

4K HDMI Multi-function Fiber Optical Converter

HDMI+1Ch Bidi Stereo Audio+1Ch RS232

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

Overview

4K HDMI fiber to video/audio/data is composed of the transmitter and the receiver. The video, audio and data output from the computer host (HD video signal source, HD DVD/DVR and other devices) are extended to the remote user through one core optical fiber, and the image and sound of the computer host are broadcasted in real time at the remote end.



Features

- Maximum support 4096*2160@30Hz downward compatibility
- Support international standard HDCP 1.4
- EDID transparent transmission mode
- Support RGB4:4:4 YUV4:4:4 4:2:2 4:2:0
- Support DDC CEC HPD signal
- Support 4K HDMI video with loop-out
- Support KVM function (keyboard and mouse)
- Support 1 channel reverse IR infrared transmission (optional)
- Support 1 channel bidirectional independent 3.5 stereo audio, forward support audio embedding / unembedding function
- Support 1 channel bidirectional full-duplex RS232 (optional half-duplex RS485)
- One channel reverse contact closure function (optional)

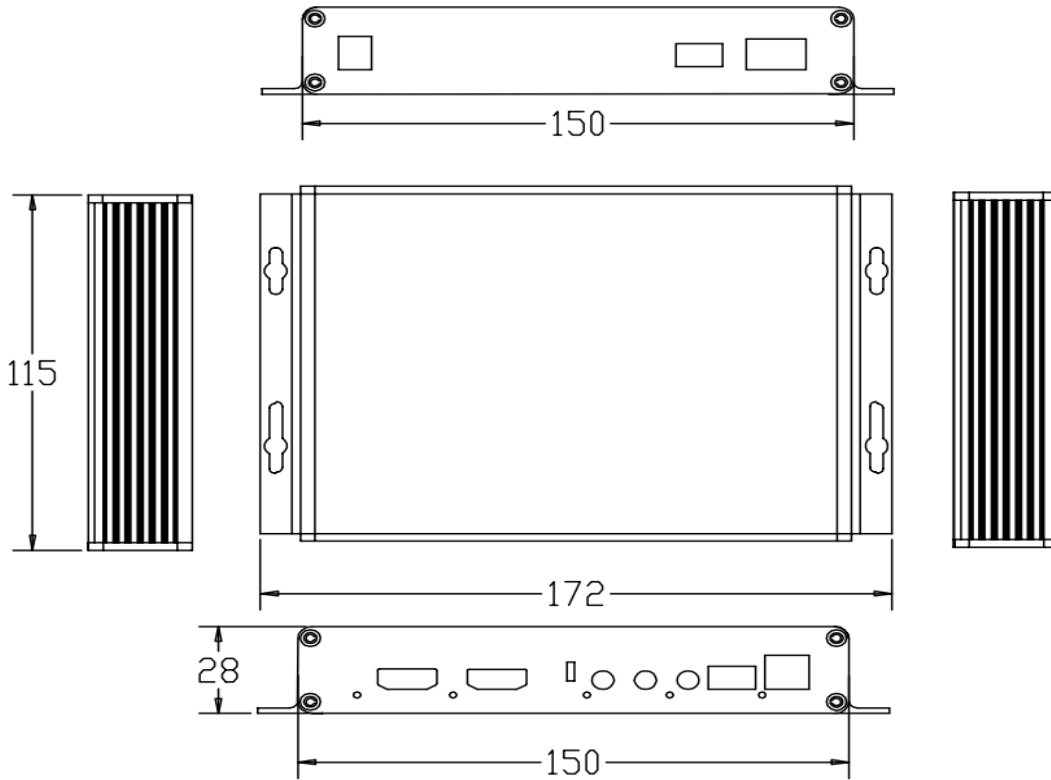
- Single-fiber/dual-fiber (optional)
- Single mode / multi-mode compatibility, multi-mode transmission distance of 1KM, single-mode transmission distance of 10KM
- Delay < 2 ms
- Support hot swap signal, plug and play, no setting required

Technical Indexes

Fiber index					
Wavelength	1310-1550nm				
Bit rate	10Gbps				
Tx power	> -5db				
Rx sensitivity	> -14db				
Fiber connector	LC				
Video index					
Video bandwidth	10Gbps				
Maximum resolution	4096*2160@30Hz downward compatibility				
Maximum pixel clock	297MHZ				
Effective cable length	10M				
Physical interface	HDMI female				
KVM(USB) index					
Version	1.1				
Tx physical interface	USB female type B				
Rx physical interface	USB female type A				
Audio index					
Sampling frequency	48K				
Sampling depth	24bit				
Dynamic bandwidth	96db				
Total harmonical 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				
IR index					
Parameter	Min	Type	Max	Unit	Condition
Optical current	200	-	1030	u A	IF=4mA,VCE=3.5V
Peak wavelength	-	940	-	nm	1F=20mA
Spectrum voltage	-	80	-	nm	1F=20mA
View angle	-	±30	-	Deg	1F=20mA

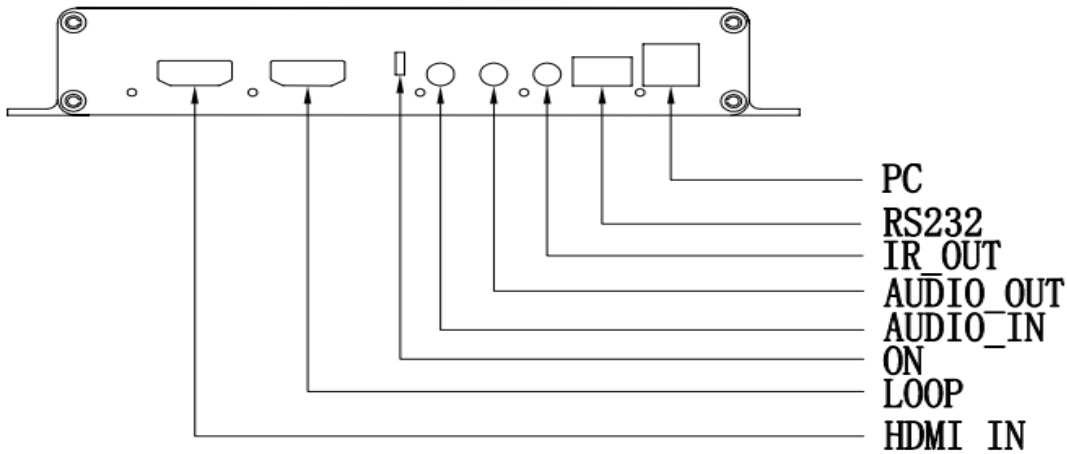
Forward voltage	-	1.2	1.6	V	1F=20mA
Reverse current	-	-	10	u A	VR=5V
RS232 (3-wire system, full duplex) index					
Baud rate	256000Hz downward compatibility				
Data bits	8 digits				
Physical interface	3-pin phoenix terminal				
RS 485 (2-wire system, half duplex) index					
Error rate	<10 ⁻⁹				
Bit rate	0-400Kbps				
Physical interface	3-pin phoenix terminal				
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)				
Other index					
Operating temperature	-20°C ~75°C				
Storage temperature	-40°C ~85°C				
Power supply	12V1A				
Power dissipation	<1.5W				

Transmitter Dimensions Drawing (mm)



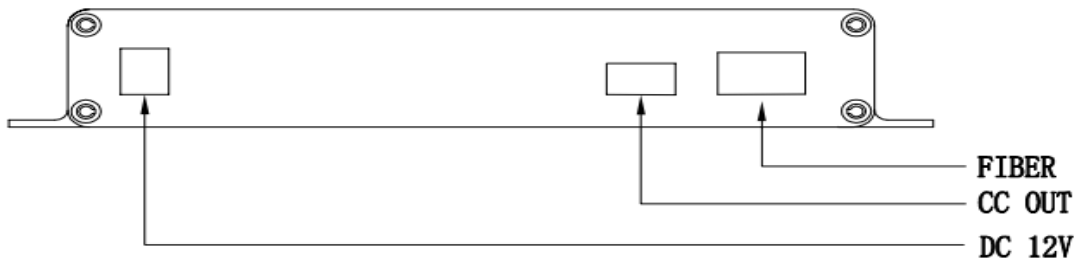
Transmitter printed / indicator description

Front panel



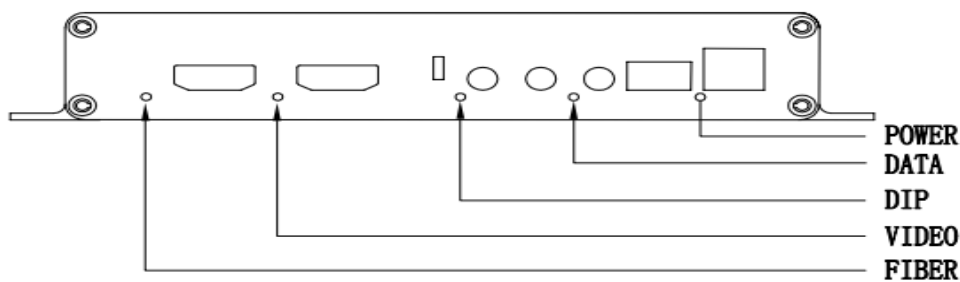
HDMI IN	HDMI signal input	
LOOP	HDMI signal loop out	
ON	Pointer up: Independent audio off, enable unembedded audio mode Pointer down: Independent audio transmission, enable embedded audio mode	
AUDIO IN	3.5mm audio input	
AUDIO OUT	3.5mm audio output	
IR OUT	Infrared receiver	
RS232	1 GND	Ground wire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

Back panel



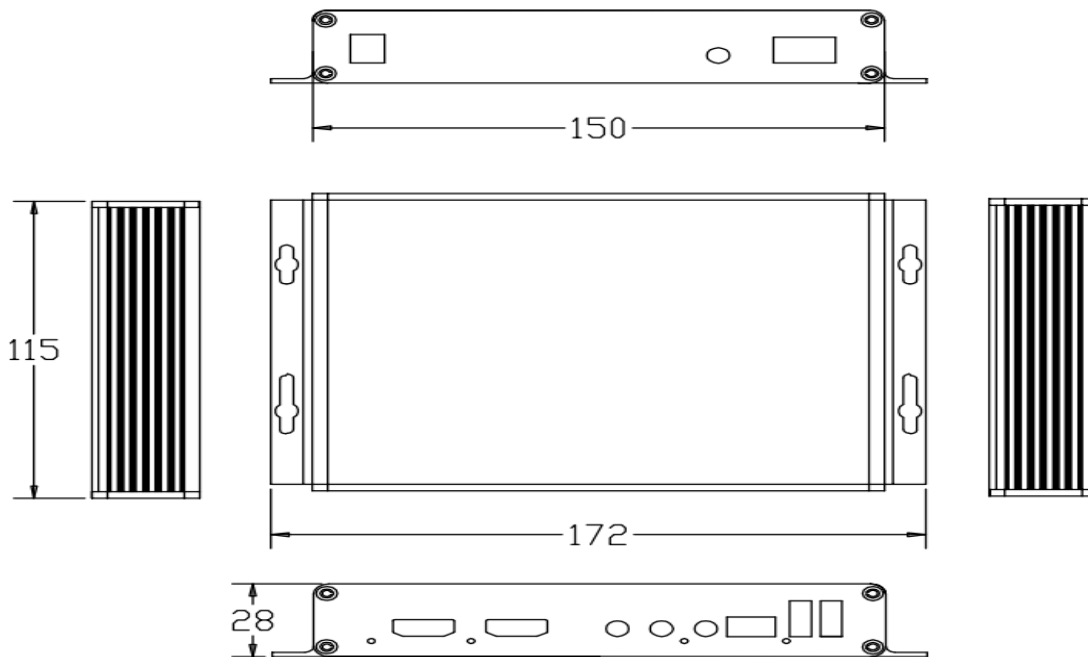
FIBER	SFP Fiber Interface
CC OUT	Contact closure signal reception
DV12	12V power supply interface

Indicators



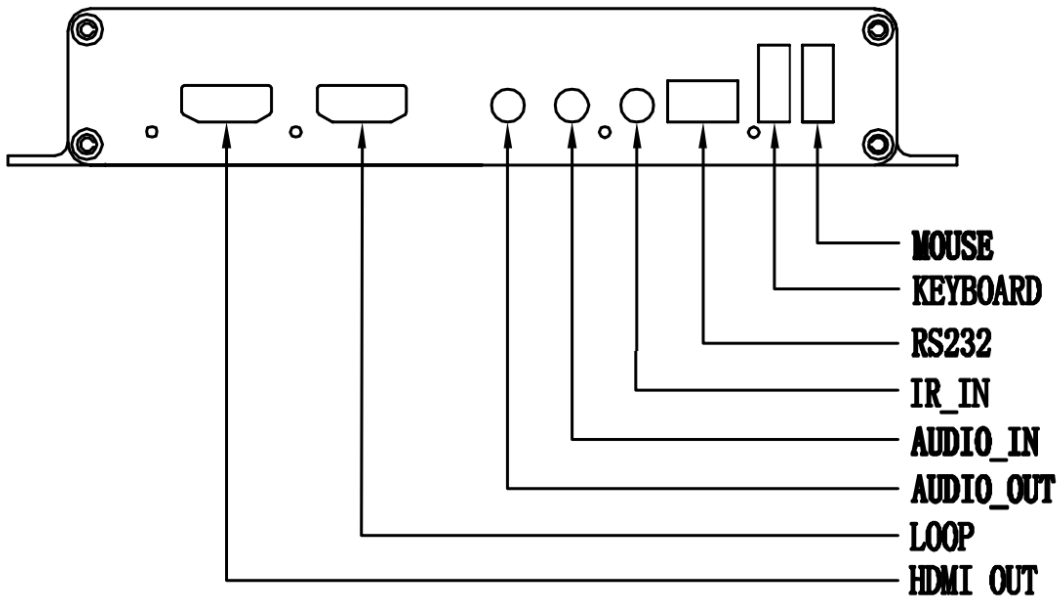
FIBER	Light on : fiber signal Light off: no fiber signal
VIDEO	Light on: video signal Light off: no video signal
DIP	Dial up off: Audio embedding mode is off Dial down on: Audio embedding mode is on
DATA	Blinking: There is data signal Off: There is no data signal
POWER	On: The device is powered on Off: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

Receiver Dimensions Drawing (mm)



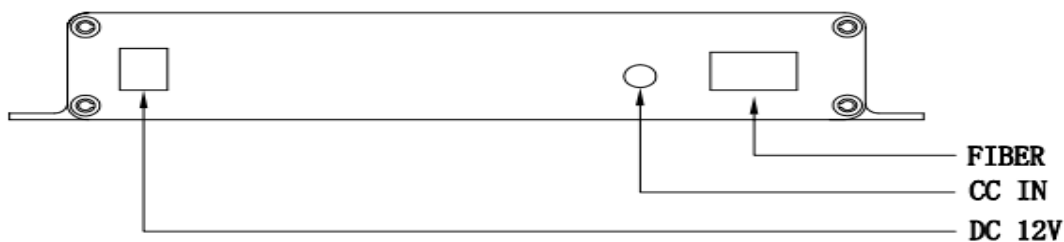
Receiver printed/indicator description

Front panel



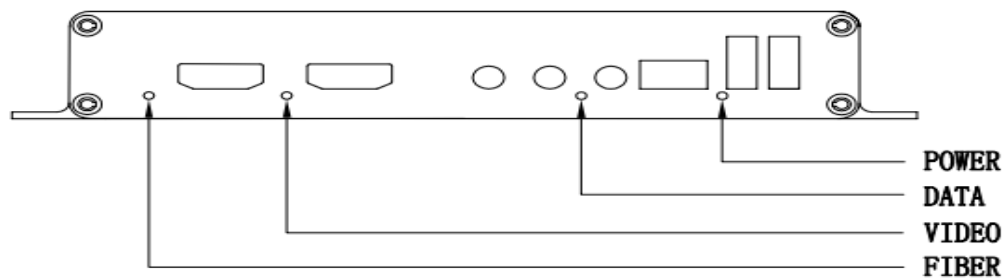
HDMI OUT	HDMI signal output	
LOOP	HDMI signal loop out	
IR OUT	Infrared receiver	
AUDIO IN	3.5mm audio input	
AUDIO OUT	3.5mm audio output	
RS232	1 GND	Ground wire
	2 RS232 IN	Transmit
	3 RS232 OUT	Receive
KEYBOARD	Keyboard input	
MOUSE	Mouse input	

Rear panel



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

Indicators



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Connection Diagram

