



AV Connectivity, Distribution And Beyond...

**VIDEO WALLS VIDEO PROCESSORS**  
**VIDEO MATRIX SWITCHES**  
**EXTENDERS SPLITTERS WIRELESS**  
**CABLES & ACCESSORIES**

## DisplayPort Extender over Single SC Fiber Optic Cable



**Model #: FO-DP-300-EMI**

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## Product Application & Market Sectors



Corporate



House Of Worship



Military



Residential



Education



Industrial



Medical



Aviation



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## SECTION I: GETTING STARTED

### I.1 IMPORTANT SAFEGUARDS

Please read all of these instructions carefully before you use the Fiber Optic cable. Save this manual for future reference.

#### What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
- Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
- Repair or attempted repair by anyone not authorized by us.
- Any damage of the product due to shipment.
- Removal or installation of the product.
- Causes external to the product, such as electric power fluctuation or failure.
- Use of supplies or parts not meeting our specifications.
- Normal wear and tear.
- Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

### I.2 SAFETY INSTRUCTIONS

The Avenview FO-DP-300M-EMI, Display Port Extender over Fiber Optic has been tested for conformity to safety regulations and requirements, and has been certified for international use. However, like all fibre optic products, the FO-DP-300M-EMI should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

On no account should you:





- ⚠ Look into a fiber while the system lasers are on;
- ⚠ Use unfiltered handheld magnifiers or focusing optics to inspect fiber connectors;
- ⚠ Connect a fiber to a fiberscope while the system lasers are on;
- ⚠ Touch the end of the fiber connectors;
- ⚠ Pull forcefully on the fiber cable;
- ⚠ Reuse any specified fiber cleaning material more than once;
- ⚠ Touch the clean area of a any specified fiber cleaning material;
- ⚠ Use alcohol around an open flame or spark - Alcohol is Very Flammable;
- ⚠ Use alcohol or wet cleaning without a way to ensure that it does not leave residue on the polished connector;
- ⚠ Dismantle the housing or modify the connector.



## 1.3 REGULATORY NOTICES FEDERAL COMMUNICATIONS COMMISSION (FCC)

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

Warning symbols	Description
	<p style="text-align: center;">LASER RADIATION DO NOT STARE INTO BEAM &lt; 1 MILLIWATT LASER DIODE CLASS 2 LASER PRODUCT</p> <p>Risk levels increase. These lasers emit a visible beam, from 400 to 780 Nanometres (nm), with an upper power limit of 1 milliwatt. An example is a (mw) bar code scanner. Momentary viewing is not hazardous, but extended viewing is. Laser protective eyewear is recommended for even momentary viewing and necessary for extended viewing</p>
	<p style="text-align: center;">DO NOT TAMPER WITH THE FIBER CABLE; DOING SO WILL VOID THE WARRANTY AND CONTINUED USE OF THE PRODUCT.</p>
	<p style="text-align: center;">LASER BEAM USED IN OPTICAL COMMUNICATIONS ARE INVISIBLE AND CAN SERIOUSLY DAMAGE THE EYES. VIEWING IT DIRECTLY DOES NOT CAUSE ANY PAIN TO THE EYE BUT SERIOUS DAMAGE CAN BE DONE TO THE RETINA OF THE EYE</p>
	<div style="border: 1px solid black; padding: 5px;"> <p style="background-color: orange; color: black; margin: 0;"><b>⚠ WARNING</b></p> <p>Read &amp; understand user guide before using this device.</p> <p>Failure to follow the proper installation instructions could result in damage to the product and preventing expected results.</p> </div>



## 2. INTRODUCTION

### FO-DP-300M-EMI, Optical DISPLAY PORT extension module

This unique fiber optical transceiver let your display device extend up to 300 meters (1000ft) away from host based on Display Port standard without signal degradation at WQXGA (2560X1600) resolution.

- High Speed and long distance transmission by optical system
- Compatible with Display Port standard V1.1a
- Main-link video signal / AUX data and Hot Plug Detection signal is transmitted by 1ch multi-mode fiber
- DPCD compliant (No support HDCP mode)
- External Power supply

## 2.1 PACKAGE CONTENTS

Before you start the installation of FO-DP-300M-EMI, please check the package contents.

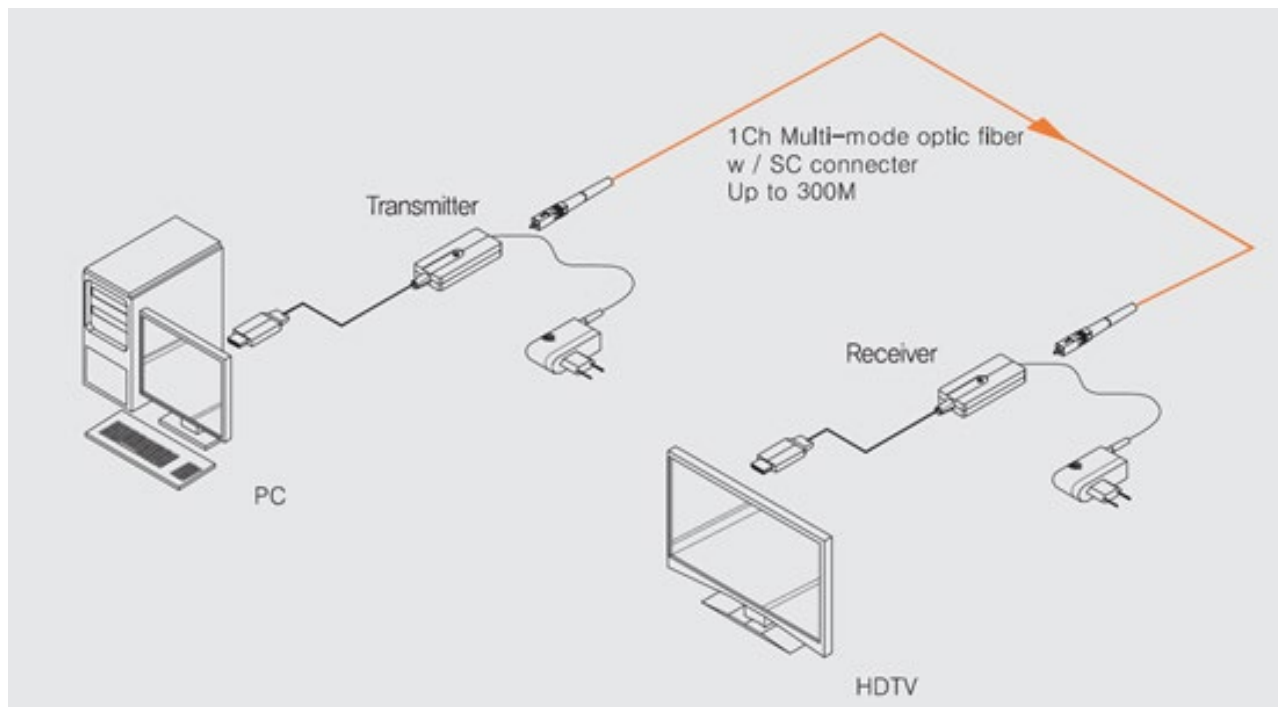
1	Transmitter & Receiver	X 1	
2	Power Adapter (5VDC, 2A)	X 1	
4	User's Manual	X 1	



### 3. INSTALLATION

This product is composed of a Transmitter and a Receiver.

The Transmitter should be connected to the source (Computer's DISPLAY PORT ) and the Receiver should be connected the DISPLAY PORT of the digital display device (Monitor). Avenview FO-DP-300M-EMI Transmitter / Receiver is designed to be used with SC type standard optical cable (Multi-Mode optical fiber: 50/125, 62.5/125um)

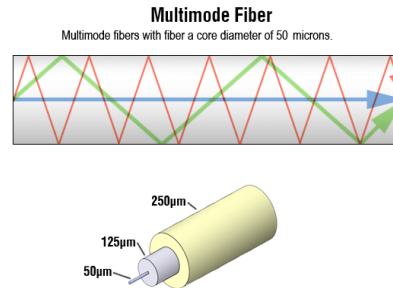


*Note: The Transmitter and the Receiver modules must be connected to the included power supplies for proper operation.  
**Transmitter module must be powered on first.***



### 3.1 Installation Steps:

1. Connect the Transmitter module to the DisplayPort source device.
2. Connect the Receiver module to the display.
3. Connect a single strand multi-mode SC terminated optic fiber (50/125um) from the Transmitter to the Receiver module.
4. Connect the included +5V DC power supply into the Transmitter.
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.



## 4. OPTICAL FIBER HAZARD



- Persons installing fiber optic products must take all necessary safety precautions, such as wearing protective clothing and goggles and observing warning signs.
- To ensure that the required personnel and equipment is properly installed, secure from unnecessary failure of the components or failure of the whole system, injury to one's self and in addition to legal responsibility; everyone is responsible for his own health
- Keep exposed optical fiber ends away from skin and eyes.
- The waste fragments should be treated with care and not picked up with bare hands, but rather with special gloves.
- Dispose of waste in a suitable container via an approved agency. Make sure that the quantity of optical fiber waste is minimized.
- Closures containing termination points for optical fiber cabling must be labeled with appropriate warning signs or clearly visible text.
- Make sure that the quantity of optical fiber waste is minimized. Closures containing termination points for optical fiber cabling must be labeled with appropriate warning signs or a clearly viewable text.
- There are four Laser Classifications based on risk levels. Laser manufacturers are required to label their lasers accordingly.





## 5. GENERAL TROUBLESHOOTING

Problem	Possible Solutions
<b>NO IMAGE</b>	<ul style="list-style-type: none"><li>• Check if the PC Power is on</li><li>• Check if connection to the computer and the monitor are correct.</li><li>• Turn the PC Power off and on again.</li><li>• Please use DC adapter (5V, 2A) included in the package for transmitter and receiver.</li></ul>
<b>LCD SCREEN DEFECTS APPEAR</b>	<ul style="list-style-type: none"><li>• This product supports up to WQXGA resolution.</li><li>• Check the maximum resolution range of the graphics card.</li></ul>

### 4.1 Trouble Shooting depending on LED indicator status

No display TX Solid / RX Blink

- Check if monitor is powered on
- Check if Display Port source is selected on monitor input setting

No display TX Blink / RX Solid

- Check if the PC and display are powered on and properly booted.
- Check if optic fiber is connected properly.

No display TX Blink / RX Blink

- Please make sure that power supply is connected into TX and RX.
- Reset the system by de-plugging and re-plugging all connections

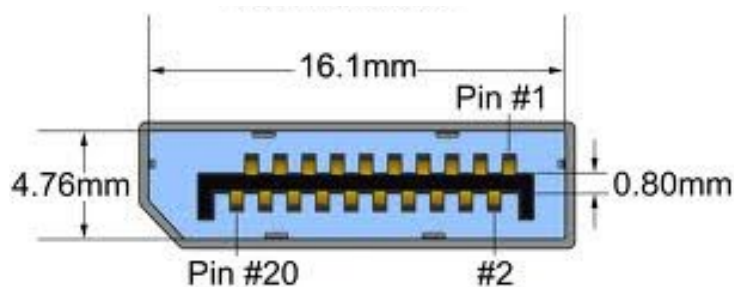
## 6. CAUTION

1. Do not put heavy object on top of the FO-DP-300M-EMI. It may cause product malfunction.
2. Put the product on even and stable location. If the product falls down or dropped, it may get damaged.
3. Keep away from high temperature (over 50°C), low temperature (under 0°C) or high humidity. It may cause a fire and injury by electrical shock.
4. Use DC power adapter with correct specification. Otherwise it may cause fire.
5. Use the multimode (50/125um) optical fiber.
6. Do not view directly laser module of transmitter or the end of the other side of optical cable connected to transmitter with optical instrument.
7. Do not twist or pull by force either ends of the optical cable. It can cause malfunction. Minimum bending diameter is 45mm

*NOTE: Optical fiber cords of different types and specifications should not be mixed.  
Please note the color-coding of connectors for different fiber specs to make it easy to avoid confusion*



## 7. DISPLAY PORT PIN ASSIGNMENT



### 7.1 Transmitter

PIN	SIGNAL ASSIGNMENT	PIN	SIGNAL ASSIGNMENT	PIN	SIGNAL ASSIGNMENT
1	Main Link Lane 0+	8	Ground	15	Auxiliary Channel +
2	Ground	9	Main Link Lane 2-	16	Ground
3	Main Link Lane 0-	10	Main Link Lane 3+	17	Auxiliary Channel -
4	Main Link Lane +	11	Ground	18	Hot Plug Detect
5	Ground	12	Main Link Lane 3-	19	Return
6	Main Link Lane 1-	13	Configuration 1	20	Connector Power (3.3V,500mA)
7	Main Link Lane 2+	14	Configuration 2		

### 7.2 Receiver

PIN	SIGNAL ASSIGNMENT	PIN	SIGNAL ASSIGNMENT	PIN	SIGNAL ASSIGNMENT
1	Main Link Lane 0+	8	Ground	15	Auxiliary Channel +
2	Ground	9	Main Link Lane 2-	16	Ground
3	Main Link Lane 0-	10	Main Link Lane 3+	17	Auxiliary Channel -
4	Main Link Lane 1+	11	Ground	18	Hot Plug Detect
5	Ground	12	Main Link Lane 3-	19	Return
6	Main Link Lane 1-	13	Configuration 1	20	Connector Power (3.3V,500mA)
7	Main Link Lane 2+	14	Configuration 2		



## 8. SPECIFICATIONS

ITEM	DESCRIPTION	
<b>UNITS</b>	FO-DP-300-EMI (Transmitter)	FO-DP-300-EMI (Receiver)
<b>UNIT DESCRIPTION</b>	DisplayPort Extender Transmitter	DisplayPort Extender Receiver
<b>INPUT SIGNAL</b>	DisplayPort Signal v1.1a	
<b>OUTPUT SIGNAL</b>	DisplayPort Signal v1.1a	
<b>VIDEO BANDWIDTH</b>	3.5Gbps / Channel	
<b>SUPPORTED RESOLUTION &amp; DISTANCE*</b>	WQXGA 2560 x 1600 @ 300 meters (1000 feet)	
<b>ELECTRICAL CONNECTOR</b>	20 Pin DisplayPort Plug	
<b>DIMENSIONS (L x W x H)*</b>	2.91" x 1.30" x 0.45"	
<b>POWER SUPPLY</b>	5V 2A DC	
<b>POWER CONSUMPTION</b>	1.5W (max)	

### OPTICAL

<b>OPTICAL SOURCE</b>	850nm VCSEL
<b>O/E CONVERTER</b>	PIN Photo Diode
<b>FIBER</b>	Multi-Mode optical Fiber(SC Type Connector)
<b>FIBER TYPE</b>	50/125 $\mu$ m Multi-mode glass fiber OM2 or OM3 rated fiber

### ENVIRONMENTAL

<b>OPERATING TEMPERATURE</b>	32° ~ 104°F (0° to 40°C)
<b>STORAGE TEMPERATURE</b>	-4° ~ 140°F (-20° ~ 60°C)
<b>RELATIVE HUMIDITY</b>	20~90% RH (no condensation)





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## TECHNICAL SUPPORT

### CONTACT US



Phone: 1 (866) 508 0269



Email: [support@avenview.com](mailto:support@avenview.com)



**USA Head Office Avenview Corp. 275 Woodward Avenue Kenmore, NY 14217**

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