

# **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

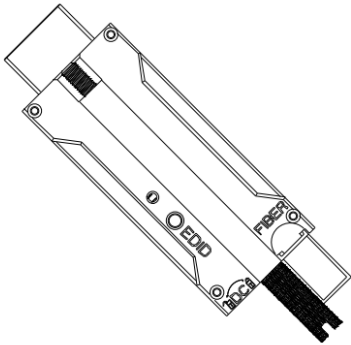
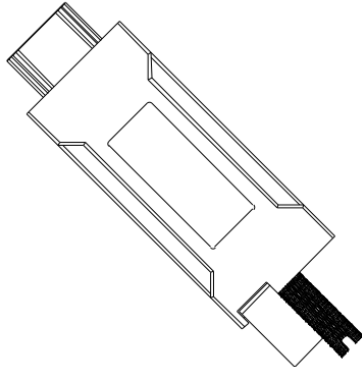
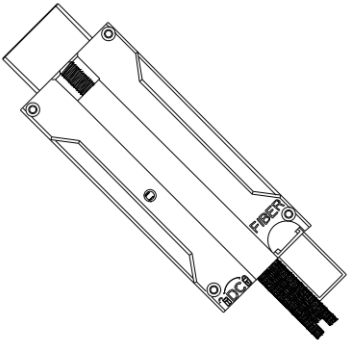
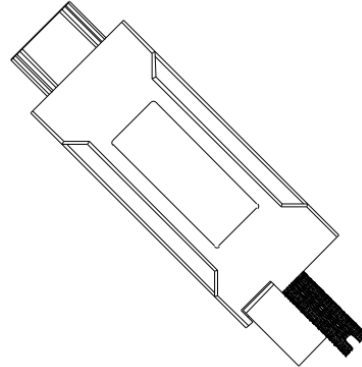
- Downward compatible with 4K\*2K\*60Hz resolution
- Built-in EDID mode and EDID manual learning mode with button (store/reset)
- Supports EDID memory storage function after power off
- Supports power via signal source HDMI port
- Fiber port self-closing dust covers
- Power plug lock protection
- HDMI 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

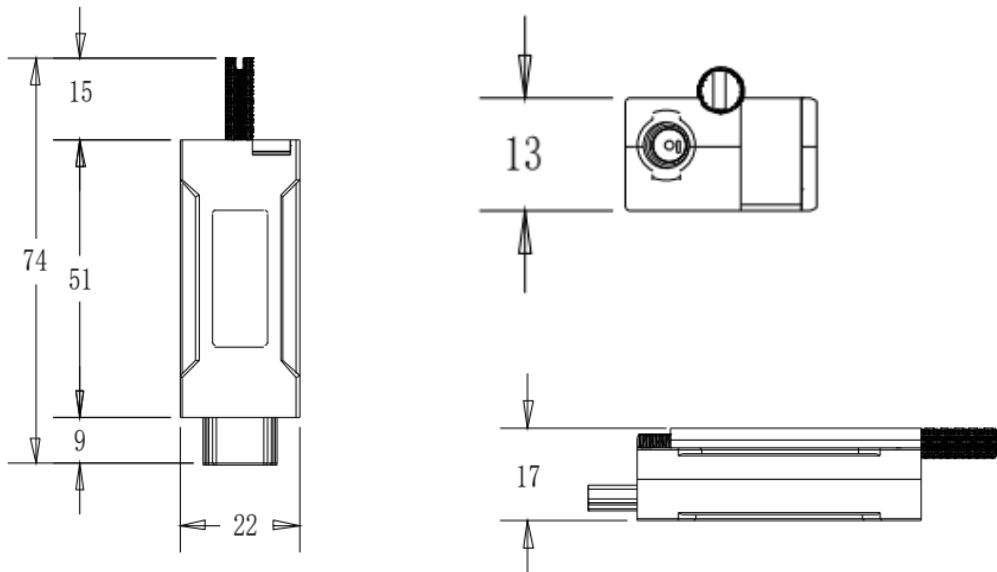
| Fiber interface          |                                                             |
|--------------------------|-------------------------------------------------------------|
| Wavelength               | 1310nm/1550nm (single strand fiber)                         |
| Data Rate                | 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<br>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                 |

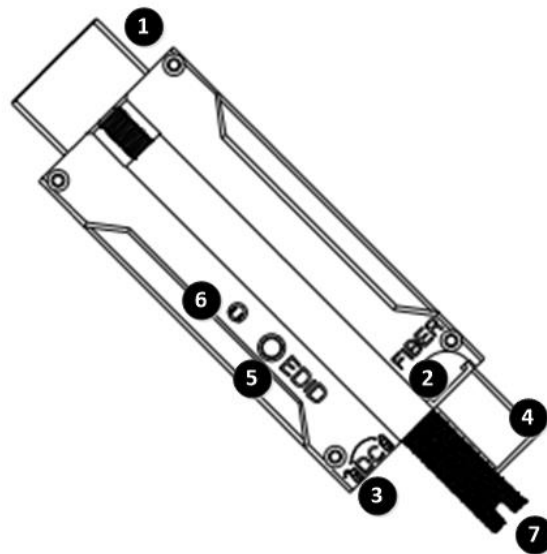
## Product Picture

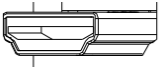
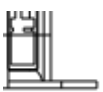
| Transmitter                                                                         |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Front panel                                                                         | Back panel                                                                           |
|   |   |
| Receiver                                                                            |                                                                                      |
| Front panel                                                                         | Back panel                                                                           |
|  |  |

## Dimensions (mm)



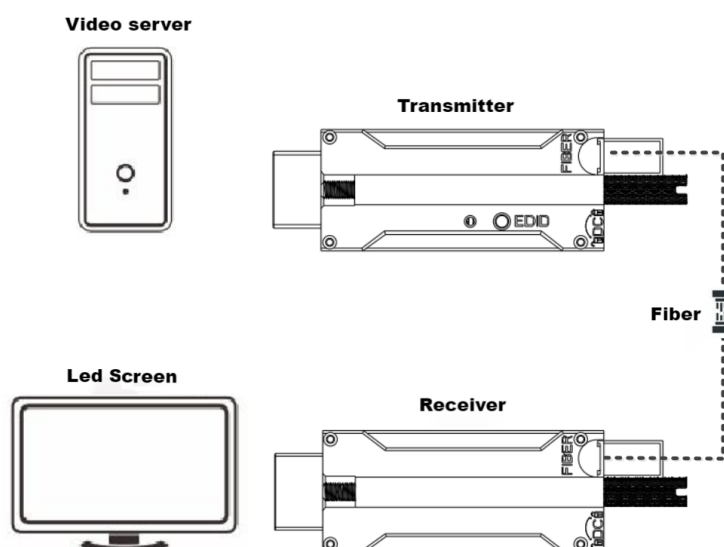
## Unit Description



| 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   |

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