One (1) Fiber Detachable HDMI 2.0 Extender With Diagnosis features,

User Manual
HDX-1F20-TR

Doc No. : OE-HD251124/ V1.1

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Welcome!

Congratulations on your purchase of the one (1) fiber HDMI extender with Diagnosis feature, HDX-1F20-TR. This manual contains information that will assist you in installing and operating the product.

Product Description

HDX-1F20-TR is a high-performance HDMI fiber optical extender, transmitting 4K (4096x2160) at 60Hz up to 300m (984 feet) over one (1) LC multi-mode fiber (OM3). It offers 3-meter extension for both transmitter and receiver sides, enhancing installation flexibility. It meets HDMI 2.0 standards and transmits uncompressed and transparent video signal.

When connecting with BR-600, the built-in Diagnosis function allows remote monitoring and management for ensuring real-time error detection and reduced downtime. Supporting both TX/RX modules and up to 8 diagnosis extenders with one-step operation. External DC 5V/1A power and USB-C power input are also available.

Combining robust performance, advanced diagnostics, and versatile extension options, the HDX-1F20-TR is an ideal solution for demanding AV installations.

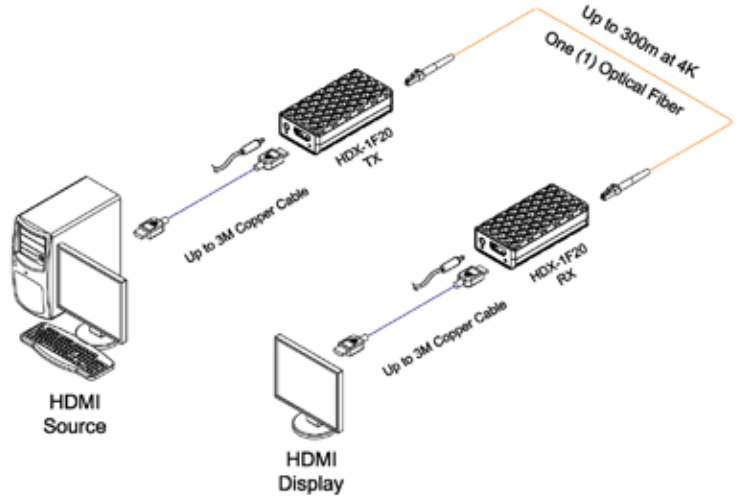

Figure 1 – Overall Connection of HDX-1F20-TR

System Requirements for Setup

- ☐ **Hardware requirements**
  - ■ You must have a HDMI source and display. It should support the maximum graphic resolution feature of displays to be connected.
  - ■ No special requirements of memory size, CPU speed and chipsets, if you've already properly installed your HDMI systems or graphic cards.
  - ■ Proper initial trial of the entire platform with its application using a short length copper cable is recommended prior to the installation with the optical link.

- ☐ **Software requirements**
  - ■ No special restrictions, if you've already properly installed your HDMI systems.
  - ■ FW upgradable via USB Type-C: contact techsupp@opticis.com to download the most recent FW version.

- ☐ **Power Technical Advisory**
  - ■ Enclosed Power Adaptors should supply power for both Transmitter and Receiver.

- ☐ **Connection Advisory**
  - ■ It is highly recommended that HDMI source is connected to HDMI display output via HDX-1F20-TR without any connection with incompatible distributor, switcher and selector.

The Shipping Group of HDX-1F20-TR;

- ☐ One (1) Transmitter (TX) and One (1) Receiver (RX)
- ☐ Two (2) 2m Male to Male HDMI copper cable
- ☐ Two (2) 5V 1A power adapter
- ☐ User Manual

※ In shipping group, two 2m copper cables are included. Contact the regional sales representative or tosales@opticis.com for using 3m copper cable.

Installation

Important: Please keep the installation procedure below. Failure in operation may result if the start-up sequence is not correctly followed.

Step 1
Carefully unpack the contents in the shipping group.

Step 2

Power on the HDMI source and display. The external power is recommended for the stable power supply for both the transmitter and receiver.

Step 3
The Power LED will be turned on and the Status LED will blink three (3) times. Once the full connection is established, the Status LED will blink blue regularly every 0.5 seconds.

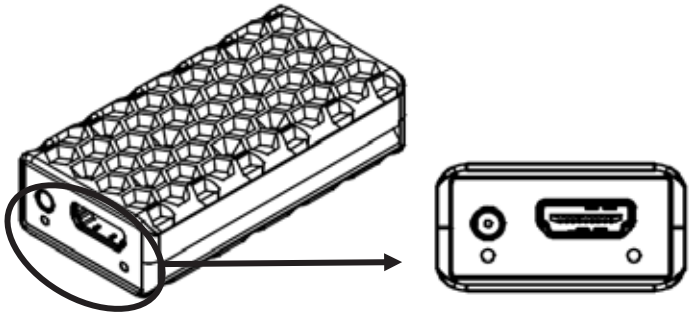

Figure 2 – Position of the LED

Step 4
Connect one (1) LC optical fiber between the transmitter and the receiver. Ensure the connectors are fully engaged and then, the blue LED will begin to blink regularly every 0.5 seconds.

Step 5
Connect the transmitter and the receiver to the source and the display respectively via 2m copper cable provided in the shipping group.

Note: If the connectors are fully engaged, the bottom LED will turn on.

Step 6
If the system does not work properly, go to the page 1-5 for trouble shooting.

Note1: Please DO NOT look directly into the LC receptacles of the Transmitter, while it is powered on. Although this product is regulated strictly enough to operate under the LASER Class I, classified by CDRH/FDA for eye safety, it is not recommended to do so.

Note2: The maximum extension length by OM3 fiber is 300 meters (984ft.).

Note3: It is recommended NOT to use any intermediate cable or adapter that is not provided in the shipping group between the modules to avoid undesirable performance degradation.

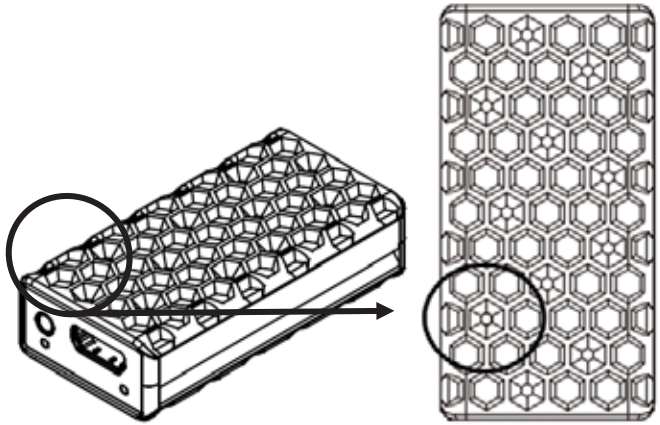

Figure 3 – Potision of the additional status LED

- **LED Indicator**

	BLUE	GREEN
Status LED	**Blinks (0.5s interval, normal connection)**	**Blinks (0.24s: Fiber disconnected 0.5s: Cable disconnected)**
Power LED	**Fixed in Blue Color**	

Troubleshooting

The display shows black screen.

- ☐ Ensure that all the plugs and jacks used by DC power supplies are firmly connected. Ensure that the LED is ON.
- ☐ Ensure that the HDMI cables are firmly plugged into the HDMI source and display.
- ☐ Ensure that the transmitter and receiver modules are plugged correctly to the source and display, respectively.
- ☐ Check if the HDMI source and display are powered on and properly booted.
- ☐ Reset the system by de-plugging and re-plugging the transmitter or receiver, or by de-plugging and re-plugging the DC power adapters that are plugged to the transmitter and receiver module.
- ☐ Re-boot up the system while connecting the module.

Screen is distorted or displays noises.

- ☐ Check if the graphic resolution is properly set. Go to the display Properties and tap the settings. Ensure that the resolution sets less than 4K (4096x2160) at 60Hz refresh ratio.
- ☐ Reset the system.
- ☐ Power down, disconnect and reconnect the optical system cable or DC power adaptors, and power up again.

Maintenance

No special maintenance is required for the optical system cables and power supplies. Ensure that the cables and power modules are stored or used in a benign environment free from the liquid or dirt contamination.
There are no user serviceable parts. Refer all service and repair issues to Opticis or its authorized distributor.

Technical Support and Service

For commercial or general product support, contact your reseller. For technical service, contact Opticis by email techsupp@opticis.com or visit its website at www.opticis.com

Product Specifications

- ☐ **Extends** up to **4K (4096x2160) at 60Hz.**
- ☐ **Supports HDMI 2.0 standards** for seamless high-definition audio and video
- ☐ **Transmits** data up to **300 meters (984 feet)** over **one (1) LC multi-mode fiber (OM3)**
- ☐ **Extra copper extension** available up to **3m** on each side (TX/RX)
- ☐ **Supports Audio Return Channel (ARC)**
- ☐ **Data security** with negligible **EMI emission**
- ☐ **Diagnosis Link Manager (GUI program)** will be provided to manage **firmware upgrade** and **diagnosis feature**
- ☐ **BR-600 Power Rack compatible — supports TX/RX and up to 8 diagnosis extenders with one-step operation.**
- ☐ **External DC power 5V/1A and USB-C power available**
- ☐ **Diagnosis features** able to check the **status of product** and **manage them from a long distance**
- ☐ **Firmware upgradable** via USB-C Type port
- ☐ **Mechanical specifications of transmitter and receiver**
  - ■ **Dimensions** (WDH)**:** 39mm x 76mm x 20mm
- ☐ **Environmental Specifications**
  - ■ Operating temperature: 0°C to 50°C
  - ■ Storage temperature: -30°C to 70°C
  - ■ Humidity: 10% to 85%

AC/DC Power Adapter

- ☐ **Power Input:** AC 100-240V, 50/60Hz.
- ☐ **Power Output:** +5 V, 1A SMPS DC-power Adapter

Warranty Information

1 (One) Year Warranty

Opticis warrants this optical HDMI module to be free from defects in workmans hip and materials, under normal use and service, for a period of one (1) year fr om the date of purchase from Opticis or its authorized resellers.

If a product does not work as warranted during the applicable warranty period, Opticis shall, at its option and expense, repair the defective product or part, deli ver to customer an equivalent product or part to replace the defective item, or r efund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Opticis.

Replacement products may be new or reconditioned.

Any replaced or repaired product or part has a ninety (90) day warranty or the r eminder of the initial warranty period, whichever is longer.

Opticis shall not be responsible for any software, firmware, information, or mem ory data of customer contained in, stored on, or integrated with any products re turned to Opticis for repair under warranty or not.

Warranty Limitation and Exclusion

Opticis shall have no further obligation under the foregoing limited warranty if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or service other than by Opticis or its authorized agents, causes other than from ordinary use or failure to properly use the product in the application for which said product is intended.

Dispose of Old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead, it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Certifications

CE, FCC, Laser safety Class 1 laser product (IEC 60825-1)

Caution – Use of controls or adjustments or performances of procedures other than those specified herein may result in hazardous radiation exposure.

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