

RB-4K60-MINI

HDMI 2.0 4K 60Hz Fiber Optic Extender Set

Quick User Guide



Overview

The mini 4K HDMI 2.0 fiber extender set is a very small and powerful solution to transport high resolution HDMI signal with no compression or delay over one single strand of fiber up to 10Km reach. The RB-4K60-MINI supports EDID with dedicated switch and memory profile storage after power off.

The fiber extender has a very small design, with minimal 1.5W power consumption, a screw for securing HDMI connector and also a DC plug with twist-and-lock feature to prevent accidental power or HDMI signal being disconnected. An option to power the extenders from an USB type A port via a separate DC cable is available. Set is designed for extreme temperature and high EMI tolerance.

Applications

High-Definition Imaging for various HDMI supporting display systems: LED screens/
Projectors/ Monitors
Broadcast quality transmission and recording
Video Conferencing
Control center

Ordering Information

Part Number	Description	Lambda	Remarks
RB-4K60-MINI	4K 60Hz HDMI 2.0 Fiber Extender Set	1310/1550nm	Single mode single fiber 10Km

Features

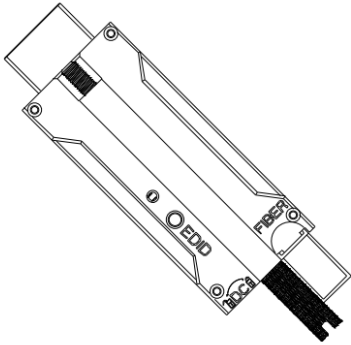
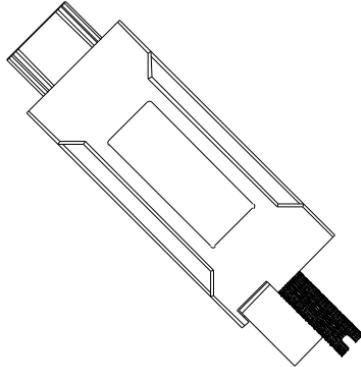
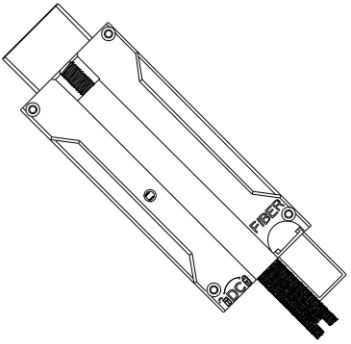
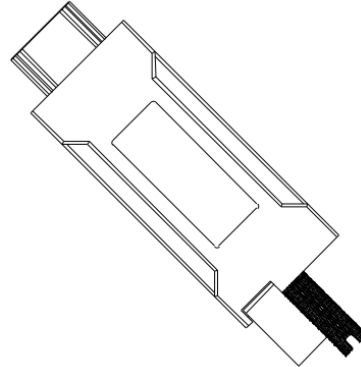
- Downward compatible with 4K*2K*60Hz resolution
- Built-in EDID mode and EDID manual learning mode with button (store/reset)
- Supports EDID memory storage function after power off
- Supports power via signal source HDMI port
- Fiber port self-closing dust covers
- Power plug lock protection
- HDMI port securing screws
- Fiber budget for up to 10km over SMF and 300m over MMF
- Status LED indicator for power, fiber and HDMI signal
- Plug and play design, no settings required

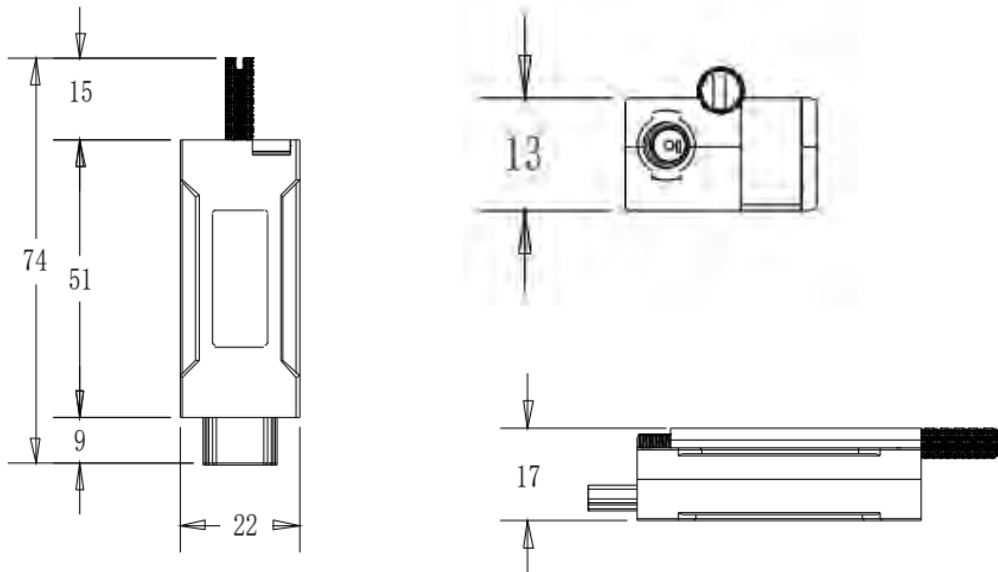
Technical Specifications

Fiber interface	
Wavelength	1310nm/1550nm (single strand fiber)
Data Rate	10Gbps
Transmitter min. power	> -3db
Receiver max sensitivity	< -10db
Transmission distance	10km over SMF, 300m over MMF
Fiber connector	LC/UPC simplex
HDMI interface	
Version	HDMI 2.0
Bandwidth	10.2 Gbps
Resolution	4K*2K*60Hz and downward compatibility
Color schemes	4K60Hz YUV 4:2:0 4K30Hz RGB, YCbCr 4:4:4 / 4:2:2 / 4:2:0
Pixel clock	340MHz
Physical connector	HDMI Male
Power	
Power supply	5V/1A AC adapter, US plug
Power consumption	< 1.5W
Physical interface	DC 3.5mm x 1.35mm jack with twist and lock mechanism
Mechanical	
Dimensions (L/W/H)	60 x 22 x 17mm
Net weight	51.7g each unit
Way to install	Direct plug-in
Color	Black

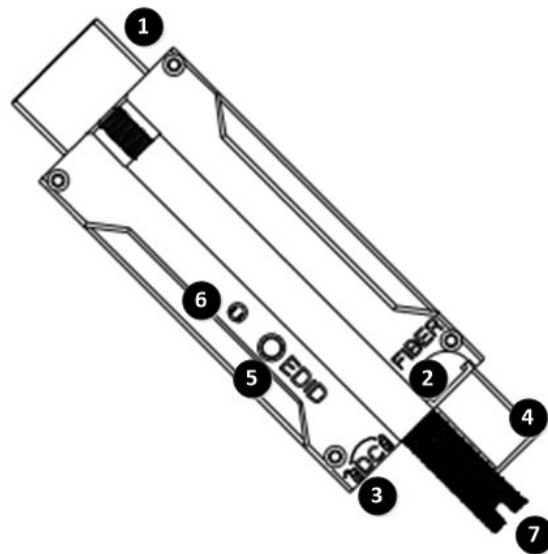
Packaging	
Dimensions	210 x 160 x 46mm, kraft carton
Gross weight	350gr
Operating conditions	
Operating temperature	-20°C ~ 70°C
Storage temperature	-40°C ~ 85°C
Humidity	0-95% (non-condensing)
MTBF	> 100,000 hours

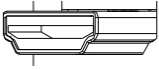


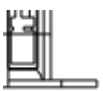



Product Picture

Transmitter	
Front panel	Back panel
	
Receiver	
Front panel	Back panel
	



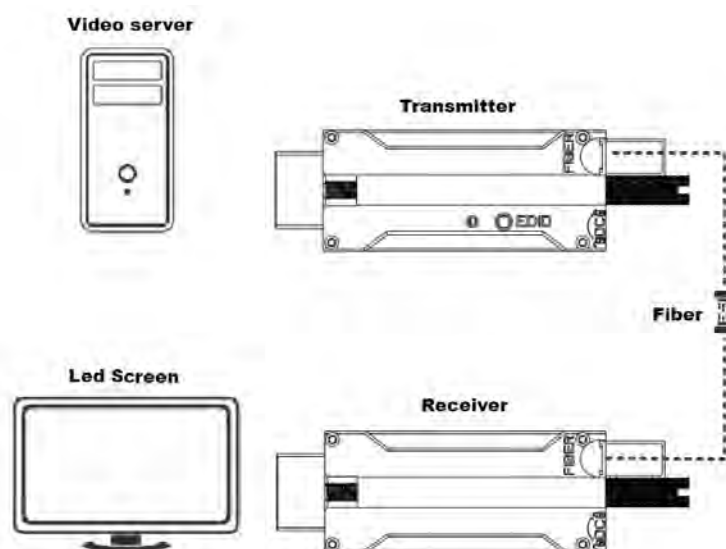
Unit Description



Item	Appearance	Description
1		HDMI male connector
2		LC/UPC fiber connector
3		DC 3.5mmx1.35mm power supply jack
4		Fiber port self-closing dust cover
5		EDID button switch
6		LED indicator
7		Rear screw for HDMI connector lock

Note: Only Transmitter unit has EDID manual learning button

Application Diagram



Operating Tips

- Test the HDMI extender first with a short fiber cable before final installation to get familiar with functions and performance
- For the HDMI source, if power is unavailable, unit can operate short term with power from the source HDMI port. It is recommended to use the power adapter for long-term operation
- Color model is 4:2:0 when transmitting 4K60Hz video signal; the color model supports RGB, YCbCr 4:4:4/4:2:2 and YUV 4:2:0 when transmitting 4K30Hz and backward compatible video signal
- EDID button switches between the device's built-in EDID and manual learning of EDID

EDID mode button

Mode	Operating instructions	LED status
EDID learning (manual)	Press and hold the transmitter's EDID key for 3 seconds, then release button after light flashes	LED flashing and off means entering EDID learning mode
Built in EDID (reset)	Press and hold the transmitter's EDID key for 10 seconds, then release button after light flashes	LED flashing and off means restoring factory default EDID

LED Status Description

Transmitter Unit (Tx)			
Operation	Powered up	Fiber signal	Video signal
Indicator light status	Red	Red	Purple
Receiver Unit (Rx)			
Operation	Powered up	Fiber signal	Video signal
Indicator light status	Red	Purple	Purple

Package Contents

Item	Name	Unit	Qty
1	Transmitter (Tx)	pcs	1
2	Receiver (Rx)	pcs	1
3	DC 5V 3.5x1.35mm AC adapter	pcs	2
4	Hex stud	pcs	2

sales@robofiber.com