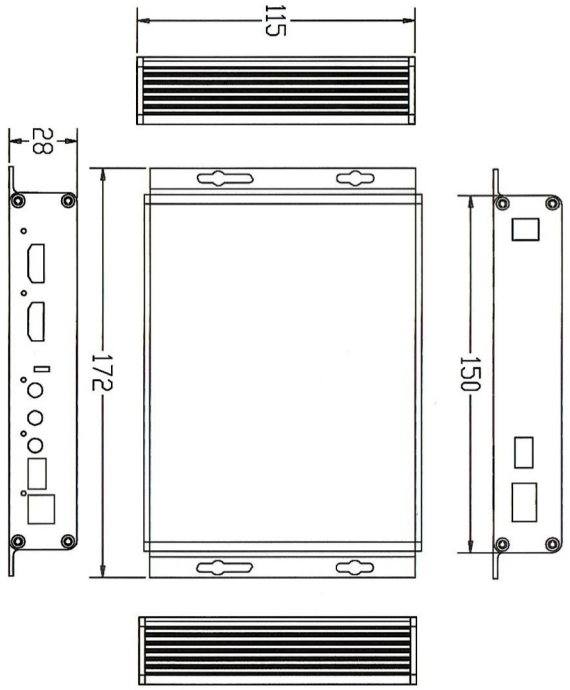
4K HDMI Multi-function Fiber Optical Converter

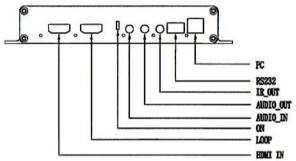
User's Manual

Transmitter Dimensions Drawing (mm)



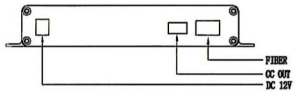
Printed transmitter indicator description

Front panel



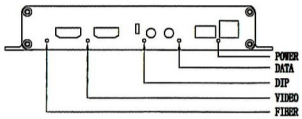
HDMI IN	HDMI signal input	
LOOP	HDMI signal loop out	
ON	Pointer up: independent audio off, enable unembedded audio mode Pointer down: independent audio transmission, enable embedded audio mode	
AUDIO IN	3.5mm audio input	
AUDIO OUT	3.5mm audio output	
IR OUT	Infrared receiver	
RS232	1 GND	Ground cable
	2 RS232 IN	Transmit
	3 RS232 OUT	Receive
PC	Computer USB	

Back panel



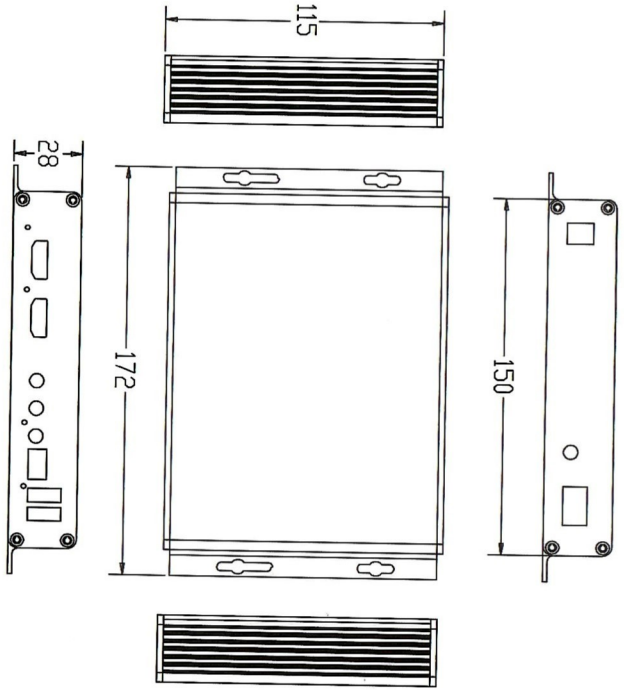
DC12	12V power supply interface
A CC OUT	Contact closure A signal reception
B CC OUT	Contact closure B signal reception
FIBER	SFP Fiber Interface

Indicators



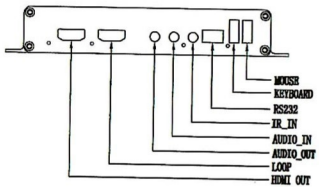
FIBER	Light on： fiber signal Light off ： no fiber signal
VIDEO	Light on ： video signal Light off ： no video signal
DIP	Dial up off : audio embedding mode is off Dial down on: audio embedding mode is on
DATA	Blinking: data signal Off : no data signal
POWER	On: the device is powered up Off: the device is powered off

Receiver dimensions drawing (mm)



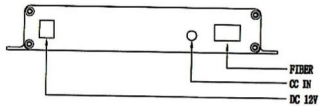
Printed receiver indicator description

Front panel



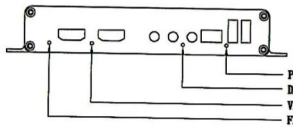
HDMI OUT	HDMI signal output	
LOOP	HDMI signal loop out	
AUDIO IN	3.5mm audio input	
AUDIO OUT	3.5mm audio output	
IR IN	Infrared transmitter	
RS232	1 GND	Ground cable
	2 RS232 IN	Transmit
	3 RS232 OUT	Receive
KEYBOARD	Keyboard input	
MOUSE	Mouse input	

Back panel



DV12	12V power supply interface
CC IN	Contact closure signal transmission
FIBER	SFP Fiber Interface

Indicators



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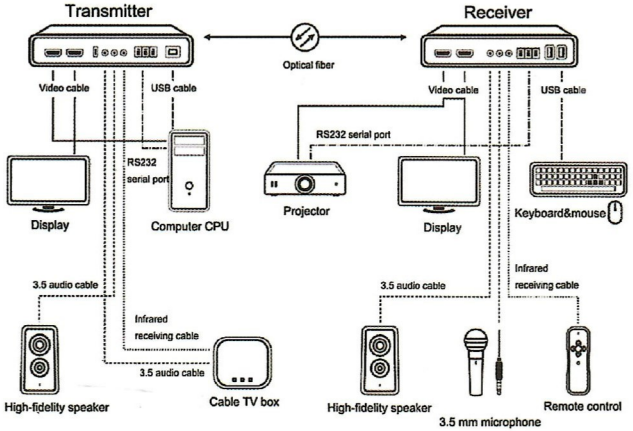
Connection Diagram



Attention

Lightning protection, static electricity and grounding:

It is recommended that when install the device, consideration should be given to the impact of grounding by lightning, and take prevention measures. Strong static electricity will damage the optical device and data chip in the equipment. It is recommended that when plug/unplug the data port of the optical converter, please disconnect the power supply of the optical converter first.

Fiber and optical components:

Be careful when plugging the optical fiber as optical components of the optical converter is very fragile, and it should avoid causing damage to the optical components. It should be noted that the light source produced by the optical components of the optical converter will be harmful to eyes, so do not have direct eye contact with the optical components of optical converter. If you need to detect the optical power of the optical converter, please use the optical power meter.

Equipment and installation procedures:

1. Optical fiber installation: please carefully insert the optical fiber into the optical fiber interface of the optical terminal after confirming that the optical fiber link meets the installation requirements.
2. Equipment installation: The equipment can be distinguished between transmitter and receiver, and it is stated clearly on the label and printed on the chassis of the equipment.

Technical Indexes

IR index					
Parameter	Min	Type	Max	Unit	Status
Optical current	200	-	1030	uA	IF=4mA VCE=3.5V
Peak wavelength	-	940	-	nm	1F=20mA
Spectrum voltage	-	80	-	nm	1F=20mA
View angle	-	±30	-	Deg	1F=20mA
Forward voltage	-	1.2	1.6	V	1F=20mA
Reverse current	-	-	10	uA	VR=5V

Contact closure index	
Input electrical parameters	Dry node, not charged (short or disconnected)
Output electrical parameters	Dry node, not charged (short or disconnected)
Output relay maximum switching voltage	250VAC/220VDC
Output relay maximum switching current	2A
Mechanical durability of output relay	100,000,000times
Maximum output power of relay	60W
Physical interface	2-pin phoenix terminal (transmitter) Switch button (receiver)

RS232 (3-wire system, full duplex) index	
Baud rate	256000Hz downward compatibility
Data bits	8 digits
Physical interface	3-pin phoenix terminal

RS 485 (2-wire system, half duplex) index	
Error rate	<10^-9
Bit rate	0-400Kbps
Physical interface	3-pin phoenix terminal

Fiber index	
Wavelength	1310-1550nm
Rate	10Gbps
Tx power	>-5db
Rx sensitivity	>-14db
Fiber connector	LC

Video index	
Video bandwidth	10GHz Gbps
Resolution	4096*2160@30Hz downward compatibility
Maximum pixel clock	297MHZ
Effective cable length	10M
Physical interface	HDMI female

Audio index	
Sampling frequency	48K
Sampling depth	24bit
Dynamic bandwidth	96db
Total harmonic distortion (THD)	-88db
Signal to noise ratio (SNR)	96db
Audio input/output impedance	600Ω
Signal level	VPP 3.5V
Physical interface	3.5mm stereo audio socket
Signal type	Stereo audio

KVM(USB) index	
Version	1.1
Tx physical interface	USB female type B
Rx physical interface	USB female type A

Other index	
Operating temperature	-20°C~75°C
Storage temperature	-40°C~85°C
Power supply	12V1A
Power dissipation	<1.5W

Product Type Selection

1.1 channel 4K HDMI video with loop out + 1 channel bidirectional 3.5 audio +1 channel reverse IR+1channel bidirectional RS232 data to fiber optical converter

2.1 channel 4K HDMI video with loop out + KVM + 1 channel bidirectional 3.5 audio +1 channel reverse IR+1channel bidirectional RS232 data to fiber optical converter

3.1 channel 4K HDMI video with loop ou t + KVM + 1 channel bidirectional 3.5 audio +1 channel reverse IR+1channel bidirectional RS232 data + 1 channel reverse contact closure to fiber optical converter

4.1 channel 4K HDMI video with loop out + 1 channel bidirectional 3.5 audio +1 channel reverse IR+1 channel bidirectional RS485 data to fiber optical converter

5.1 channel 4K HDMI video with loop out + KVM + 1 channel bidirectional 3.5 audio +1 channel reverse IR+1channel bidirectional RS485 data to fiber optical converter

6.1 channel 4K HDMI video with loop out + KVM + 1 channel bidirectional 3.5 audio +1 channel reverse IR+1 channel bidirectional RS485 data + 1 channel reverse contact closure to fiber optical converter

Features

1.Maximum support 4096*2160@30Hz downward compatibility

2.Support international standard HDCP 1.4

3.EDID transparent transmission mode

4.Support RGB4:4:4 YUV4:4:4 4:2:2 4:2:0

5.Support DDC CEC HPD signal

6.Support 4K HDMI video with loop-out

7.Support KVM function (keyboard and mouse)

8.Support 1 channel reverse IR infrared transmission (optional)

9.Support 1 channel bidirectional independent 3.5 stereo audio, forward support audio embedding / unembedding function

10.Support 1 channel bidirectional full-duplex RS232 (optional half-duplex RS485)

11.1 channel reverse contact closure function (optional)

12.Single-fiber/dual-fiber (optional)

13.Single mode / multi-mode compatibility, multi-mode transmission distance of 1KM, single-mode transmission distance of 10KM

14.Delay < 2 ms

15.Support hot swap signal, plug and play, no setting required