4K60 HDMI Fiber Extender

User Manual

Shenzhen Micagent Technology Co., Ltd

Introduction

This fiber optic extender is used to extend the transmission of HDMI audio and video signals, usually used in the HDMI cable limit length can not meet the transmission distance. This product is through the 10 Gigabit fiber will be the highest resolution of 3840 * 2160 @ 60Hz HDMI HD audio and video signals uncompressed transmission standard 10KM, this product supports RS232 serial data transmission, independent audio transmission, support for the local loop out, in order to reduce the cost for the user at the same time to ensure that the stability of the signal. Extender built-in learning EDID greatly enhance the compatibility of the device. The device has a long transmission distance, low cost, easy to install, good compatibility, is a stable and efficient transmission method, widely used in high-definition conference systems, high-definition film and television shooting, high-definition teaching systems, high-definition digital advertising and other audio and video transmission.

Features

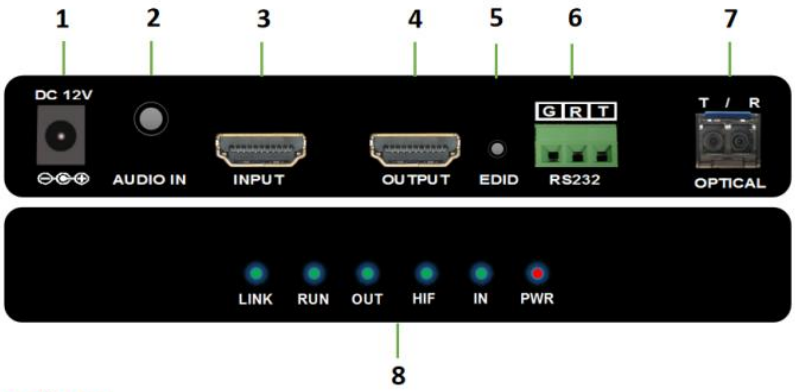
- Metal shell, good heat dissipation, strong anti-interference ability; wall-mounted more convenient
- Using single mode single fiber standard can transmit 10KM
- Video resolution up to 3840*2160@60Hz
- Supports RS232 serial port data transmission
- Support independent audio transmission
- Supports local loop out
- HDMI 2.0 and HDCP 2.2 standards
- Support EDID learning to improve compatibility and match signal sources and display devices
- Built-in auto-adjustment system for smooth, clear and stable images
- Built-in ESD static protection circuit, easy installation, plug and play
- Application areas: solutions (stores, restaurants, classrooms, monitors, speakers, energy saving, virtual desktops, digital cameras, large screen splicing, etc.)

Specification

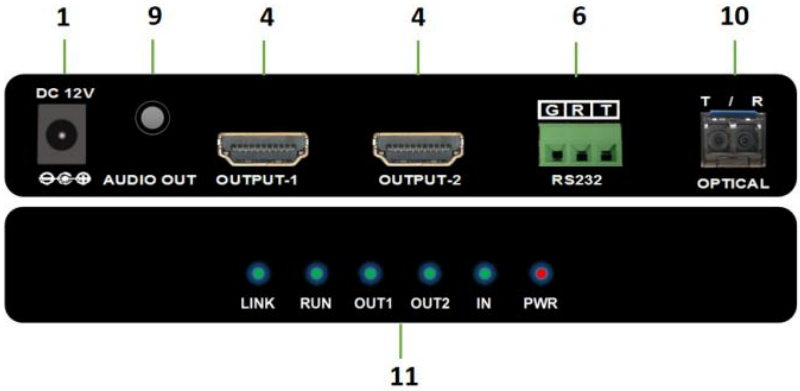
Video	Supported Protocols	HDMI 2.0; HDCP 2.2
	HDMI Pixel Bandwidth	600MHz, All Digital
	HDMI Interface Bandwidth	Total Bandwidth 18Gbps
	Maximum Supported Resolution	3840X2160@60Hz and backward compatible
	Video Interface	HDMI-A Connector
	HDMI Interface Impedance	100Ω
	Recommended HDMI Cable Length	Less than 5 meters at 1920X1080@60Hz
RS232	Interface	DB9
	Signal Direction	Unidirectional transmission (single fiber); bidirectional transmission (dual fiber)
	Baud Rate	Adaptive, up to 115200bps
	Data Bit	8-bit
Audio	Interface	3.5mm stereo audio jack
	Audio Format	44.1k,48k,96k,176k,192k
	Signal Type	Stereo
Fiber Optic	Fiber Optic Interface	External SFP Module - LC Interface
	Fiber Type	Singlemode
	Wavelength	Singlemode 1310nm
	Interface Bandwidth	18Gbps
	Maximum Transmission Distance	At 3840X2160@60Hz;
Other	Power Supply	Single-mode standard: 10KM
	Maximum Power Consumption	Power adapter: DC 12V
	Operating Temperature	MAX 10W
	Operating Humidity	-5℃ ~ +70℃
	Main unit size	5% ~ 90%
	Warranty	142*67*23mm

Interface specification

Transmitter:



Receiver:



1.DC 12V power supply (DC5.5*2.1mm)	7. Fiber optic sending interface
2.3.5mm independent audio input	8. Signal light of sending end, “PWR” is on (power on), “IN” is on (HDMI signal input detected), “HIF” is on (HDMI signal has entered the optical component), “OUT” is on (local HDMI loop out is connected) “RUN” is on (system operation is normal) “LINK” is on (system operation is normal) “LINK” is on (system operation is normal) (HDMI signal has entered the optical component), “OUT” is on (local HDMI loop out has been connected) “RUN” is on (the system is running normally) “LINK” is on (fiber optic signal has been received)
3.HDMI video signal input	9.3.5mm independent audio output
4.HDMI video signal output (HDMI local loop out and remote output)	10.Fiber optic receiving interface
5.Learning EDID button, connect the HDMI interface of the monitor with the HDMI input interface of the transmitter of the optical terminal, connect the optical terminal to the power supply, press and hold down the EDID button for 3 seconds to start learning, when learning EDID, the HDMI input indicator “IN” flashes, the	11. Receiver signal indicator, “PWR” light (powered on), “IN” light (detected fiber optic received HDMI signal input), “OUT1” light (HDMI output1 is outputting a signal), “OUT2” is bright (HDMI output2 is outputting a signal) “RUN” is bright (the system is running normally) “LINK RUN” is on (system operation is normal) ‘LINK’ is

light is off and restarted, and the transmitter will be recharged, and EDID learning is completed. EDID learning is completed.	on (fiber optic signal is received)
6.RS232 interface (G: ground; R: receive; T: transmit)	

Installation steps

1. Connect the HDMI signal source to the transmitter HDMI input interface,
2. Connect the HDMI extender receiver HDMI OUT to the display device,
3. Use a single-mode optical fiber to connect the optical fiber interface between the sender and the receiving end,
4. Connect the sending terminal and the receiving terminal to the power supply. When the indicator light is on normally, the system is running normally.
5. EDID button purposes, if all the indicator lights of the transmitting terminal and the receiving terminal are connected, but the display has no image, color, or dissatisfaction with the screen, the HDMI interface of the display connects with the HDMI input interface of the transmitting terminal of the optical terminal, the optical terminal is connected to the power supply, press the EDID button for 3 seconds to start learning, the HDMI input indicator "IN" flashes, the light is off, and the transmitting terminal turns on again, the EDID learning is completed, and repeat the 1-4 steps.

System diagram