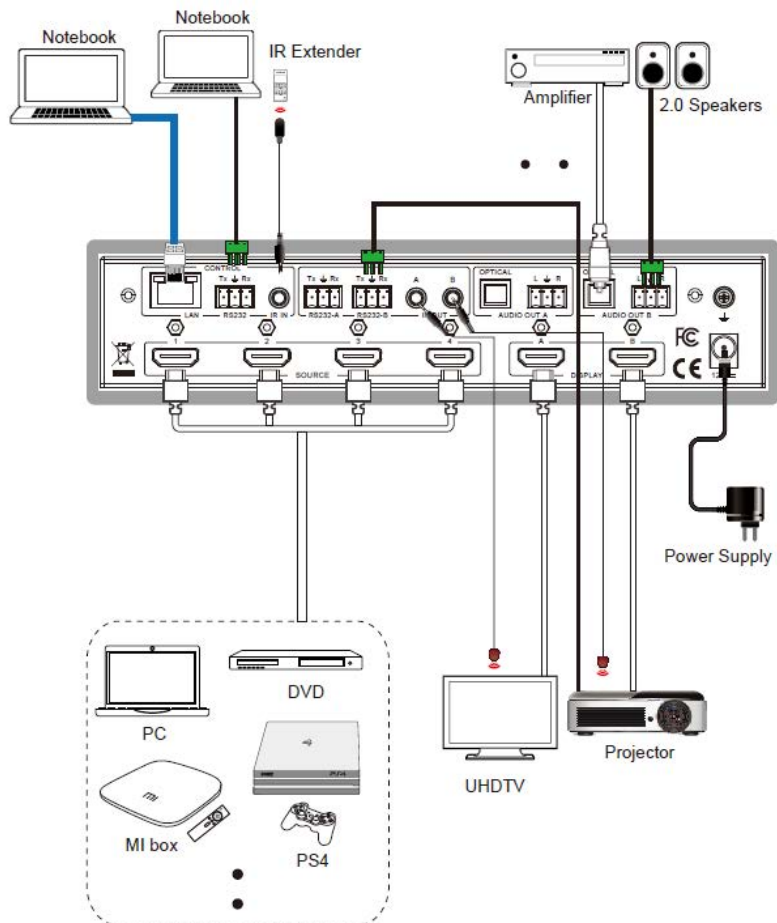
Control port: 1×LAN、3×RS232、1×IR IN、2×IR OUT A/B

FEATURES

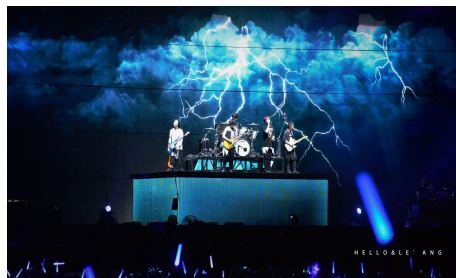
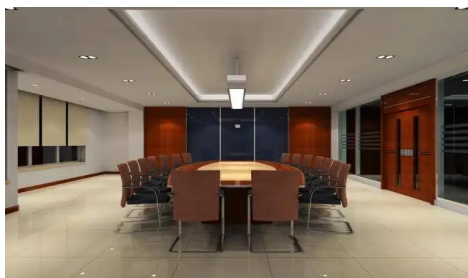
- HDMI 2.0, HDCP 2.2 / HDCP 1.4 and DVI 1.0 compliant;
- Four 18G HDMI 2.0 video inputs supporting up to 4K60 444 resolution;
- Two 18G HDMI 2.0 video outputs supporting up to 4K60 444 resolution;
- Both outputs can be individually scaled for 4K→1080p or HDBaseT mode;
- Automatic RS232, CEC and IR control of the display device power state;
- Two sets of de-embedded audio analogue and TosLink outputs, for both outputs;
- ARC decoding to the TosLink audio outputs only;
- Test Pattern mode for testing output signal integrity to the display;
- Built-in Web GUI for LAN control;
- Four methods of control: Front panel, RS232, IR and LAN.



DIAGRAM



APPLICATION





SPECIFICATIONS

Technical			
HDMI Compliance	HDMI 2.0		
HDCP Compliance	HDCP 2.2 and HDCP 1.4		
Video Bandwidth	18 Gbps		
Video Resolution	4K2K 50/60Hz 4:4:4 K2K 50/60Hz 4:2:0 4K2K 30Hz 4:4:4 1080p, 1080i, 720p, 720i, 480p, 480i All HDMI 3D TV formats All PC resolutions including 1920 x 1200		
3D Support	Yes		
Output Scaling	4K to 1080p 4K to HDBaseT (Down-scale to no more than 10.2Gbps)		
Color Space	RGB, YCbCr4:4:4, YCbCr4:2:2, YCbCr 4:2:0		
Color Depth	8-bit, 10-bit, 12-bit [1080P, 4K30Hz, 4K60Hz (YCbCr 4:2:0)], 8-bit [4K60Hz (YCbCr4:4:4)]		
HDMI Audio Formats	PCM2.0/5.1/7.1CH, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD		
HDR formats	HDR10, HDR10+, Dolby Vision, HLG		
L/R Audio Formats	PCM2.0CH (Note: If ARC function is turned on, the audio port will mute.)		
Optical Audio Formats	PCM2.0, Dolby Digital / Plus, DTS		
Audio Frequency Response	20Hz to 20kHz, ± 3 dB		
RS232 Control	57600, No parity, 8 data bits, 1 stop bit, No handshaking		
RS232-A and RS232-B	Configurable from 4800 to 115200 baud; 7 or 8 bits; none, odd or even parity and 1 or 2 stop bits.		
ESD Protection	Human-body Model: ± 8 kV (Air-gap discharge), ± 4 kV (Contact discharge)		
Connections			
Input Ports	4xHDMI Type A [19-pin female]		
Output Ports	2xHDMI Type A [19-pin female] 2xL/R audio out [3-pin phoenix connector] 2xOPTICAL audio out [S/PDIF] 2xRS232 A/B [3-pin phoenix connector]		
Control port	1xLAN [RJ45] 3xRS232 [3-pin phoenix connector] 1xIR IN [3.5mm Stereo Mini-jack] 2xIR OUT A/B [3.5mm Stereo Mini-jack]		
Mechanical			
Housing	Metal Enclosure		
Color	Black		
Dimensions	218mm(W)x140mm(D)x43mm(H)		
Weight	1050g		
Power Supply	Input: AC100~240V 50/60Hz Output: DC12V/1A (Locking connector)		
Power Consumption	4.3W (max)		
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F		
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F		
Relative Humidity	20~90% RH (non-condensing)		
Resolution / Cable length	4K60 - Feet / Meters	4K30 - Feet / Meters	1080P60 - Feet / Meters
HDMI IN / OUT	16ft / 5M	32ft / 10M	50ft / 15M
The use of "Premium High Speed HDMI" cable is highly recommended.			