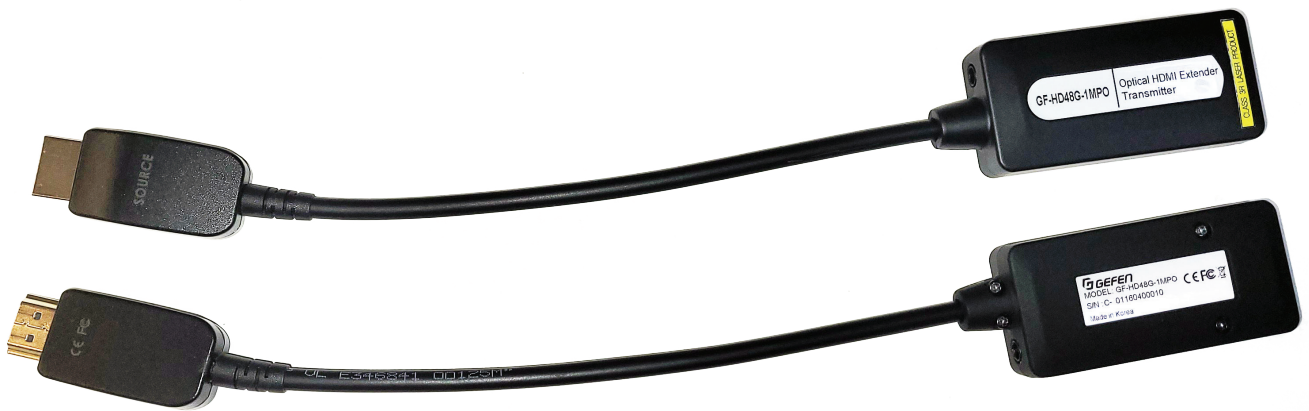


Optical HDMI 2.1 Extender over MPO Fiber Cable
GF-HD48G-1MPO



User Guide

Table of Contents

Important Safety Instructions	3
Introduction	4
Features	4
Package Contents	4
Connectors & Indicators	5
Connection Instructions	5
8-core pin assignment	5
12-core pin assignment	5
Sample Wiring Diagram	6
Specifications	7
Supported Formats	7
Connectors & Indicators	7
Operational	7
Warranty and Return Policy	8
Electronics	8
Returns for Credit	8

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Batteries that may be included with this product and/or accessories should never be exposed to open flame or excessive heat. Always dispose of used batteries according to the instructions.

Introduction

Congratulations on your purchase of the Gefen® HDMI 2.1 Extender over one MPO Fiber Cable. This product operates with 8-core (or 12-core) MPO/MTP, OM3 50/125 μm Multi-mode fiber cable. Your complete satisfaction is very important to us.

The Gefen GF-HD48G-1MPO is a compact and high-performance solution for extending uncompressed, full-bandwidth HDMI 2.1 audio/video with HDR (standard 10-bit and Dolby Vision™), up to 100m (330 feet), over a single 8-core (or 12-core) MPO/MTP, OM3 50/125 μm Multi-mode fiber cable for optimized operation.

It supports 48 Gbps of bandwidth, the highest specified under the HDMI 2.1 standard. Full bandwidth support allows the Gefen extender to accommodate resolutions up to up to 8K (7680x4320 @ 60 Hz), 4K (3840x2160 @ 120 Hz) along with HDR (High Dynamic Range). HDCP 2.3 and the legacy HDCP 2.2/1.4 are both supported.

The GF-HD48G-1MPO also supports 1080p Full HD, WUXGA (1920 x 1200), 3DTV, and Deep Color (up to 1080p resolution). Highest performance multichannel digital audio including 7.1 channels of LPCM and HBR (High Bit Rate) digital audio formats, such as Dolby Atmos®, Dolby® TrueHD, DTS:X™, and DTS-HD Master Audio™ are passed through to the HDMI outputs.

There is full electrical isolation between the Sender and the Receiver, meeting the stringent safety and EMC requirements for critical applications (Galvanic Isolator).

The Sender and Receiver are plug-and-play, and work without any set-up.

Compact enclosures are easy to install and can be hidden away. Their sturdy metal en-closures help provide further immunity against Electro-Magnetic Interference (EMI) and radiated noise (RFI).

Applications include medical imaging, military and industrial command and control rooms, flight simulators, digital signage, gaming, and wherever 8K full-bandwidth uncompressed video or end-to-end electrical isolation are essential.

Features

- High Speed and long-distance transmission by optical fiber
- Compatible with HDMI standard v2.1
- Supports OM3 (or OM4) fiber with 8-core MPO/MTP type connector
- I2C data and Hot Plug Detection signal is transmitted by optical fiber
- CEC control, EDID, and HDCP 2.3 premium content protection including legacy HDCP standards
- Supports VRR (Variable Refresh Rate)
- Support for static & dynamic HDR allowing for extended dynamic range and wide color gamut support
- **Supporting Resolution & Distance:** 8K/4K UHD (up to 7680x4320) up to 100 meters (330ft)
- **Connector/Fiber:** HDMI 19 Pin (male) / MPO/MTP
- Audio support up to 8 Channel PCM, DTS Master, DTS:X, Dolby TrueHD, Dolby Atmos

Package Contents

The following items are shipped with the HDMI 2.1 Optical Fiber Extender. If any of these items are not present in the box when you first open it, immediately contact your dealer or Gefen.

- 2pc x 5V/2A DC Power Supply (Interchangeable connectors: US, UK, AU, EU)
- Optical HDMI Fiber Extender Transmitter
- Optical HDMI Fiber Extender Receiver
- Quick-Start Guide

Connectors & Indicators



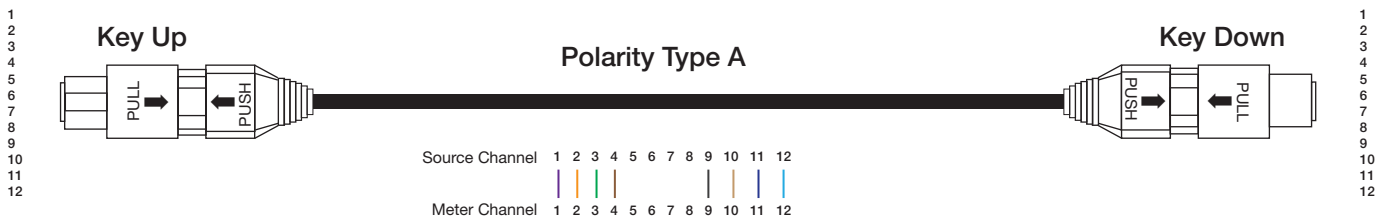
Connection Instructions

1. Connect the transmitter module to the HDMI source device.
 2. Connect the receiver module to the display.
 3. Connect the MPO/MTP (Type A) optical cable (8 ch or 12 ch) from transmitter to the receiver.
 4. Connect the included +5V DC power supply into the transmitter.
- Note:** Step 4 only applies if the source doesn't supply enough power.
5. Connect the included +5V DC power supply into the receiver.
 6. BLUE LED indicator on the modules will be light up after all connections are completed.

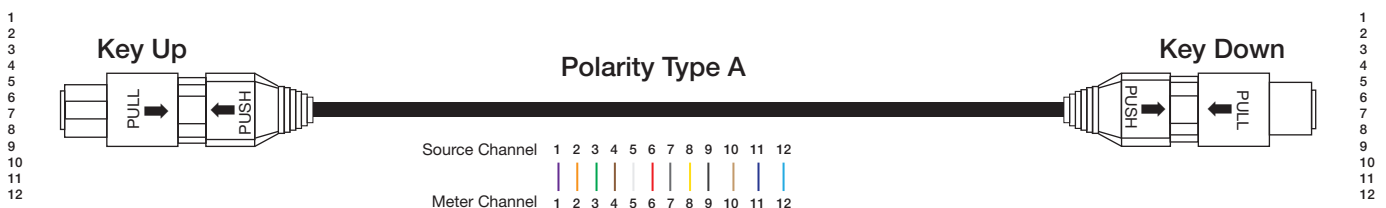
Gefen recommends using 8-core (or 12-core) MPO/MTP, OM3, 50/125 μm Multi-mode fiber cable for optimized operation. (see illustrations below).

NOTE: Please check the pin connection before installing.

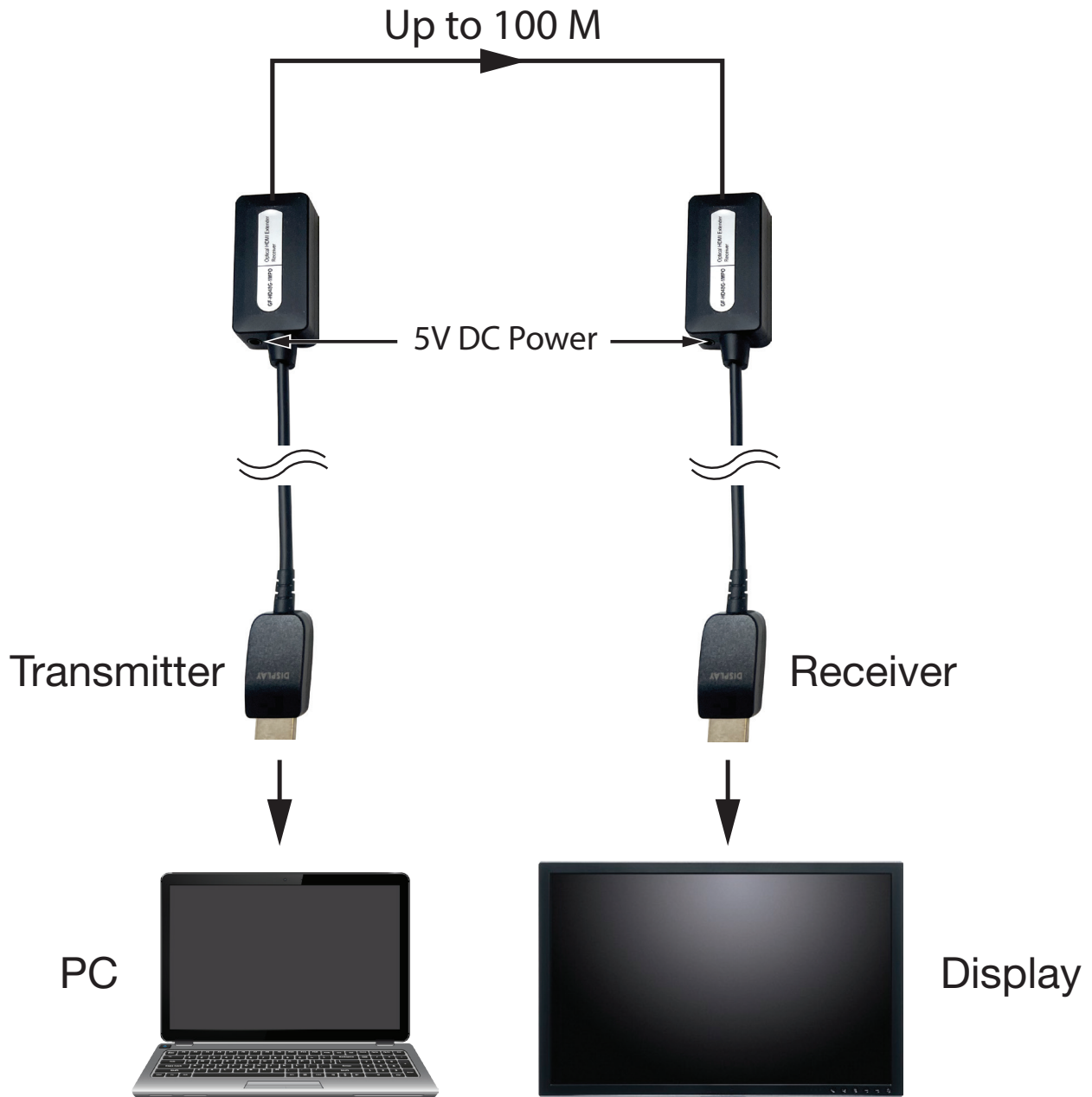
8-core pin assignment



12-core pin assignment



Sample Wiring Diagram



NOTE: The Receiver Module must be connected to the included power supply (5V DC) for proper operation. Connect the power supply to the Transmitter Module if the source doesn't supply enough power.

Specifications

Supported Formats

Video	<ul style="list-style-type: none">➤ 8K (7680x4320 @ 60 Hz)➤ 4K (3840x2160 @ 120 Hz)➤ 4K Cinema-DCI (4096 x 2160 @ 60 Hz, 4:4:4)➤ 4K Ultra HD (3860 x 2160 @ 60 Hz, 4:4:4) w/ HDR-10 and Dolby Vision™➤ 1080p Full HD (1920 x 1080 to 60 Hz, 4:4:4, 12 bit)➤ WUXGA (1920 x 1200 to 60 Hz)
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Connectors & Indicators

Input Connector (Sender)	1 x HDMI Type A 19-pin, female
Output Connector (Receiver)	1 x HDMI Type A 19-pin, female
Link Connector (Sender / Receiver)	1 x MPO/MTP-type, female
Power Connector (Sender / Receiver)	1 x DC jack, 1.3mm
Link Indicator (Sender / Receiver)	1 x LED, Blue

Operational

TMDS Clock	5940 MHz
Video Bandwidth	48 Gbps
Optical Wavelength	850 nm
Optical Output Power	5 dBm
Receiver Sensitivity	-15dBm
Power Consumption	0.75W (typ) ~ 0.95W (typ)
Operating Temperature	+32 to +122 °F (0 to +50 °C)
Operating Humidity	10% to 80% RH, non-condensing
Storage Temperature	-4 to +158 °F (-20 to +70 °C)
Storage Humidity (RH)	10% to 85% RH, non-condensing

Physical

Dimensions (W x H x D) (Sender / Receiver), not including connectors	300 x 16 x 31 (mm)
Net Weight (Sender / Receiver)	3.7 oz. 104, each
Shipping Weight	1.4lbs 630g

NOTE: Features and specifications are subject to change without notice. All trademarks and registered trademarks are properties of their respective owners.

Warranty and Return Policy

Nice North America warrants the equipment it manufactures to be free from defects in material and workmanship. If Gefen equipment fails because of such defects and Nice North America is notified within the specified warranty period* from the documented** date of purchase, Nice North America will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed. Warranty period begins on the date of purchase by the original end-purchaser, as indicated on the proof of purchase document**. This Limited Warranty extends to the original end-user purchaser of the product and is not transferable to any subsequent purchaser(s) or owner(s). Customers outside the continental United States of America are responsible for shipping charges to and from Nice North America. * Warranty period: Passive Copper Cables without any electronic circuitry: 30 days. Cables must be in their original condition.

Electronics

2 Years unless specified otherwise.

3 years if specifically noted as such on the store.niceforyou.net portal or gefen.com website product page. Valid only for documented** purchases made on or after March 29, 2017.

** Proof of purchase must be a receipt or written document, deemed acceptable by Nice North America. Requesting an RMA. The RMA number must be obtained prior to returning any product for repair or replacement. Please contact us at support@gefen.com or 1.800.472.5555 for further instruction.

Returns for Credit

- All returns must reference an RMA number.
- Packages returned without an RMA number may be refused.
- Return packages must be properly packaged for return shipment.
- Any damages resulting from improper packaging are subject to a restocking fee.
- To obtain a full refund of the purchase price, returns must be requested within 30 days of the initial purchase date from your Gefen authorized resellers/distributors.
- All returns requested after 30 days, but no later than 60 days of purchase date are subject to a 15% restocking fee.
- Nice North America reserves the right to inspect the product condition and may apply an additional 5% restocking fee for any excessive damage or wear.
- To receive a credit on copper cables, the cables must be unopened.

All returns must include every component originally shipped with the products (power supplies, remotes, cables, etc.). The cost of any missing accessory will be deducted from the original purchase amount.



Technical Support:
1-800-472-5555

Technical Support Hours:
7:00 AM to 4:00 PM
Monday through Friday, Pacific Time

GEFEN
c/o Customer Service
5919 Sea Otter PI, Suite 100,
Carlsbad, CA 92010 USA
gefen.com



This product uses UL listed power supplies.

10033429 Rev-A



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Gefen and Nice North America LLC reserve the right to make changes in the hardware, packaging and any accompanying documentation without prior notice.