

# MATRIX SWITCHER - ALF-MUH88E

## 4K Home Distribution Hub



### DESCRIPTION

MUH88E Kit is a professional 4K HDBaseT Home Distribution Hub Kit, which consists of a 4K HDBaseT Matrix Switcher, 7 HDBaseT Receivers and accessories.

MUH88E is a professional 8x8 HDBaseT Matrix Switcher that consist of the following inputs and outputs, 8 HDMI IN (4Kx2K@60Hz signal at max), 7 IR IN, 1 IR EYE, 8 IR OUT, 1 IR OUT ALL, 7 HDBaseT OUT, 1 HDMI OUT, 1 SPDIF OUT, 1 L&R RCA OUT, and TCP/IP, RS232 control port via phoenix connector.

The TPHD-BYE-R is an HDBaseT Receiver that consists of the following inputs and outputs, 1 HDBaseT IN, 1 IR IN, 1 IR OUT and HDMI OUT. The receiver is powered directly by the Matrix Switcher.

All HDMI inputs can be selected by either the front panel buttons, IR, RS232 or GUI. The selected source is delivered to HDBaseT zoned outputs 1~7 & HDMI Output.

The Matrix Switcher is capable of delivering 4K signals up to 40m, 1080p up to 70m and powering the receivers via a single CAT5e cable. It is however recommended to use good quality CAT6 cable.

The Matrix Switcher supports EDID management and is HDCP 2.2, 1.4 compliant.

Audio sources can be selected via RS232 commands and TCP/IP at the Matrix Switcher or by 3rd Party control.

## FEATURES

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- HDBaseT Matrix Switcher that features 7 HDBaseT outputs and 1 HDMI output
- Supports HDCP 2.2, and is backwards compatible with the previous version of HDCP and HDMI
- Transmits 4Kx2K @ 60Hz 4:2:0 up to 26 ft. (8m) via HDMI port and 131 ft. (40m) via HDBaseT port
- 7 HDBaseT outputs with distances up to 230 ft. (70m) at 1080p and 131 ft. (40m) at 4Kx2K on a single Cat5e/6 cable
- HDBaseT Receivers are powered by the matrix using PoC technology
- LED indicators show real-time switching status
- Controllable via the front panel, RS232, IR and TCP/IP
- Built-in GUI for TCP/IP control and setup
- Powerful EDID management
- Support CEC to control far-end display devices via RS232 commands
- Features Micro USB port for firmware upgrades
- Easy installation with rack-mounting design, mounting hardware included
- Power supply : Matrix Unit, AC100V~ 240V; Receivers, PoC

## TECHNICAL SPECIFICATIONS

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### 4K HDBaseT Matrix Switcher

#### Video Input

Input	: 8 HDMI
Input Connector	: Female HDMI
Input Level	: T.M.D.S. 2.9V ~ 3.3V
Input Impedance	: 100Ω (Differential)
HDMI Standard	: Support 4K@60 4:2:0 & HDCP 2.2 and is backward compatible with all previous standards

#### Video Output

Output	: 1 HDMI, 7 HDBaseT
Output Connector	: Female HDMI, Female RJ45 (with LED indicators)
Output Level	: T.M.D.S 2.9V ~ 3.3V
Output Impedance	: 100Ω (Differential)
HDMI Standard	: Support 4K@60 4:2:0 & HDCP 1.4 and is backward compatible with all previous standards.

#### Video General

Video Signal	: HDMI (or DVI-D)
Transmission Distance	: 1080p@60Hz ≤ 70m; 4K x 2K @60Hz ≤ 40m
Resolution Range	: Up to 4K x 2K@60Hz
EDID Management	: In-built EDID data and manual EDID management
Gain	: 0 dB
Bandwidth	: 10.2 Gbit/s
Switching Speed	: 200ns (Max)

#### Audio General

Output Signal	: Stereo audio, Digital audio
Analog Audio Output	: Support PCM
Digital Audio Output	: SUPPORTS PCM, DOLBY, DTS, DTS-HD
Frequency Response	: 20Hz ~ 20KHz
Output Connector	: 1 L&R (RCA), 1 SPDIF

## TECHNICAL SPECIFICATIONS CONTINUED

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### 4K HDBaseT Matrix Switcher

#### Control Parts

Control Ports	: 8 IR OUT, 1 IR ALL OUT, 7 IR IN, 1 IR EYE, 1 TCP/IP (female RJ45), 1 RS232 (3-pin pluggable terminal block)
Panel Control	: Front panel buttons
RS232 Control	: 3-pin pluggable terminal block
IR	: Extended IR receiver
TCP/IP Control	: Web-based GUI

#### General

Power Supply	: AC 100 ~ 240V, 50/60Hz
Power Consumption	: 93W (Max)
Temperature	: 0 ~ +50°C
Reference Humidity	: 10% ~ 90%
Dimension (W*H*D)	: 436.4mm x 44.0mm x 300.0 mm
Net Weight	: 2.9Kg

### TPHD-BYE-R HDBaseT Receiver

#### Input & Output

Input	: 1 HDBaseT
Input Connector	: Female RJ45(with LED indicators);
Output	: 1 HDMI
Output Connector	: Female HDMI
Control	: 1 IR IN; 1 IR OUT
Control Connector	: 3.5mm mini jacks

#### General

Resolution Range	: Up to 4Kx2K@60Hz
Transmission Mode	: HDBaseT
Transmission Distance	: 1080P@60Hz ≤70m; 4Kx2K@60Hz ≤40m
Bandwidth	: 10.2Gbps
HDMI Standard	: Support HDMI1.4 and HDCP1.4
Temperature	: 0 ~ +50°C
Humidity	: 10% ~ 90%
Power Supply	: Powered by 4K HDBaseT Matrix Switcher.
Dimension (W*H*D)	: 61mm x 24mm x 120mm
Net Weight	: 280g

## SYSTEM DESIGN

