DisplayPort 1.4 One (1) Fiber Optical Extender with Smart Aux feature
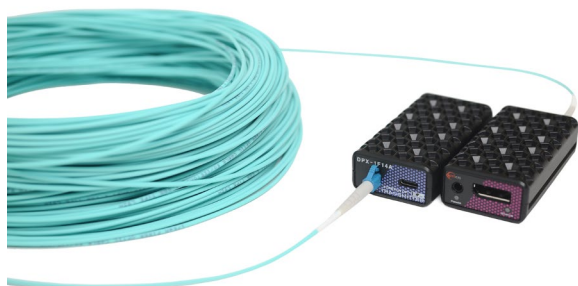
User Manual
DPX-1F14A-TR

Doc No. : OE-DP240827 / V1.0

Manual Contents
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Pictorials

Welcome!

Congratulations on your purchase of the one (1) fiber DisplayPort extender with Smart Aux feature, DPX-1F14A-TR. This manual contains information that will assist you in installing and operating the product.

Product Description

The Shipping Group

- ☐ **DPX-1F14A-TR, DisplayPort 1.4 Optical Extender with Smart Aux feature**
  One (1) Transmitter (TX) and One (1) Receiver (RX)
- ☐ **Two (2) 3m Male to Male DisplayPort copper cables**
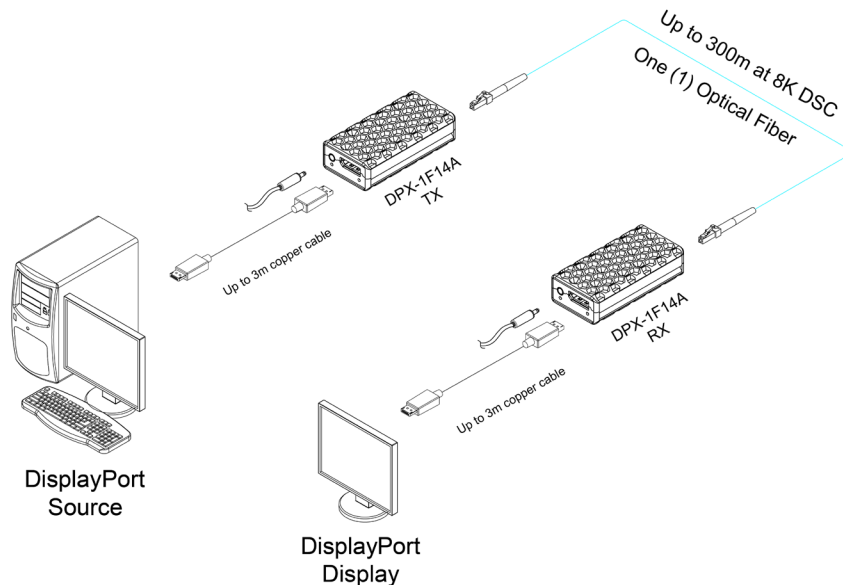- ☐ **Two (2) 5V 1A power adapters**
- ☐ **User Manual**

Figure 1 – Overall Connection of DPX-1F14A-TR

System Requirements for Setup

- ☐ **Hardware requirements**
  - ▪ You must have a DisplayPort source (Media player, PC or Laptop). It should support the maximum graphic resolution feature of Display (TV, Display or Projector) to be connected.
  - ▪ No special requirements of memory size, CPU speed and chipsets, if you've already properly installed your DisplayPort 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 DisplayPort systems.
  - ▪ FW upgradable via USB Type C port: contact techsupp@opticis.com to the download of the latest FW version.

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

- ☐ **Connection Advisory**
  - ▪ It is highly recommended that DisplayPort source is connected to DisplayPort display output via DPX-1F14A-TR without any connection with incompatible distributor, switcher and selector.

※ **In shipping group, 3m 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 DisplayPort source and display. Connect the included power adapter to the transmitter and receiver units / DPX-1F14A-TX and DPX-1F14A-RX units.

Step 3
The Power LED will be turned on and the Status LED will blink three (3) times. Then the Status LED will blink again when the whole connection is made. If the Status LED blinks in Green, it means that the display is not connected properly.
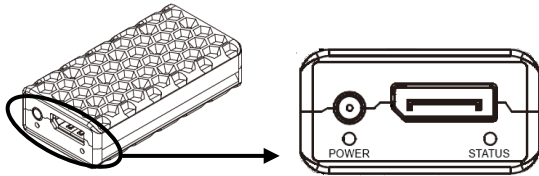

Figure 2 – Position of the LED

Step 4
Connect one (1) LC multi-mode fiber between the transmitter and the receiver. Ensure the connectors are fully engaged and then, the Status LED will begin to blink regularly.

Step 5
Connect the transmitter and the receiver to the source and the display respectively with 3m copper cable provided in the shipping group.

Note: If the connectors are fully engaged, the Status LED will blink in blue.

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, it is not recommended to do so.

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

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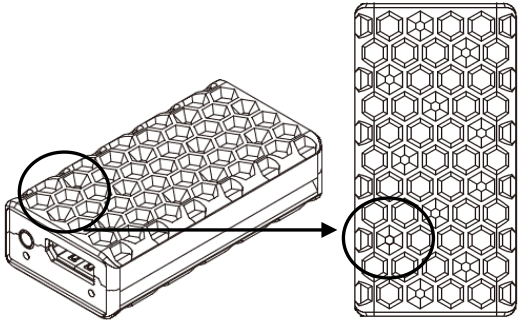

Figure 3 – Potision of the additional status LED

Power and Status LED Indications

LED	LED color and status		Description
Power	Blue	On	Indicates that power is on
	Off		Indicates that power is off
Status	Green	Flashing fast	Indicates that ther power is on but no fiber connection
	Green	Flashing slowly	Indicates that fiber is connected but no video signal
	Blue	Flashing	Indicates that video signal is active and all connections are established
	Off		Indicates that power is off

Troubleshooting

The display shows black screen.

- Ensure that all the plugs and jacks used by DC power supplies are firmly connected. Ensure that the status LEDs of Tx and Rx are ON.
- Ensure that the DisplayPort cables are firmly plugged into the DisplayPort source and display.
- Ensure that the transmitter and receiver modules are plugged correctly to the source and display, respectively.
- Check if the DisplayPort 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.

Decrease in resolution after setting EDID via Smart Aux feature

Once the EDID is set via Smart Aux feature, the resolution follows the set EDID even after the rebooting the PC. If an event occurs, such as a resolution reduction or layout change, it may be due to the source settings. Check the settings on your source/graphic card.

Screen is distorted or displays noises.

- Check if resolution is set correctly in source/graphic card. Go to the display properties and tap Settings. Ensure that the resolution is set to less than WHUXGA (7680x4320) at 60Hz or 4K(3840x2160) at 144Hz 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

    - 8K (7680x4320) at 60Hz DSC

    - 4K(4096x2160) at 144Hz

- ☐ **Transmits** DisplayPort1.4 data up to 300m(984feet) over one (1) LC multi-mode fiber (OM3)

- ☐ **Offers** Smart Aux feature to manage auxiliary channel communication

- ☐ **Extra additional extension** available up to **3m** on each side (TX/RX)

- ☐ **Firmware upgradable** via USB Type C port

- ☐ **Data security** with negligible EMI emission

- ☐ **Mechanical specifications** of transmitter and receiver
    - ■ **Dimensions** (LxWxH)**:** 39 x 76 x 20 mm

- ☐ **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: +5V, 1A DC-power adapter

Warranty Information

One (1) Year Warranty

Opticis warrants this optical extender module to be free from defects in workmanship and materials, under normal use and service, for a period of one (1) year from the date of purchase from Opticis.

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, deliver to customer an equivalent product or part to replace the defective item, or refund 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 reminder of the initial warranty period, whichever is longer.

Opticis shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned 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, Class 1 Laser Eye Safety

Certification of Eye Safety
This laser product is inside implemented by using 780, 825, 850, 930, 960, 990nm LD Transceivers, manufactured by Opticis Co., Ltd., which are all certified by CDRH/FDA referred as classified in Laser Class 1 (IEC60825-1).

CLASS 1 LASER PRODUCT

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

Opticis Locations

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For order support, please contact your Distributor or Reseller.

For technical support, check with the Opticis web site www.opticis.com or contact techsupp@opticis.com