



## TECHNICAL SPECIFICATIONS

### SPECIFICATION

## Matrix Switcher

Video Input	
Input	(8) HDMI
Input Connector	(8) Type-A female HDMI
HDMI Resolution	Up to 4Kx2K@60Hz 4:4:4, HDR10,1080p 3D

Video Output	
Output	(8) HDBaseT, (8) HDMI
Output Connector	(8) RJ45, (8) Type-A female HDMI
HDMI Output Resolution	Up to 4Kx2K@60Hz 4:4:4, HDR10, 1080p 3D. Supports 4K to 1080p down-scaling
HDBaseT Output Resolution	Up to 4Kx2K@60Hz 4:2:0
HDMI Audio Signal	LPCM 7.1 audio, Dolby Atmos®, Dolby® TrueHD, Dolby Digital® Plus, DTS:X™, and DTS-HD® Master Audio™ pass-through.





<b>Audio Output</b>	
Output	(8) Stereo analog L+R audio, (8) Digital SPDIF audio
Output Connector	(8) 3-pin terminal blocks, (8) Toslink connectors
Analog L+R Audio Format	Supports PCM
Digital SPDIF Audio Format	Supports PCM, Dolby Digital, DTS, DTS-HD
Local Audio Sampling Rate	Supports 44.1KHz, 48KHz, 96KHz
ARC Audio Sampling Rate	Supports 48KHz, 96KHz
Frequency Response	20Hz - 20KHz, $\pm 3$ dB
Audio Output Impedance	700ohms
Max Input Level	<b>L+R:</b> 2.0Vrms $\pm$ 0.5dB. 2V = 16dB headroom above -10dBV (316mV) nominal consumer line level signal. <b>SPDIF:</b> $\pm 0.05$ dBFS.
THD+N	< 0.05% (-80dB), 20Hz - 20KHz bandwidth, 1KHz sine at 0dBFS level (or max level).
SNR	<b>L+R:</b> > 80dB, 20Hz - 20KHz bandwidth. <b>SPDIF:</b> > 90dB, 20Hz-20 kHz bandwidth.
Crosstalk Isolation	<b>SPDIF:</b> < -70 dB, 10KHz sine at 0dBFS level (or max level before clipping). <b>L+R:</b> < -80 dB, 10KHz sine at 0dBFS level (or max level before clipping).
L-R Level Deviation	<b>L+R:</b> < 0.3dB, 1KHz sine at 0dBFS level (or max level before clipping).
Frequency Response Deviation	< 3 0.5dB 20Hz - 20KHz.
Output Load Capability	<b>L+R:</b> 1K $\Omega$ and higher (Supports 10x paralleled 10K $\Omega$ loads).
Stereo Channel Separation	>70dB@1KHz.
Noise Level	L+R: -80dB; SPDIF: -90dB

<b>Control Part</b>	
Control port	(8) IR IN, (1) IR ALL IN, (8) IR OUT, (1) IR ALL OUT, (1) IR EYE,(9) RS232, (1) FIRWARE, (1) TCP/IP
Control Connector	(19) 3.5mm jacks, (9) 3-pin terminal blocks, (1) Type-A USB, (1) RJ45

<b>General</b>	
Transmission Mode	HDBaseT
Transmission Distance	1080p $\leq$ 230 feet (70 meters), 4K@60Hz $\leq$ 131 feet (40 meters)
Bandwidth	18Gbps
Operation Temperature	-5°C ~ +55°C
Storage Temperature	-25°C ~ +70°C
Relative Humidity	10% ~ 90%
External Power Supply	100V~240V AC, 50/60Hz
Power Consumption	125W (Max)
Dimension (W*H*D)	436.6mm x 88mm x 440mm
Net Weight	5.8kg



## HDBaseT Receiver

<b>Video</b>	
<b>Input</b>	(1) HDBT
<b>Input Connector</b>	(1) RJ45
<b>Input Resolution</b>	Up to 4Kx2K@60Hz 4:2:0
<b>Output</b>	(1) HDMI
<b>Output Connector</b>	(1) Type-A female HDMI
<b>Output Resolution</b>	Up to 4Kx2K@60Hz 4:4:4 8bit, HDR10

<b>Audio</b>	
<b>Input</b>	(1) ARC Audio In
<b>Input Connector</b>	(1) Toslink Connector
<b>Output</b>	(1) Audio Breakout
<b>Output Connector</b>	(1) Toslink connector
<b>Audio Format</b>	Supports PCM, Dolby Digital, Dolby True-HD, DTS and DTS-HD.
<b>Frequency Response</b>	20Hz - 20KHz, $\pm 3$ dB
<b>Max Output Level</b>	2.0Vrms $\pm 0.5$ dB. 2V = 16dB headroom above -10dBV (316mV) nominal consumer line level signal
<b>THD+N</b>	< 0.05% (-80dB), 20Hz - 20KHz bandwidth, 1KHz sine at 0dBFS level (or max level)
<b>SNR</b>	> 85dB, 20Hz-20 kHz bandwidth
<b>Crosstalk Isolation</b>	> 70dB, 10KHz sine at 0dBFS level (or max level before clipping)
<b>L-R Level Deviation</b>	< 0.3dB, 1KHz sine at 0dBFS level (or max level before clipping)
<b>Frequency Response Deviation</b>	< $\pm 0.5$ dB 20Hz - 20KHz
<b>Output Load Capability</b>	1K $\Omega$ and higher (Supports 10x paralleled 10K $\Omega$ loads)
<b>Stereo Channel Separation</b>	>70dB@1KHz

<b>Control</b>	
<b>Control Part</b>	(1) ARC Mode button, (1) FW, (1) IR In, (1) IR Out, (1) RS232
<b>Control Connector</b>	(1) Micro-USB port, (2) 3.5mm jacks, (1) 3-pin terminal block





## TECHNICAL SPECIFICATIONS

**ALF MUH88TP-N with  
8x ALF TPUHD88-RX Receivers**

<b>General</b>	
<b>Bandwidth</b>	18Gbps
<b>HDMI Standard</b>	2.0
<b>HDCP Version</b>	2.2, 1.4 compliant
<b>CEC</b>	Pass-through
<b>Bidirectional PoC</b>	Supported
<b>HDMI 2.0 Cable Length</b>	4K@60Hz 4:4:4 ≤ 5m, 4K@60Hz 4:2:0 ≤ 15m, 1080p ≤ 20m
<b>Transmission Standard</b>	HDBaseT
<b>Transmission Distance</b>	1080p@60Hz ≤ 230 feet (70 meters), 4K@60Hz ≤ 131 feet (40 meters)
<b>Operation Temperature</b>	-5°C ~ +55°C
<b>Storage Temperature</b>	-25°C ~ +70°C
<b>Relative Humidity</b>	10%-90%
<b>Power Supply</b>	Input:100V~240V AC; Output:24V DC 1.25A
<b>Power Consumption</b>	12W (Max)
<b>Dimension (W*H*D)</b>	40mm x 19.5mm x 84mm
<b>Net Weight</b>	290g

