ALFATRON
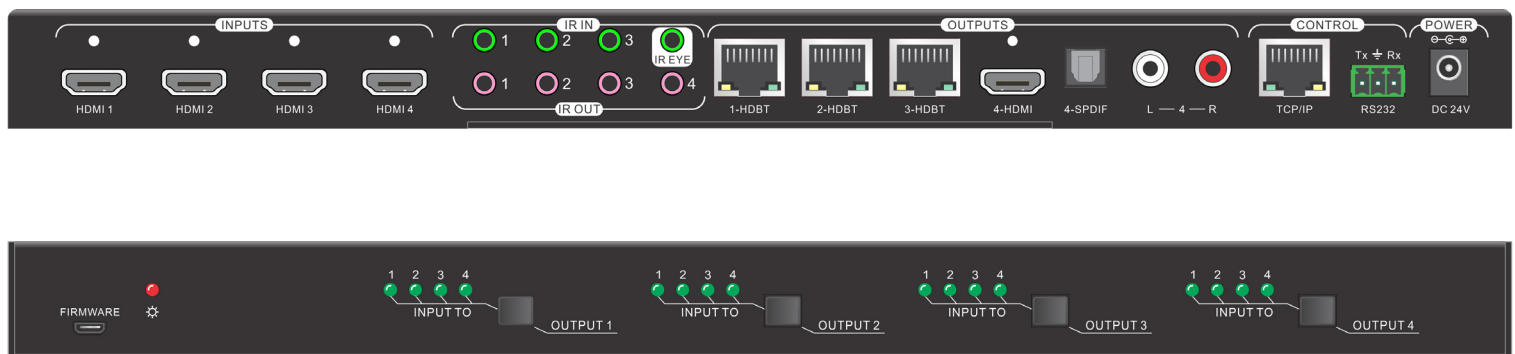
MATRIX SWITCHER - ALF MUH44E
4K Home Distribution Hub

DESCRIPTION

This product is a professional 4K HDBaseT Home Distribution Hub Kit, which consists of a 4K HDBase T Matrix Switcher, 3 HDBaseT Receivers and accessories.

The 4K HDBaseT Matrix Switcher is a professional 4x4 HDBaseT Matrix Switcher that consists of the following inputs and outputs, 4 HDMI InN (4K x 2K@60Hz signal at max), 3 IR IN, 1IR EYE, 4 IR OUT, 3 HDBaseT OUT, 1 HDMI OUT, 1 SPDIF OUT, 1 L&R RCA OUT, and TCP/IP, RS232 control port via phoenix connector.

The HDBaseT Receiver is and HDBaseT Receiver that consists of the following inputs and outputs, 1 HDBaseT 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 ~3 & 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

- Support HDMI 1.4 & HDCP 2.2, and compliant with lower standards, capable to transmit 4Kx2K@60Hz 4:2:0 & 1080p 3D

- Support manual HDCP management and auto-detecting

- Transmit 4Kx2K signal for 8m via HDMI port, 40m Via HDBT port

- Audio source selectable via RS232 command

- 3 HDBaseT outputs distance up to 70m at 1080p and 40m at 4Kx2K on a single CAT5e/6 cable can be achieved.

- The HDBaseT Receivers are powered by the matrix switcher 12VDC by PoC technology.

- LED indicators show real-time switching status.

- Controllable via the front panel, RS232, IR and TCP/IP

- Support bi-directional IR control

- Built-in GUI for TCP/IP control

- Powerful EDID management

- Support non-volatile memory (NVM) for reliable operation

- Support firmware upgrade through Micro USB port

- Easy installation with a rack-mounting design.

TECHNICAL SPECIFICATIONS

4K HDBaseT Matrix Switcher

Video Input

Input	:	4 HDMI
Input Connector	:	Female HDMI
Input level	:	T.M.D.S. 2.9V ~ 3.3V
Input impedance	:	100Ω (Differential)
HDMI Standard	:	Support HDMI 1.4 & HDCP 2.2 and is backward compatible with all previous standards.

Video Output

Output	:	1 HDMI, 3 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 HDMI 1.4 & HDCP1.4 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

4K HDBaseT Matrix Switcher

Control Parts
Control Ports	:	4 IR OUT, 3 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	:	Input : 100 ~ 240V, 50/60Hz, Output: DC 24V 2.71A
Power Consumption	:	35W (Max)
Temperature	:	0 ~ +50°C
Reference Humidity	:	10% ~90%
Dimension (W*H*D)	:	360mm x 28mm x 150mm
Net Weight	:	910g

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 4K x 2K@60Hz
Transmission Mode	:	HDBaseT
Transmission Distance	:	1080p@60Hz ≤70m, 4Kx2K@60Hz ≤40m
Bandwidth	:	10.2Gbps
HDMI Standard	:	Support HDMI1.4 and HDCP 1.4
Temperature	:	0 ~ +50°C
Humidity	:	10% ~90%
Power Supply	:	DC 12V 1A
Dimension (W*H*D)	:	120mm x 18mm x 74mm
Net Weight	:	280g

SYSTEM DESIGN

Design Key

- HDMI
- Control
- Audio
- HDBaseT

ALFATRON 51W

ALFATRON PA100W

ALFATRON 5AC
ACTIVE SPEAKERS

PC/ DESKTP COMPUTER

REMOTE CONTROL
& IR RECEIVER

INPUTS

HDMI 1   HDMI 2   HDMI 3   HDMI 4

IR IN
1   2   3
IR EYE
1   2   3   4
IR OUT

OUTPUTS

1-HDBT   2-HDBT   3-HDBT   4-HDMI   4-SPDIF   L — 4 — R

CONTROL
TCP/IP   RS232   Tx ⇄ Rx

POWER
DC 24V

LAPTOP

DVD PLAYER

APPLE TV

GAMING
UNIT

IR
TRANSMITTER

HDBaseT Receiver - Back
DC 12V   LINK   HDCP

HDBaseT Receiver - Front
HDMI OUT   IR IN   IR OUT

TV

REMOTE CONTROL
& IR RECEIVER

IR
TRANSMITTER

TV