



VGA to DVI Extender over Fiber SET



Model #: FO-VGA-DVI

HD
ready
1080p

WUXGA
1920x1200



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Table of Contents

Section 1: Getting Started	3
1.1 Important Safeguards	3
1.2 Safety Instructions	3
1.3 Regulatory Notices Federal Communications Commission (FCC)	4
1.4 Introduction	4
1.5 Package Contents.....	4
1.6 Before Installation.....	4
1.7 Installation	5
1.8 Troubleshooting.....	6
1.9 Caution.....	6
Section 2: Specifications.....	7
2.1 Electrical & Optical Specifications.....	8
2.1.1 Electrical Specifications	8
2.1.2 Optical Specifications	8
2.2 Connector PIN Assignment	9
2.2.1 Input Connector	9
2.2.2 Output Connector	10
2.2.3 Optical Cable Information	11

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-VGA-DVI, VGA to DVI Extender over Fiber Optic has been tested for conformity to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the FO-VGA-DVI 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-VGA-DVI, VGA to DVI Extender over Fiber SET lets you extend VGA signal and convert it to DVI up to 500 meters (1650 feet) at 1920 x 1200 away from host by TMDS analog signal transmission with only 1 SC Type fiber optic cable. VGA to DVI Extender over Fiber SET includes both VGA to DVI Converter / Extender and Receiver.

- High Speed and long distance transmission by SC type Multi-Mode 1 fiber
- Automatically detects the input signal and SOG (Sync on Green)
- DVI 1.0 compliant
- Standard VGA plug on Transmitter, DVI plug on Receiver and SC Fiber connector
- R, G, B, Clock signal is transmitted by 1 Multi-Mode optical Fiber
- Supports up to WUXGA (1920 x 1200) resolution
- External power supply

1.5 Package Contents

Before you start the installation of FO-VGA-DVI, please check the package contents.

- | | |
|----------------------|-----|
| - FO-VGA-DVI | x 1 |
| - FO-DVI-1000M-EMI-R | x 1 |
| - Power Adapter +12V | x 1 |
| User's Manual | x 1 |

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 Installation

The FO-VGA-DVI Transmitter should be connected to the computer's VGA Port and the Receiver (FO-DVI-1000M-EMI-R) should be connected the DVI Port of the digital display device. Avenview FO-VGA-DVI and FO-DVI-1000M-EMI-R Receiver is designed to be used with SC type standard optical cable (Multi-Mode optical fiber: 50/125, 62.5/125um).

1. Connect FO-VGA-DVI Transmitter to the VGA Source and FO-DVI-1000M-EMI-R Receiver to the Display.
2. Connect the optical fiber between Transmitter and Receiver.
3. Power on Display
4. Connect DC power to the Receiver
5. Restart the computer or VGA Source.

1.8 Troubleshooting

General Troubleshooting	
Problem	Possible Solution
No Image	<ul style="list-style-type: none">• Check if the PC Power is on• Check if connection to the computer and the monitor are correct.• Turn the PC Power off and on again.
Screen Defects Appear	<ul style="list-style-type: none">• This product supports up to WUXGA resolution.• Check the maximum resolution range of the graphics card.

1.9 Caution

1. Do not put heavy object on top of the FO-VGA-DVI. 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. Do not twist or pull by force either ends of the optical cable. It can cause malfunction. Minimum bending diameter is 75mm.
6. Use the multimode (50/125um, 62.5/125um) optical fiber.

Section 2: Specifications

Item	Description
Input Signal	PC: up to 1920x1200@60Hz (165MHz) TV (HD): up to 1080p 60Hz
Input Connector	VGA D-Sub (15pin)
Output Connector	SC Type Fiber Optic, DVI-I
Power	DC +12V 1.5A
Supported Resolution and Distance	WUXGA 1920 x 1200 @ 500 meters (1650 feet)
Dimensions (LxWxH)	(8.75" + (DVI: 3.75" VGA: 2")) x (DVI: 1.5" VGA: 1.25") x (DVI: 0.5" VGA: 0.5")

Optical

Optical Source	850nm VCSEL
O/E Converter	PIN Photo Diode
Fiber Type	50/125 or 62.5/125 SC Multi-Mode Fiber, SC Fiber

Environmental

Operation	0° to +50°C Degree
Storage	-20° to +70°C Degree
Relative Humidity	10 ~ 80%
Power Supply	-03 ~ 12V

Stresses greater than those listed under "Environmental Ratings" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these

or any other conditions above those indicated in the operations section for extended periods of time may affect reliability.

2.1 Electrical & Optical Specifications

2.1.1 Electrical Specifications

	Parameter	Symbol	Min	Type	Max	Units	Condition
P O W E R	Supply Voltage	Vcc		+ 12		V	
	Supply Current	Icc		70		mA	Standby
				400			Working
	Power Dissipation	Po		0.84		W	Standby
4.8				Working			

2.1.2 Optical Specifications

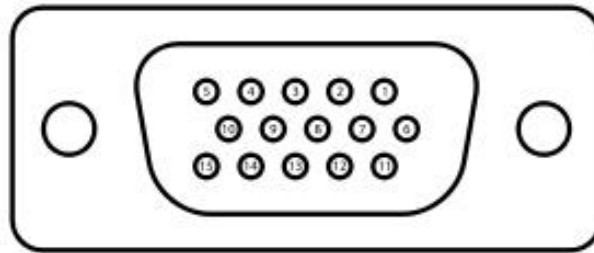
Parameter (per Channel)	Symbol	Min	Typ	Max	Units
Optical Power ¹	Pout	-3.0	0.0		dBm
Optical Modulation Amplitude		-6.25			dBm
Center Wavelength – Lane 0		771.5	778	784.5	nm
Center Wavelength – Lane 1		793.5	800	806.5	nm
Center Wavelength – Lane 2		818.5	825	831.5	nm
Center Wavelength – Lane 3		843.5	850	856.5	nm
Optical Rise/Fall Time ² (P1TX4B-SX4V-01)			200		Ps
RMS Spectral Width			0.5		nm

Transmitter module of FO-VGA-DVI includes VCSEL (Vertical Surface Emitting Laser Diode) with 850 nm invisible laser radiation.

DO NOT view directly at laser module of Transmitter or the end of the other side of optical cable connected to Transmitter with optical instrument.

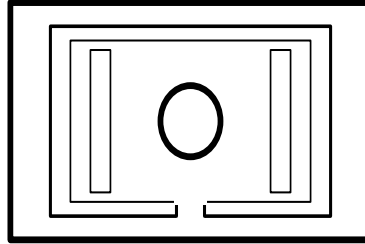
2.2 Connector PIN Assignment

2.2.1 Input Connector



Pin	Signal Assignment	Pin	Signal Assignment
1	Red	9	N/C
2	Green	10	Ground
3	Blue	11	Ground
4	Ground	12	SDA
5	Ground	13	H Sync
6	Red Ground	14	V Sync
7	Green Ground	15	SCL
8	Blue Ground		

2.2.2 Output Connector

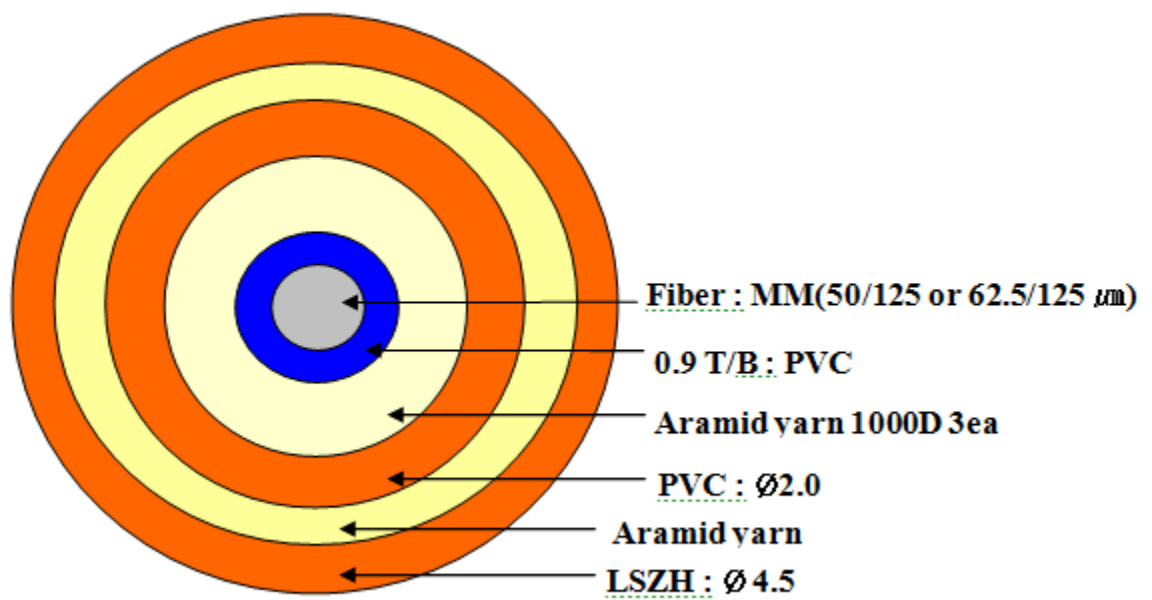


Pin	Signal Assignment
1	T.M.D.S. optical output



Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	CH 2-	9	CH 1-	17	CH 0-
2	CH 2+	10	CH 1+	18	CH 0+
3	CH2 Ground	11	CH1 Ground	19	CH0 Ground
4	N/C	12	N/C	20	N/C
5	N/C	13	N/C	21	N/C
6	N/C	14	+5V	22	CLK Ground
7	N/C	15	Ground	23	CLK+
8	N/C	16	N/C	24	CLK-
C1	Ground	C2	Ground	C3	Ground
C4	Ground	C5	Ground		

2.2.3 Optical Cable Information





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