



## DVI Dual Link Extender over 2 Strand Multi-Mode Fiber Optic Cable



Model #: FO-DVI-DL-330X



**WQXGA**  
**2560x1600**

Ver. 1.3

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## Table of Contents

Section 1: Getting Started .....	4
1.1 Important Safeguards .....	4
1.2 Safety Instructions .....	4
1.3 Regulatory Notices Federal Communications Commission (FCC) .....	5
1.4 Introduction .....	5
1.5 Package Contents.....	6
1.6 Before Installation.....	6
1.7 Panel Description .....	7
1.8 Installation .....	8
1.9 Function Switch.....	8
1.10 General Troubleshooting .....	9
Section 2: Specifications.....	11
2.1 Signal Pin Assignment (Single Link) .....	12
2.2 Signal Pin Assignment (Dual Link) .....	13



14

## Section 1: Getting Started

### 1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. 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.

### 1.2 Safety Instructions

The Avenview FO-DVI-DL-330X, DVI Dual Link Extender over Fiber Optic, has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the FO-DVI-DL-330X 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.

- Do not dismantle the housing or modify the module.
- Dismantling the housing or modifying the module may result in electrical shock or burn.
- Refer all servicing to qualified service personnel.
- Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Have the module checked by a qualified service engineer before using it again.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

## 1.3 Regulatory Notices Federal Communications Commission (FCC)

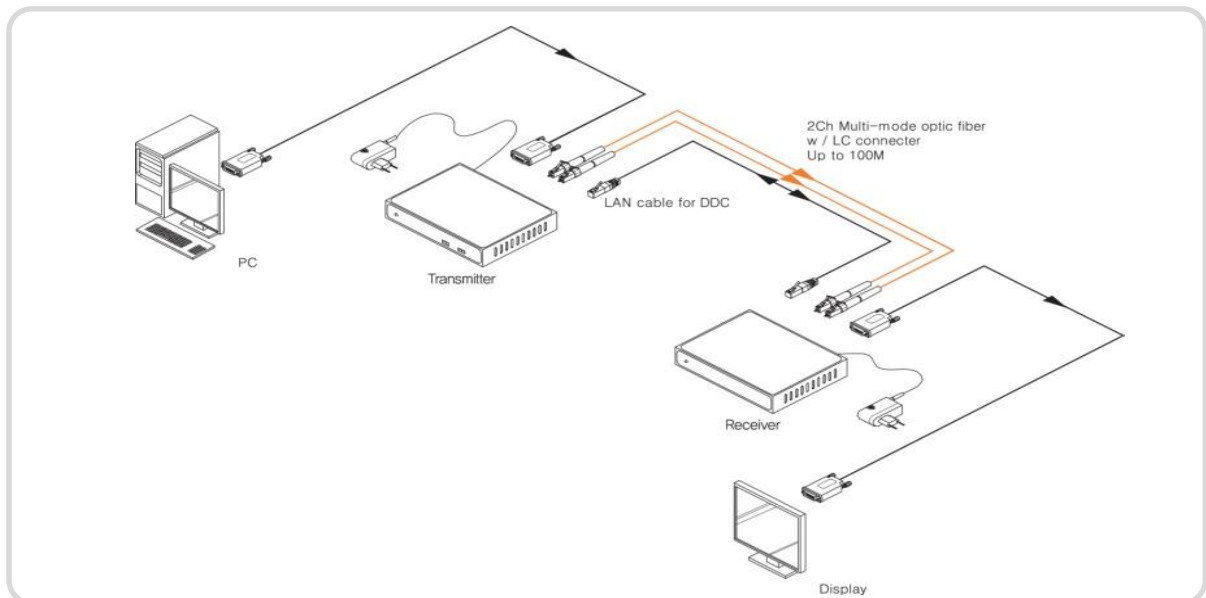
This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

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

## 1.4 Introduction

Avenview FO-DVI-DL-330X Series with fiber optic cable system lets you extend dual link digital signal up to 100m (330 feet).

- High Speed and long distance transmission
- Uses 2 strand multi-mode LC fiber optic cable
- Supports both Single link and Dual link by selectable function switch
- Supports up to Dual Link WQXGA (2560 x 1600) resolution and WUXGA (1920x1200) Single link
- Self-detecting function for EDID
- Supports two mode for DDC
  - o Real Mode: Uses one CAT5 cable for DDC
  - o Emulation: Pseudo DDC detection function for EDID information (2560x1600)



## 1.5 Package Contents

Before you start the installation of the converter, please check the package contents.

- |                              |     |
|------------------------------|-----|
| - FO-DVI-DL-330X Transmitter | x 1 |
| - FO-DVI-DL-330X Receiver    | x 1 |
| - Power Adapter (+5VDC 2A)   | x 1 |
| - User's Manual              | x 1 |

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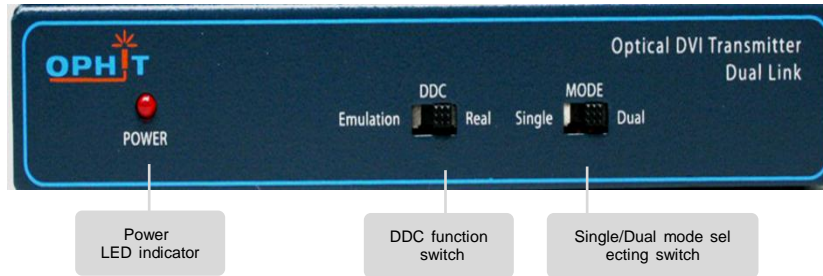
*Fiber Optic Cable is not included in the package*

## 1.6 Before Installation

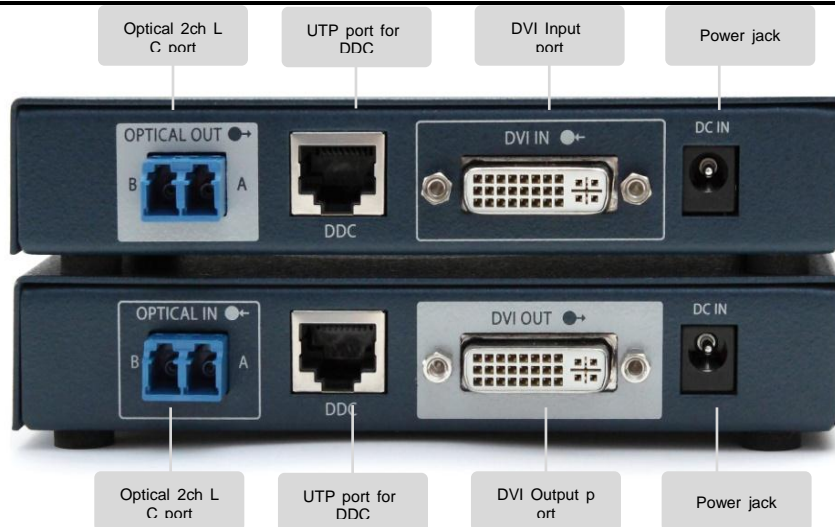
- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.

## 1.7 Panel Description

### FRONT PANEL (Transmitter, FO-DVI-DL-300X)



### REAR PANEL





## 1.8 Installation

Avenview FO-DVI-DL-330X is composed of a transmitter and a receiver. The Transmitter should be connected to the computer's DVI Port and the Receiver should be connected the DVI Port of the digital display device. Avenview FO-DVI-DL-330X Transmitter is designed to be used with the LC type standard optical cable. Transmitter and Receiver have each of 7 Optical port which are marked on the optical port of the fiber cable connection.

To setup Avenview FO-DVI-DL-330X follow these steps for connecting to a device:

1. Connect FO-DVI-DL-330X Transmitter unit to DVI source
2. Connect FO-DVI-DL-330X Receiver unit to DVI port of display.
3. Connect 2 Strand Fiber Optic LC Type cable to both Transmitter and Receiver.
4. Plug the power to Receiver Unit.
5. Power on DVI Source and DVI Display.

*Use the DC adapter (included in the package) for the Receiver. The Transmitter which is connected to a computer uses power from the computer.  
If Transmitter power LED doesn't light up after PC is turned on, then use the external power adapter for Transmitter.*

## 1.9 Function Switch

### EDID: Switch in front of Transmitter

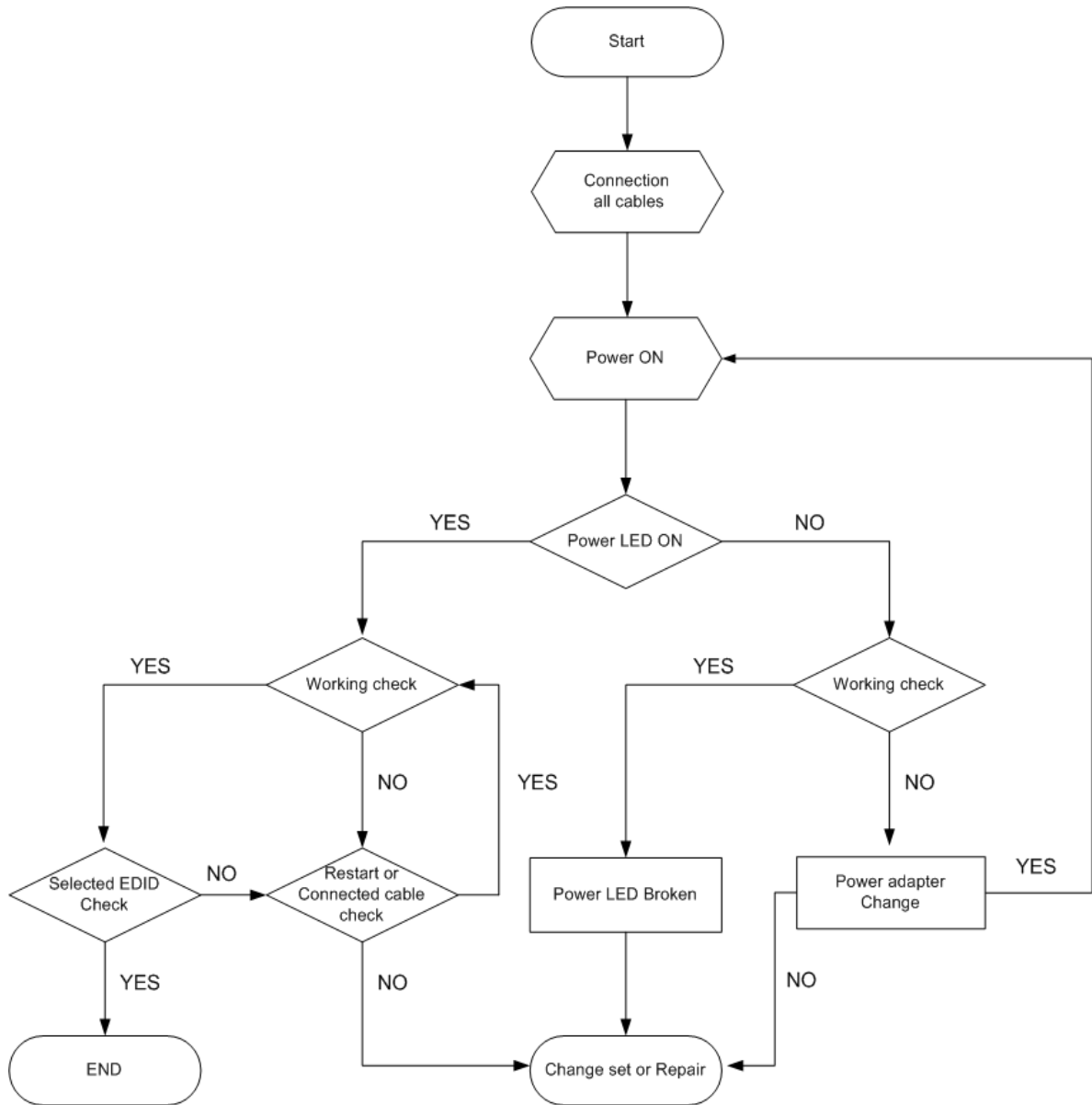
- **REAL:** EDID data of connected monitor is transmitted between Transmitter and Receiver in real time through UTP cable.
- **Emulation:** Certain EDID data pre-set in the Transmitter is used in signal transmission. UTP cable is not necessary.

### EDID: Switch in front of Transmitter

- **Single:** When you use Single link display, select 'Single' switch.
- **Dual:** When you use Dual link display, select 'Dual' switch.



## 1.10 General Troubleshooting



Problem	Possible Solution
<b>Power ON Power LED does not work</b>	<ul style="list-style-type: none"> <li>• Please check out voltage of adapter. (DC +5V)</li> <li>• Ensure that power adapter correctly plugged</li> </ul>
<b>Cannot read selected EDID</b>	<ul style="list-style-type: none"> <li>• Select switch the emulation mode <ul style="list-style-type: none"> <li>- Retry self EDID read</li> <li>- Check the monitor to read EDID</li> </ul> </li> <li>• Select switch the real mode. <ul style="list-style-type: none"> <li>- Please check and connected the UTP cable. (Only the direct type)</li> <li>- Please check if the DVI cable is connected.</li> </ul> </li> </ul>
<b>Resolution Issue</b>	<ul style="list-style-type: none"> <li>• Select single mode switch <ul style="list-style-type: none"> <li>- Max resolution 1920x1200@60Hz</li> <li>- Some monitor will not support this mode.</li> </ul> </li> <li>• Select dual mode switch <ul style="list-style-type: none"> <li>- Max resolution 2560x1600@60Hz</li> <li>- Please check and connect DVI cable type (Should use DVI-Dual cable)</li> </ul> </li> <li>• Noise or no display <ul style="list-style-type: none"> <li>- Please check the DVI and optical fiber cable is connected.</li> </ul> </li> </ul> <p>*** The max resolution is different on to connected monitor</p>

*Self EDID Setting :*

- 1) DDC function switch set to Emulation.
- 2) DVI cable connection between TX and display.
- 3) Supply power to TX (DC +5[V]).
- 4) LED blink -> LED ON

## Section 2: Specifications

Item	Description	
<b>Units</b>	FO-DVI-DL-330X (Transmitter)	FO-DVI-DL-330X (Receiver)
<b>Unit Description</b>	DVI Dual Link Transmitter	DVI Dual Link Receiver
<b>Input Signal</b>	TMDS Signal (DVI 1.0 Standard)	
<b>Output Signal</b>	TMDS Signal (DVI 1.0 Standard)	
<b>Video Bandwidth</b>	1.65Gbps (Single Link)	
<b>Supported Resolution &amp; Distance</b>	Single Link: WUXGA 1920 x 1200 @ 100 meters ( 330 feet) Dual Link: WQXGA 2560 x 1600 @ 100 meters (330 feet)	
<b>Optical Converter</b>	2 ch 850 nm Multi-Mode VCSEL	2 ch GaAs PIN photo Diode
<b>DVI Connector</b>	24 pin DVI-D Plug	
<b>Optical Connector</b>	2 LC Connector	
<b>DDC Link Connector</b>	Rj45	
<b>Fiber Type</b>	62.5/125 $\mu$ m Multi-mode glass fiber	
<b>Dimensions (L x W x H)</b>	3.4" x 5.3" x 1"	
<b>Power Supply</b>	5V 2A DC	
<b>Power Consumption</b>	1.5W (max)	
<b>Environmental</b>		
<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)	

## 2.1 Signal Pin Assignment (Single Link)

### TRANSMITTER

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2 Shield	11	T.M.D.S. Data1 Shield	19	T.M.D.S. Data0 Shield
4	No Connect	12	No Connect	20	No Connect
5	No Connect	13	No Connect	21	No Connect
6	DDC Clock (SCL)	14	+5V Power	22	T.M.D.S. Clock Shield
7	DDC Data (SDA)	15	Ground (for +5V)	23	T.M.D.S. Clock+
8	No Connect	16	Hot Plug Detect	24	T.M.D.S. Clock-

### RECEIVER

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2 Shield	11	T.M.D.S. Data1 Shield	19	T.M.D.S. Data0 Shield
4	No Connect	12	No Connect	20	No Connect
5	No Connect	13	No Connect	21	No Connect
6	DDC Clock (SCL)	14	Out +5V Power	22	T.M.D.S. Clock Shield
7	DDC Data (SDA)	15	Ground (for Out +5V)	23	T.M.D.S. Clock+
8	No Connect	16	Hot Plug Detect	24	T.M.D.S. Clock-

## 2.2 Signal Pin Assignment (Dual Link)

### TRANSMITTER

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2 Shield	11	T.M.D.S. Data1 Shield	19	T.M.D.S. Data0 Shield
4	T.M.D.S. Data4-	12	No Connect	20	T.M.D.S. Data5-
5	T.M.D.S. Data4+	13	No Connect	21	T.M.D.S. Data5+
6	DDC Clock (SCL)	14	+5V Power	22	T.M.D.S. Clock Shield
7	DDC Data (SDA)	15	Ground (for +5V)	23	T.M.D.S. Clock+
8	No Connect	16	Hot Plug Detect	24	T.M.D.S. Clock-

### RECEIVER

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2 Shield	11	T.M.D.S. Data1 Shield	19	T.M.D.S. Data0 Shield
4	T.M.D.S. Data4-	12	No Connect	20	No Connect
5	T.M.D.S. Data4+	13	No Connect	21	No Connect
6	DDC Clock (SCL)	14	Out +5V Power	22	T.M.D.S. Clock Shield
7	DDC Data (SDA)	15	Ground (for Out +5V)	23	T.M.D.S. Clock+
8	No Connect	16	No Connect	24	T.M.D.S. Clock-



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