



4K Ultra HD Extender for HDMI over One Fiber w/ RS-232 and 2-way IR

HDMI[®] 2.0

4K ULTRA HD
60Hz, 4:2:0



HDCP



Extend HDMI with 4K Ultra HD support, RS-232, and Bi-Directional IR over one fiber optic cable up to 3300 feet (1000 meters)

The Gefen 4K Ultra HD Extender for HDMI over One Fiber is a complete solution, allowing HDMI, RS-232 and Bi-Directional IR to be extended up to 3300 feet (1000 meters) at 4K resolution and up to 6600 feet (2000 meters) at 1080p60 Full HD. This product works with any HDMI source and supports resolutions up to 4K Ultra HD (3840 x 2160 @ 60Hz 4:2:0) and 4K Cinema (DCI) (4096 x 2160 @ 24 or 30Hz 4:4:4). This HDCP-compliant extender is the ideal for installations where the HDMI source and display are located apart from each other in an interference-prone operating environment. A single strand of SC-terminated multi-mode fiber optic cable is used for extension, providing excellent protection from electromagnetic interference (EMI), and preserving signal integrity. The Automatic Virtual EDID feature allows automatic copying of the Extended Display Identification Data (EDID) to the sender unit for continuous availability to the source. This allows rapid recovery of picture upon display power up or when used in conjunction with Switchers and Matrixes. Compared to similar copper-based solutions, optical signal transmission provides inherent galvanic isolation and excellent immunity to electromagnetic interference. These Sender and Receiver modules also feature metal enclosures, providing further protection against radiated noise. Locking HDMI and power connectors ensure trouble-free installation and long-lasting, reliable operation.

How It Works

The Sender unit is placed near the source and the Receiver unit near the Display. Connect the supplied locking HDMI cable between the Sender unit and the source. Connect an HDMI cable between the Receiver unit and the display. Connect the included DB-9 cable from an RS-232 automation device to the Sender unit. Connect another male-to-female DB-9 cable between the Receiver unit and an RS-232-controlled device on the Receiver side (such as the display). To send an IR control signal from the viewing location to the source unit, connect the IR output from an automation control device or the included Gefen EXT-RMT-EXTIRN IR Extender to the IR In/Ext port on the Receiver, and connect an IR Emitter to the IR Out on the Sender unit to IR Sensor window of the source. To control devices at the viewing location (such as the display) from the source side, use the IR In/Ext port on the Sender side and the IR Out connection on the Receiver side. Connect one strand of multi-mode fiber optic cable, with SC connectors, between the Sender and the Receiver units. Connect the locking power supplies to the Sender and the Receiver units and plug them into electrical outlets. Power up all associated equipment.

Features*

- Extends HDMI, RS-232, and Bi-Directional IR over a single strand fiber optic cable
- Extends 4K Ultra HD (3840 x 2160 @ 60Hz, 4:2:0, or 30Hz, 4:4:4) up to:
 - 3300 feet (1000 meters) over 50/125µm OM3e/OM4 fiber
 - 500 feet (150 meters) over 50/125µm (OM3) fiber
 - 165 feet (50 meters) over 62.5/125µm (OM1) fiber
- Extends 4K Cinema (DCI) (4096 x 2160 @ 24 or 30Hz, 4:4:4) up to:
 - 3300 feet (1000 meters) over 50/125µm OM3e/OM4 fiber
 - 500 feet (150 meters) over 50/125µm (OM3) fiber
 - 165 feet (50 meters) over 62.5/125µm (OM1) fiber
- Extends 1080p Full HD (1920 x 1080 @ 60Hz) up to:
 - 6600 feet (2000 meters) over 50/125µm OM3e/OM4 fiber
 - 1000 feet (300 meters) over 50/125µm (OM3) fiber
 - 330 feet (100 meters) over 62.5/125µm (OM1) fiber
- HDMI Features Supported:
 - HDMI 2.0
 - HDCP 1.4
 - 12-bit Deep Color
 - LPCM 7.1 audio, Dolby® TrueHD, and DTS-HD Master Audio™
 - 3DTV pass-through
 - Lip Sync pass-through
- RS-232 extension
- 2-way IR extension
- Auto Virtual EDID
- Automatic calibration based on the type and length of fiber optic cable
- Full duplex RS-232 up to 115200 baud
- Firmware upgradable via USB
- Inherently immune to electromagnetic interference (EMI)
- Locking power supplies
- Surface-mountable

Specifications*

- Maximum Pixel Clock: 300 MHz
- HDMI Connectors (Sender/Receiver): (1) HDMI Type A, 19-pin, female, locking
- RS-232 Connector (Sender): (1) DB-9, female
- RS-232 Connector (Receiver): (1) DB-9, male
- USB Connectors (Sender/Receiver): (1) USB Mini-B, female
- IR Out Connector (Sender/Receiver): (1) 3.5mm mini-mono jack, female
- IR In/Ext Connector (Sender/Receiver): (1) 3.5mm mini-stereo jack, female
- IR Extender type: EXT-RMT-EXTIRN
- Link Connectors (Sender/Receiver): (1) SC type
- Link Indicators (Sender/Receiver): (1) LED, green/red
- Power Indicators (Sender/Receiver): (1) LED, blue/red
- Bi-Directional IR Carrier Pass-through Frequency Range: 30 kHz to 60 kHz
- Power Supply (Sender/Receiver): 5V DC
- Power Consumption (Sender/Receiver): 2.5W each maximum
- Operating Temperature: +32 to +113 °F (0 to +45 °C)
- Operating Humidity: 5% to 90% RH, non-condensing
- Storage Temperature: -4 to +185 °F (-20 to +85 °C)
- Storage Humidity: 0% to 95% RH, non-condensing
- MTBF: 50000 hours
- Dimensions (W x H x D, Sender/Receiver): 4.3" x 1" x 3.4" (110mm x 26mm x 86mm)
- Net Weight (Sender/Receiver): 0.4 lbs (0.2 kg) each
- Shipping Weight: 3.0 lbs. (1.4 kg)

