

SIMPLIFIED

MFG

EXFBR



User Manual

VER 1.5

Thank you for purchasing the EXFBR

The Simplified MFG EXFBR is designed to provide years of reliable service. At Simplified MFG, we want the experience with this device to be the best possible and are committed to helping achieve that experience.

Surge protection device recommended

The EXFBR contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended to protect and extend the life of your equipment. A HDSURGE is highly recommended on cable and satellite boxes.

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1. Introduction

The EXFBR is a full featured fiber extender that can extend HDMI2.0b (18Gbps) 4K/Ultra HD signal over 33300 feet/10,000 meters over Single-mode fiber. The EXFBR supports HDMI2.0b 18Gbps 4K/2K @ 60Hz. YUV 4:4:4.

2. Features

- HDMI 2.0b (18Gbps), HDCP 2.2 and DVI 1.0 compliant
- Video resolutions up to 4K2K@50/60Hz (YUV444) up to 18Gbps
- Audio supports LPCM2/5.1/7.1 CH, Dolby Digital/Plus/EX, DTS, DTS-X, Dolby True HD, DTS-HD Master Audio, and Dolby Atmos
- Transmission up to 33000 feet/10,000 meters over single-mode fiber cable
- Supports HDR10/10+/DolbyVision™
- Control features include 2-Way IR, RS-232, and EDID management
- HDMI loop out on TX
- Audio insertion available on TX and extraction on RX

3. Package Contents

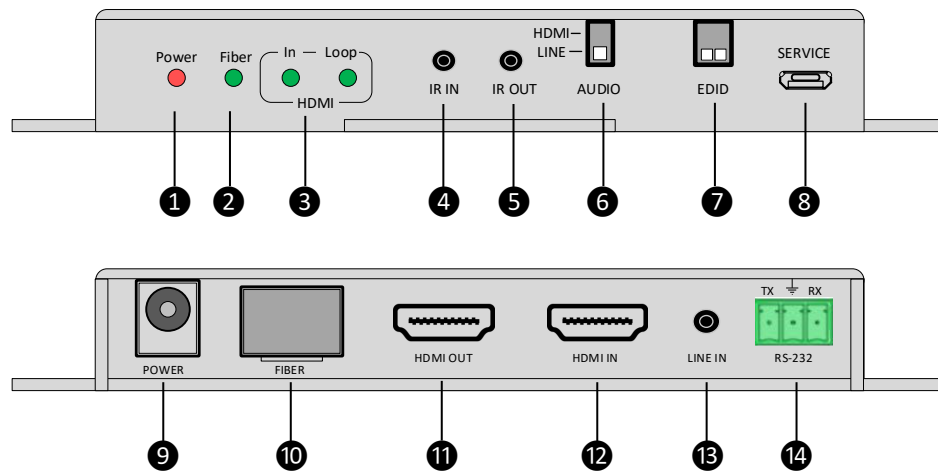
- 1 x HDMI over Optical Fiber Transmitter
- 1 x HDMI over Optical Fiber Receiver
- 1 x Fiber Transmitter Module
- 1 x Fiber Receiver Module
- 1 x Wideband IR Blaster
- 1 x Wideband IR Receivers
- 2 x 5V/1A Power Adaptors
- 2 x 3-Pin Phoenix Connectors
- 1 x User Manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Resolutions	Up to 4K2K@50/60Hz(YUV4:4:4),4K2K@30Hz,1080P@120Hz, and 1080P 3D@60Hz
Color Space	RGB, YCbCr 4:4:4/4:2:2, YUV 4:2:0
Color Depth	8-bit, 10-bit, 12-bit
HDMI Audio Formats	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Operation Range	Up to 33000 feet/10,000 meters over single-mode fiber cable
IR Frequency	20KHz - 60KHz
RS-232 Baud Rate	4800-115200bps
ESD Protection	Human body model — ±8kV (air-gap discharge) & ±4kV (contact discharge)
Connections	
Transmitter	<p>Inputs:</p> <ul style="list-style-type: none"> 1x HDMI Type-A female 1x 3.5mm mini-jack for stereo audio 1x 3.5mm mini-jack for IR input 1x 3-pin Phoenix connector for RS-232 1x Micro-USB Service Port <p>Outputs:</p> <ul style="list-style-type: none"> 1x HDMI Type-A female loop out 1x SFP module output port for fiber connection 1x 3.5mm mini-jack for IR output
Receiver	<p>Inputs:</p> <ul style="list-style-type: none"> 1x SFP module input port for fiber connection 1x 3.5mm mini-jack for IR input <p>Outputs:</p> <ul style="list-style-type: none"> 1x HDMI Type-A female 1x 3.5mm mini-jack for IR output 1x 3.5mm mini-jack for stereo audio 1x 3-pin Phoenix connector for RS-232
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	134mm/5.28" [W] x 68mm/2.68" [D] x 18mm/0.71" [H]
Weight	TX: 280g/9.88oz. RX: 278g/9.8oz.
Power Supply	Universal Voltage (100-240V AC) to 5V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	TX: 3.85W (Max) RX: 2.7W (Max)
Oper. Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

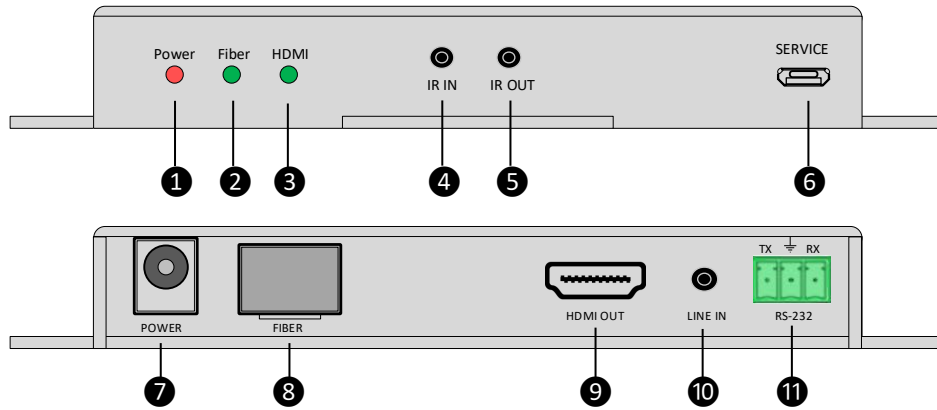
5. Operation Controls and Functions

5.1 Transmitter Panel



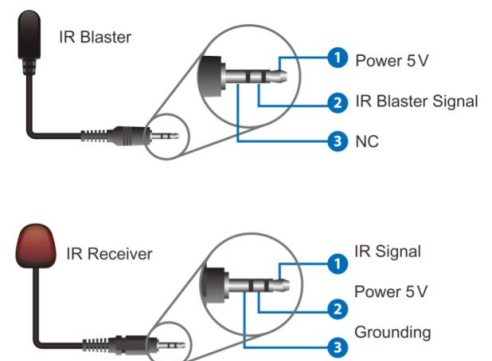
No.	Name	Function Description
1	Power LED	Indicates that the TX has a viable power connection
2	FIBER LED	Indicates a connection from TX to RX via Fiber
3	HDMI LED	IN: Indicates HDMI connection on HDMI IN port LOOP: Indicates HDMI connection on HDMI OUT port
4	IR IN	Connects to IR RX devices. This signal will be output at RX
5	IR OUT	Outputs IR from IR IN on RX
6	AUDIO Switch	Selects Audio from 3.5mm input or from HDMI. Note: the EXFBR can be used as an audio only device without an HDMI connection
7	EDID Switch	This selects the EDID shown to the source 11: Copies the Output of the RX 10: Copies the Loop Out of the TX 01: 4K 60Hz. Stereo 00: 1080p Stereo
8	SERVICE Port	Used to update firmware
9	Power 5VDC	Connects to 5VDC power supply
10	FIBER	Supplied SFP module (BL-32TG-10DC) is connected here. Fiber is connected to this module via a LC connector
11	HDMI OUT	This is essentially a built in splitter, however it can be used to extract audio with an extractor or manipulate EDID
12	HDMI IN	Connects to HDMI source to be transmitted to RX
13	LINE IN	Stereo audio in can be sent to the RX audio out port
14	RS-232	Allows RS-232 signals to be sent to/from RX/TX

5.2 Receiver Panel



No.	Name	Function Description
1	Power LED	Indicates that the TX has a viable power connection
2	FIBER LED	Indicates a connection from TX to RX via Fiber
3	HDMI LED	IN: Indicates HDMI connection on HDMI IN port LOOP: Indicates HDMI connection on HDMI OUT port
4	IR IN	Connects to IR RX devices. This signal will be output at RX
5	IR OUT	Outputs IR from IR IN on RX
6	AUDIO Switch	Selects Audio from 3.5mm input or from HDMI. Note: the EXFBR can be used as an audio only device without an HDMI connection
7	EDID Switch	This selects the EDID shown to the source 11: Copies the Output of the RX 10: Copies the Loop Out of the TX 01: 4K 60Hz. Stereo 00: 1080p Stereo
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5.3 IR Cable Pin Assignments

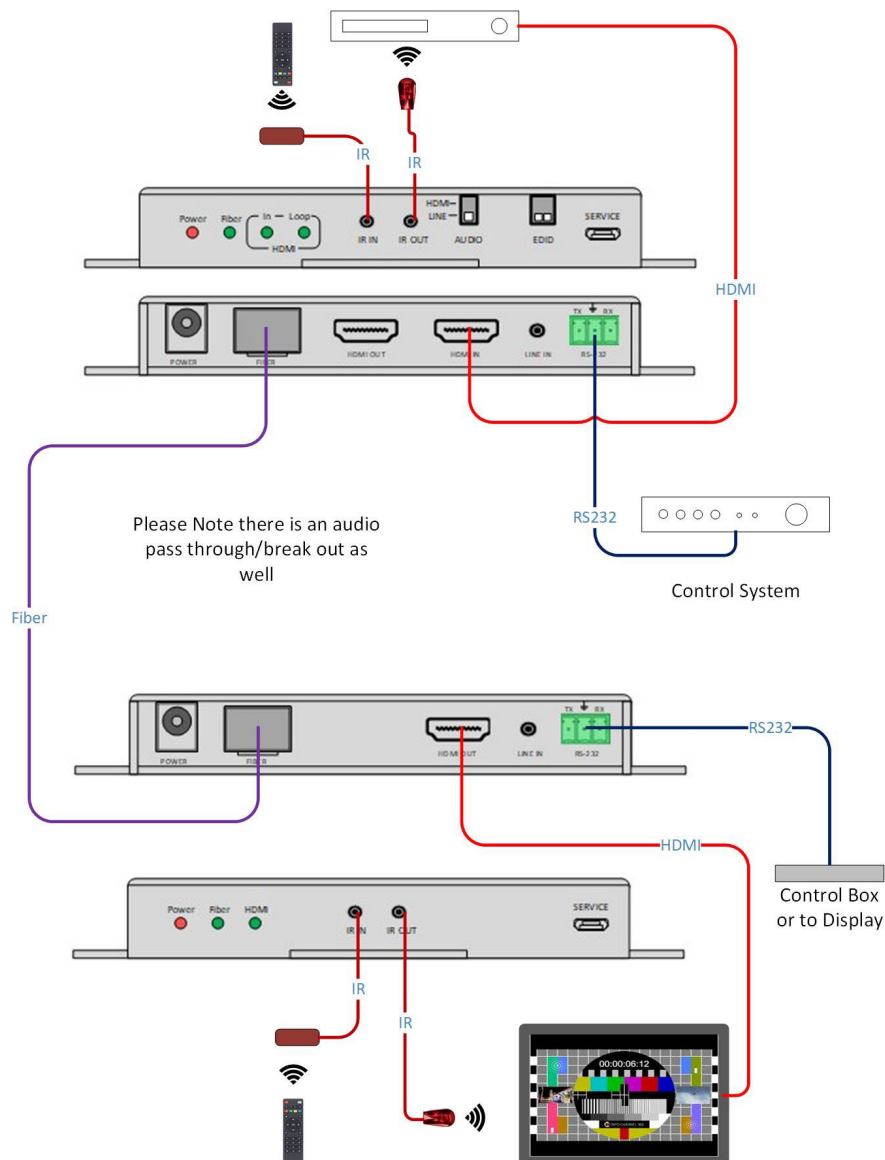


5.4 Optical module instructions



- 1 SFP-BL35T1-02DC is TX optical module.
- 2 SFP-BL531T-02DC is RX optical module.

6. Connection Diagram



7. Warranty

Should you feel that this product does not function adequately due to defects in materials or workmanship, we (referred to as "the warrantor") will, for the length of the period indicated below (starting from the original date of the purchase) either a) repair the product with new or refurbished parts. Or b) Replace the product with new or refurbished product. All Simplified MFG products are covered by a 3-year PARTS and LABOR warranty. During this period there will be no charge for unit repair, replacement of unit components or replacement of the product if deemed necessary. The decision to repair or replace is made by the warrantor. The purchaser must mail in the product during the warranty period. This limited warranty only covers the product purchased as new and is extended to the original purchaser only. It is non-transferrable to subsequent owners, even during the warranty period. A purchase receipt or other proof of purchase date is required for the limited warranty service.

8. Contact

Sales and Tech Support

P. 833-HDMI-411 (833-436-4411)

E. info@simplifiedmfg.com



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