MultiDyne
Video & Fiber Optic Systems

INSTRUCTION MANUAL

DVI-ONE

DVI Single Link Fiber Optic Extender over ONE Fiber

1-(877)-MULTIDYNE
1-(800)-488-8378

191 Forest Avenue
Locust Valley, NY 11560-2132 USA
(516)-671-7278 FAX (516)-671-3362
sales@multidyne.com
www.multidyne.com

WARNING!!!

- **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/spills into the housing, unplug the module immediately. Have the module checked by a qualified service engineer before using it again.

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INTRODUCTION

The MultiDyne DVI-ONE Series lets your digital flat panel display extend up to 1,000 meters (3,300 feet) away from host by TMDS digital signal transmission with only 1(one) fiber. The DVI-ONE supports the following:

- High Speed and long distance transmission by SC type Multi-mode 1(one) Fiber
- Self detecting function for EDID information
- Corresponding to T.M.D.S signal (Single link)
- The use of standard DVI plug and SC fiber connector.
- R, G, B and Clock signal is transmitted by 1(one) multimode optical fiber
- Maximum resolution WUXGA
- Optional external power supply (Automatic power switch is included.)

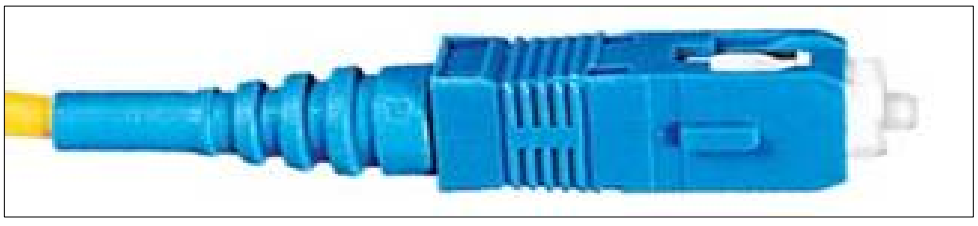
PACKAGE CONTENTS

Before you start installing the DVI-ONE, please check the package contents for:

- Transmitter unit with designation “COMPUTER”- 1each
- Receiver unit with designatuion “MONITOR” - 1 each
- Power Adapter (5VDC , 2A) - 2 each
- User's Manual - 1 each

INSTALLATION

The product is composed of a transmitter and a receiver. The transmitter unit is imprinted with the designation “COMPUTER”. The receiver unit is imprinted with “MONITOR”. The COMPUTER unit should be connected to the PC computer or source DVI output port. The MONITOR unit should be connected to the DVI input port of digital display. The DVI-ONE COMPUTER and MONITOR units are to be used with Multimode fiber optic cable of 50/125 or 62.5/125um with one SC connector. Please see the picture below.



SC Type Fiber Optic Connector

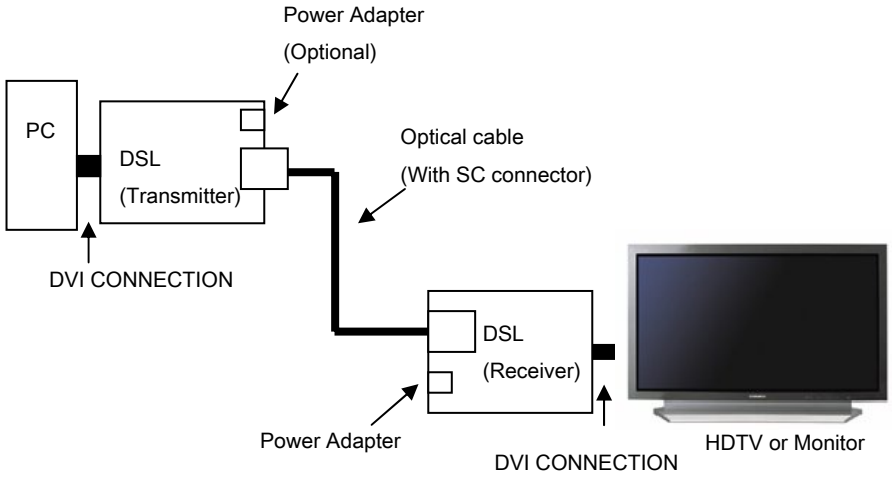
Programming Display EDID Resolution

The DVI-ONE has the ability to self-detect the resolution of the monitor and change the resolution accordingly. **Please note the BOTH the DVI-ONE MONITOR and DISPLAY side devices require external power.** Please follow the steps below to program the EDID or resolution information of the display:

1. Power on your display.
2. Connect the DVI-ONE COMPUTER unit to the DVI input port of the display device.
3. Plug the DC power into the DVI-ONE COMPUTER unit.
4. Check the LED light of the DVI-ONE COMPUTER uinit. If it turns OFF and then turns back ON in a few seconds, this means it has finished reading the EDID of the display device.
5. Connect the DVI-ONE COMPUTER unit to the PC computer or DVI source.
6. Connect the MONITOR unit to the display DVI input port.
7. Plug the DC power into the DVI-ONE MONITOR unit.
8. Connect the Multimode fiber optic cable between the COMPUTER and MONITOR side units.
9. Restart your PC computer or DVI source.

Notes: The EDID display resolution is now flashed into the memory of the COMPUTER side DVI-ONE unit. Programming is only required once. If a display is used with a different resolution, please repeat the process with the new display device.

Connection Diagram



Caution

1. Do not put the heavy object on top of the product. It may cause malfunction.
2. Put the product in a stable location. If the product falls or is dropped, it may get damaged leading to malfunction.
3. Use the DC power adapter with correct specification. Otherwise, it may cause fire.
4. Do not twist or pull by force either ends of the optical cable. It can cause malfunction. The fiber optic cable minimum bending diameter is 75mm.
5. Use Multimode 50/125um or 62.5/125um fiber optic cable.

SPECIFICATION

General Specification

Frequency Bandwidth:	1.65 Gbps (Single Link)
Supported Graphical Resolution:	WUXGA resolution (1920 x 1200)
Distance:	1 KM or 3,300ft
Electrical Connector:	DVI 24pin Plug
Optical Connector:	SC connector
Power Consumption:	TX: 1.0Watt (max) Rx: 1.0Watt (max)

Optical Specification

Optical Source:	850nm VCSEL
O/E Converter:	PIN Photo Diode
Fiber Type:	50 or 62.5/125 SC Multimode

Environmental

Operating Temperature Range:	-10 to 50 degrees Centigrade
Storage Temperature Range:	-30 to 70 degrees Centigrade

DVI SIGNAL PIN ASSIGNMENT

COMPUTER Unit

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

MONITOR Unit

Pin	Signal Assignment	Pin	Signal Assignment
1	T.M.D.S. Data2-	13	No Connect
2	T.M.D.S. Data2+	14	No Connect
3	T.M.D.S. Data2 Shield	15	No Connect
4	No Connect	16	No Connect
5	No Connect	17	T.M.D.S. Data0-
6	No Connect	18	T.M.D.S. Data0+
7	No Connect	19	T.M.D.S. Data0 Shield
8	No Connect	20	No Connect
9	T.M.D.S. Data1-	21	No Connect
10	T.M.D.S. Data1+	22	T.M.D.S. Clock Shield
11	T.M.D.S. Data1 Shield	23	T.M.D.S. Clock+
12	No Connect	24	T.M.D.S. Clock-

TROUBLESHOOTING

Display screen is blank	• Check if the computer of DVI source power is ON. • Check if the COMPUTER unit connection to the computer and MONITOR unit connection to the monitor is correct. • Check if the power LED of COMPUTER unit is ON. If power LED is OFF, plug in the DC power for COMPUTER side unit. • Check if fiber optic cable is Multimode. • Turn the Computer of DVI source power OFF and then back ON again.
Noise is shown on the screen	• Check the maximum resolution range of the PC computer graphic card or DVI source. • Check if connection of DVI port is correct • Check if connection to the Optical port is correct

WARRANTY

1 (One) Year Warranty

The MultiDyne DVI-ONE product line is covered by a 1 (one) year warranty from the date of purchase on parts and labor covering defects in material and workmanship.

Out of warranty services

In the case of defects or manfuction caused by misusage, the company may provide repair and service at a nominal cost for the following:

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- Defects of DVI-ONE products caused by accident or disaster.
- Damages of DVI-ONE products caused by the customer’s carelessness or mistaken application.
- Damages of DVI-ONE products caused by the application of the parts or products not supplied or sold by MultiDyne.
- Damages of DVI-ONE products and related defects caused by unauthorized personnel or service center.