



User Guide

Single-Link DVI Fiber Optic Extender

DVI-7315



TABLE OF CONTENTS

| SECTION | PAGE |
|--------------------------------|------|
| PRODUCT SAFETY..... | 1 |
| 1. INTRODUCTION | 2 |
| 2. SPECIFICATIONS | 3 |
| 3. PACKAGE CONTENTS | 3 |
| 4. INSTALLATION | 4 |
| 5. TROUBLESHOOTING..... | 6 |
| 6. LIMITED WARRANTY | 7 |
| 7. REGULATORY COMPLIANCE | 7 |



WARNING – Product Safety

1. Do not dismantle the product housing or modify the printed circuit board module as this may result in electrical shock or burn.
2. Do not attempt to service this product yourself as opening or removing the product housing may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.
3. Keep this product away from liquids. Spills into the product housing may result in fire, electrical shock, or equipment damage. If liquid spills into the housing, unplug the product immediately. Have the product checked by a qualified service engineer before using it again.
4. Only use the supplied External AC Power Adapter. The use of other power adapters may cause this product to fail, or may cause a fire.
5. Do not twist or exert excessive force on the ends of the optical cable as this can cause it to malfunction. Take precaution to avoid that the fiber optic cable is not forced to bend tighter than its minimum bend radius.



1. INTRODUCTION

The DVI-7315 Fiber Optic Extender enables the transmission of single-link DVI signals at distances up to 500 meters without any signal degradation. This makes it an ideal solution for applications where a single-link DVI signals must be routed long distances from the source without introducing artifacts in the image.

Our professional video conversion products have been serving the industry for several years. DVI Gear offers a full line of high quality Video Scalers, Scan Converters, Analog-Digital Converters and DVI/HDMI Converters, as well as Signal Switchers and Distribution Amplifiers.

1.1 Liability Statement

Every effort has been made to ensure that this product is free of errors. DVI Gear cannot be held liable for the use of this hardware or any direct or indirect consequential damage arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights are reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

DVI Gear reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way. All third party trademarks and copyrights are recognized. The DVI Gear logo is a registered trademark of DVI Gear, Inc. All other trademarks are the property of their respective holders.

1.2 Features

This product offers several unique features and benefits:

- Long distance transport of high speed single-link DVI signals using commercial-off-the-shelf fiber optic cable (uses a single strand of multi-mode fiber optic cable with SC type terminations).
- Detachable fiber optic cables can easily be pulled through 1/2" conduit and can be terminated in the field with proper equipment and training.
- Supports PC resolutions up to UXGA (1600x1200) and WUXGA (1920x1200).
- Supports single-link DVI bit rates up to 1.65 Gbps.
- Supports optical cable lengths up to 500 meters.
- EDID Detection / EDID Memory greatly enhances installation flexibility.
- Includes +5VDC External AC Power Adapter for Receiver Unit. External AC Power Adapter for Transmitter is available as an option.



2. SPECIFICATIONS

| General Specifications | |
|--------------------------------|---|
| Supported Bit-rates | Up to 1.65 GBit/sec. |
| Supported Resolutions | Single-Link DVI: up to 1920x1200 or 1600x1200 |
| Maximum Cable Length | UGXA (1600 x 1200) 500 meters WUXGA (1920 x 1200) 500 meters |
| Connector Types | DVI Port: 24+1 pin DVI Male connector Optical Ports: SC connector |
| Weight | Net: 0.16 lbs. / 72 grams Shipping: 0.82 lbs. / 372 grams |
| Dimensions (L x W x H) | 2.61" x 1.57" x 0.59" (66.4 mm x 40.0 mm x 15.0 mm) |
| External AC Power Adapter | Input: 100-240 VAC / 50-60Hz Output: +5VDC, 2.0A |
| Maximum Power Consumption | Transmitter: 1.0 watt Receiver: 0.9 watt |
| Optical Specifications | |
| Optical Source | Quad VCSEL Lasers (CWDM), Class 1M laser product |
| Optical / Electrical Converter | Quad PIN Photo Diodes (CWDM) |
| Fiber Optic Cable | 50/125u multi-mode OM3 Fiber with 1x SC connector per module |
| Environmental Specifications | |
| Operating Temperature Range | 32° to 122° F / 0° to 50° C. |
| Storage Temperature Range | -4° to 158° F / -20° to 70° C |
| Model Numbers | |
| DVI-7315 | Fiber Optic Extender, DVI Single-Link, 1x SC |
| n/a | 1x SC, Plenum Rated, Single-Link DVI Fiber Optic Cable (length must be specified) |

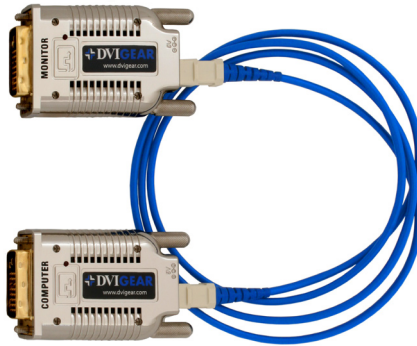
3. PACKAGE CONTENTS

Before starting installation, please check the package contents:

- 1x Transmitter Unit
- 1x Receiver Unit
- 1x External AC Power Adapter
- 1x User Guide

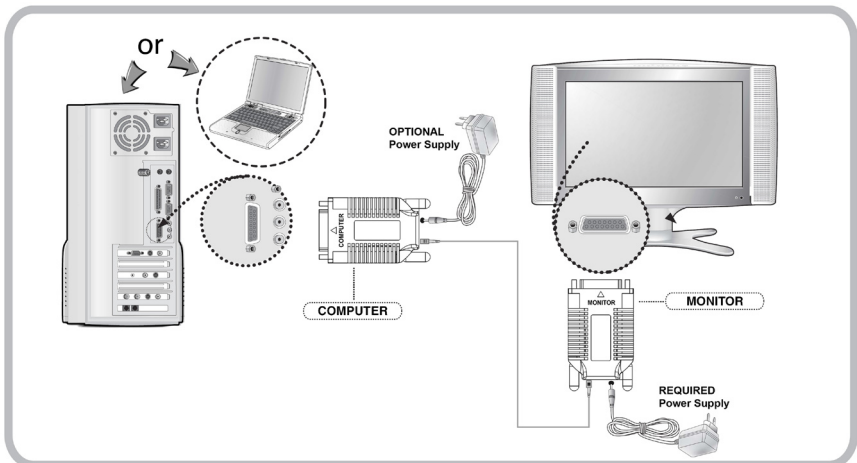
4. INSTALLATION

This product consists of a Transmitter Unit and a Receiver Unit. The Transmitter Unit must be connected to the DVI output port of the signal source (such as a PC); whereas the Receiver Unit should be connected to the DVI port of a digital display.



The DVI signal components are routed from the Transmitter Unit to the Receiver Unit using a single strand of fiber optic cable with SC connectors (see the picture above).

4.1 System Connection:



Connect the External AC Power Adapter to the power input jack on the Receiver Unit. This is necessary because the Receiver Unit cannot draw power from the monitor. The Transmitter Unit is connected to the DVI source (computer) and can draw operating power from this device. In the event that the source cannot provide adequate power for the Transmitter Unit, an optional External AC Power Supply is available (part number DVI-7208-PS).



4.2 Programming the EDID Memory Function:

This device is capable of automatically detecting and storing monitor EDID information in a non-volatile memory chip in the Transmitter Unit. This allows the system to work without the need of a “live” DDC connection (typically a CAT 5 cable). This feature ensures that the display’s EDID is always presented to the source even if the display is switched OFF or disconnected.

1. Power on the Display.
2. Connect the Transmitter Unit to the display’s DVI input port.
3. Connect the External Power Supply to the Transmitter Unit.
4. Wait 5 - 10 seconds, then remove the Transmitter Unit from the display.
5. Remove the Power Supply from the Transmitter Unit.
6. Disconnect the Transmitter Unit from the display and connect it to the source.
7. Connect the Receiver Unit to the display and connect the Power Supply to the Receiver Unit.
8. Connect the optical cable and apply power to the system. The display’s EDID is now stored in the Transmitter Unit.



5. TROUBLESHOOTING

If the system fails to display a signal, power OFF all devices and check that the following connections are properly installed:

- The fiber optic cable must be routed to the SC connectors on both the Transmitter Unit and Receiver Unit. Check to ensure that the optical cable is fully inserted into the connector port. Note that slight pressure on fiber optic cable and/or connector should NOT have any influence on the image quality of the signal.
- The supplied External AC Power Adapter should be connected to the Receiver Unit.
- Check to ensure that the DVI source device is able to provide +5.0 VDC with at least 180 ma of current on pin 14 of its DVI output connector. If these conditions are not met, or are unknown, then an optional External AC Power Adapter should be connected to the Transmitter Unit (part number DVI-7208-PS).

Once all connections have been verified, power ON the monitor first, and then the DVI signal source.

If the system still fails to display an image, check to ensure that the DVI signal source is compatible with the display by making a direct connection between the two so as to bypass the Single-Link DVI Fiber Optic Extender. If there is still no image, then reprogram the EDID Memory as noted in Section 4.2 above. If there is still no image then there is a compatibility issue between the source and the display that must be resolved.

Should the problem still persist after you have tried the above suggestions, contact your dealer for additional support. If you require further assistance, please contact DVI Gear via telephone at (888) 463-9927 (United States and Canada); international callers may dial +1-770- 421-6699, or use e-mail at support@dvigear.com.



6. LIMITED WARRANTY

LIMITED WARRANTY – With the exceptions noted in the next paragraph, DVIgear, Inc. warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of three years from the date of purchase. Should this product, in DVIgear’s opinion, prove defective within this warranty period, DVIgear, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of DVIgear. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from DVIgear and return the product freight prepaid to a location designated by DVIgear. After repairs are complete, the product will be returned, freight prepaid.

LIMITATIONS – All products sold are “as is” and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to three years from the date of purchase. DVIgear assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit.

DVIgear makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of DVIgear with respect to any defective products will be limited to the repair or replacement of such products. In no event shall DVIgear be responsible or liable for any damage arising from the use of such defective products whether such damage is direct, indirect, consequential or otherwise, and whether such damage is incurred by the reseller, end-user or any third party.

7. REGULATORY COMPLIANCE

This product has been tested for compliance with: FCC Class B and CE. The Power Adapter has been tested for compliance with: UL, CSA and CE. This product is RoHS compliant.



Your Digital Connectivity Experts

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