

RB-4KHDMI

4K HDMI Fiber Optic Converter/Extender

1-Channel HDMI 4K resolution Video with RS232 return path for PTZ controls

The Robofiber RB-4KHDMI is an HDMI optical extender which supports 4K resolution high-definition HDMI optical transmission, using a 10G data rate HDMI signal conversion chip. Using different SFP transceivers transmission can reach 60 km over SMF with no loss of quality nor delay of transmission. Supports HDMI 1.4 (with 3D) video signal transmissions, can pass the EDID, supports HDCP, supports resolution of up to 720p@60Hz, 1080i@60Hz, 1080p@60Hz, 1080p@120Hz, supports 7.1 channel PCM surround sound and audio compression and is compatible with DVI signal transmission and hot plug HDMI interface. The embedded return path RS232 interface allows remote control via fiber for automation applications of monitoring and control.



Features

- Extends uncompressed multi-rate 4K HDMI video signals over fiber
- Supports HDMI 1.4 (and 3D) compliant signal
- 10G physical data rate over fiber
- Industrial temperature grade hardened units (-20 to +75 Celsius)
- Supports HDCP and EDID features
- Supports Single-Mode Fiber distances up to 60 km and Multi-Mode Fiber up to 2Km
- High quality and resolution real-time video transmission
- LED status providing rapid reading of operational status
- No EMI or RFI and no ground loops
- Supports chassis hot swap, stand alone or card operating mode

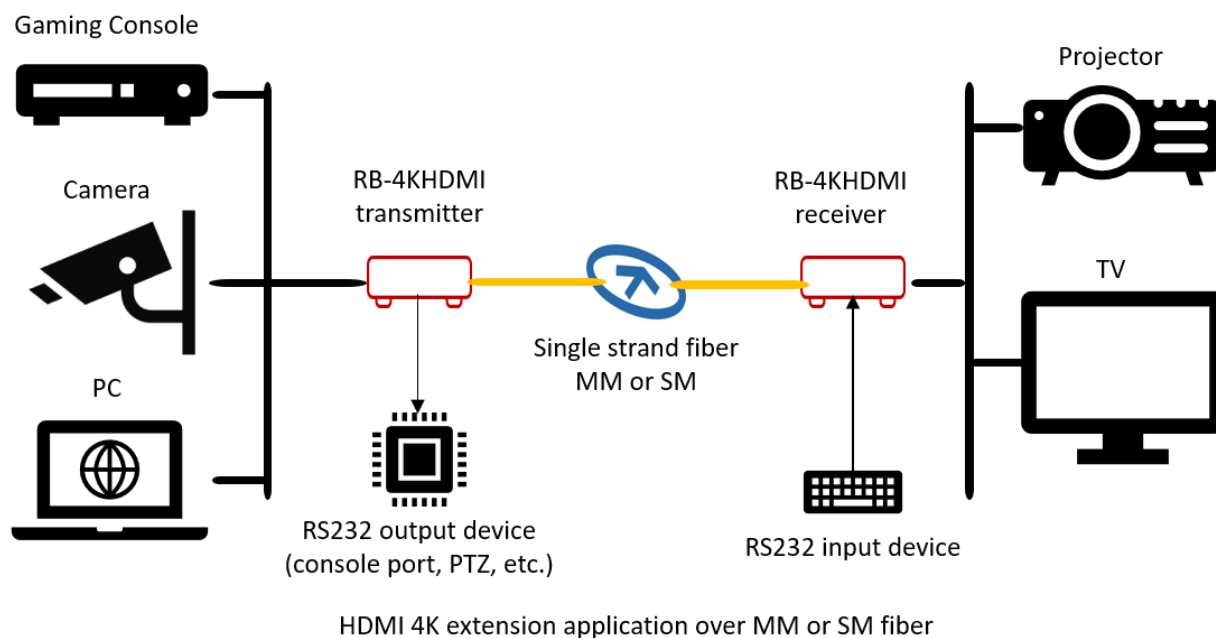
LED lights

LED	Description	
FIBER	On	Fiber link is up
	Off	No fiber connection
DATA	On	RS232 data traffic
	Off	No RS232 data traffic
VIDEO	On	Device has proper HDMI signal
	Off	No HDMI signal
POWER	On	Power available
	Off	No power available



Panel look with LEDs for RB-4KHDMI extender

Application Diagram



Technical Specifications

Optical Port	Wavelength	1550/1310nm
	Fiber Type	SMF 9/125um, single fiber(default) MMF 62.5/125 or 50/125um SS(up to 500m)
	Distance	20km (up to 80km optional)
	Fiber Connector	LC (default)
HDMI Video	Video Interface Ports	1
	Physical Interface	HDMI type A connector
	Max Resolution	1920 x 1080 @ 60Hz
	Bit Rate	Max 10Gb/s
	HDMI standard	HDMI 1.4 with 3D support
Data	Physical Interface	Standard Block Terminal, 3 pin
	Interface Signal	RS485/RS422/RS232/Manchester
	Baud Rate	0-400Kbps
	BER	$< 10^{-9}$
	Operation Mode	Full duplex / half duplex
Electrical & Mechanical	Input Power Requirements	DC 5V
	Power Adapter	AC 100V~240V
	Dimensions	104 x 104 x 28 mm
	Packing	250 x 140 x 75 mm
	Weight	0.75kg
Environmental	Operating temperature	-20°C ~ +75°C
	Storage temperature	-40°C ~ +85°C
	Working humidity	0% ~ 95% (non-condensing)
	MTBF	>100,000 hours

Ordering Information

Model Number		Fiber Mode	Transmission Distance	Fiber Connector
Transmitter	Receiver			
RB-4KHDMI-T	RB-4KHDMI-R	Singlemode	20km	LC
		Multimode	1Km	

Note:

- One model covering SMF 20Km and MMF 1Km reach.
- Optical transmission distance will vary. Total optical loss is affected by number of splices, connectors and patch panels which cause additional loss and thus reduced reach. Please use optical tools (Optical Power Meter and Optical Laser Source) to determine the total IL of a fiber circuit
- Maximum transmission distance is also limited by fiber bandwidth
- Power adapter is manufactured by third party. Power adapter is included for standalone versions of the RB-4KHDMI fiber extenders. Default AC plug is US format (European, UK or Australia power plug are available on demand)