B10-FBR-EXT-18G
## B10 Series Fiber to HDMI Extender

BINARY

Description

The B10-FBR-EXT-18G Fiber to HDMI Extender supports HDMI signal transmission of up to 18 Gbps without compression and with zero latency for the highest quality HDMI signals for all HDR formats, as well as support for the Audio Return Channel (ARC). The single optical fiber link allows up to 1000m links enabling 4K video the way it was meant to be seen.

Features

- Supports both HDMI 2.0x and HDMI 1.x signals

- Full, uncompressed 4K/60 HDR and 4K/60 4:4:4 video transmission

- Supports all HDR formats, including HDR10+, Dolby Vision, HLG, etc.

- Transmits superior HDMI video up to 1000m*

- Supports both HDCP 2.2 and HDCP 1.4 content protection

- All video transport, content protection and maintenance operation transmitted over a single fiber

- Integrated safety feature turns off lasers when an open fiber is detected

- Multicolor LED provides status indication and alerts

- Supports HDMI 18 Gbps interface cable from 0.3m to 3m

- Audio Return Channel (ARC) support included

- Bi-directional Infrared Channel (IR) support is included through the use of the IR-USB Power Cable accessory

    NOTE: IR-USB Power Cable Accessory sold separately

SOURCE — USB Power / HDMI — BINARY — Multimode Fiber up to 1000M — BINARY — USB Power / HDMI — DISPLAY
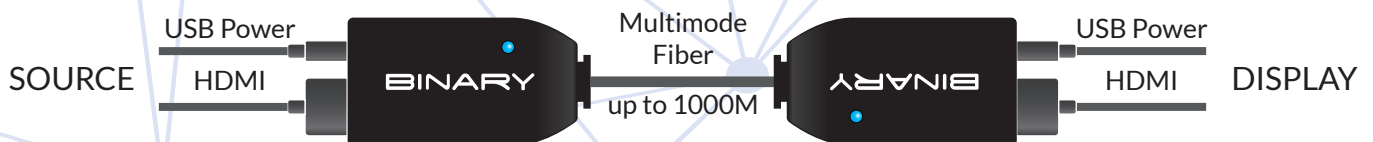
LED Status Indicators

Color	Link Status
Off	Extender has no power
Red	Extender detects an open fiber connection and has disabled the lasers
Yellow	Fiber detected but link initialization failed
White	Link functional with no HDCP video
Green	Link functional with HDCP 1.x video
Blue	Link functional with HDCP 2.x video
Purple	Fiber connection is open and lasers have been disabled. Bootloader connected for firmware upgrade.

HDMI Interface

- Transmitter and receiver automatically select between HDMI 2.0x and HDMI 1.x based on the video source
- Content protection is based on the auto-detected HDCP of the source for No HDCP, HDCP 1.4 and HDCP 2.2
- Support is provided for Consumer Electronics Control (CEC) over HDMI
- Support is provided for Audio Return Channel (ARC) over HDMI
- Single optical fiber link also handles all DDC and EDID
- Modules each require an HDMI Premium High Speed 18 Gbps Type A-Type A copper cable to interface with the source/sink. Cable lengths from 0.3m to 3m are guaranteed when using Binary™ Premium Certified High Speed HDMI Cables.

USB Interface

- Kit supplied with two USB Standard – A connector cables
- Provides power to the Receiver module from the video sink
- Provides power to the Transmitter module from the video source
  - This can be simultaneously connected to HDMI power without adverse effects
  - If the source can supply sufficient current from the HDMI 5V supply, USB power is not required
- Enables firmware upgrades to the local module via a USB 2.0 or 1.1 compatible Host
- If the optional IR-USB Power Cable is used, the cable provides a breakout for USB power and support for transmitting/receiving an infrared (IR) signal.

Fiber Interface

- The B10 Fiber to HDMI Extenders require an industry-standard SC-terminated simplex fiber cable and can use a range of fiber types, depending on the application requirements
- Recommended Fiber type: OM3 or above Multimode fiber (MMF), Simplex fiber cable

Electrical Operating Conditions

Parameter	Symbol	Min.	Max.	Unit
USB Supply Voltage	V_{dd}	4.75	5.25	V
Transmitter Supply Current	I_{TX}	0	500	mA
Receiver Supply Current	I_{RX}	0	250	mA
Operating Temperature Range	T_C	0	50	°C

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature Range	T_s	0	85	°C
Electrostatic DIscharge Contact (IEC)	ESD		8	kV
ESD Air Discharge (IEC)			15	kV
Supply Voltage	V_{dd}		5.5	V

Dimensions
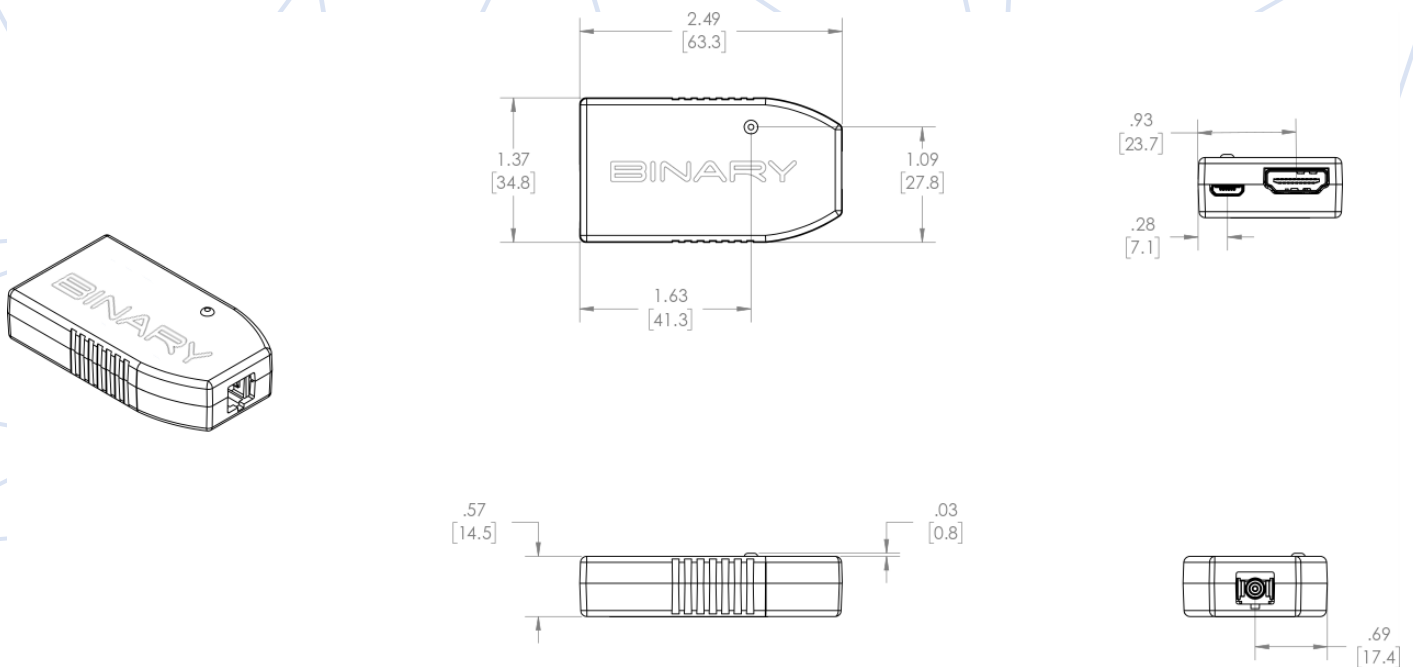
Compliance

- FCC Part 15 Class B for Susceptibility, Radiated and Conducted
- CE for Susceptibility, Radiated and Conducted
- Optical Fiber Communication System Class 1 Eye Safety per IEC 60825-1
- RoHS - Directive 2002/95/EC

Contacting Technical Support

Phone: (866) 838-5052

(704) 909-5229

Email: TechSupport@SnapAV.com

BINARY®