

## **User Guide**

**HDMI™ Fiber Optic Extender**

**DVI-7360**



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## **WARNING – Product Safety**

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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. Place the product in an even and stable location. If the product falls or is dropped, it may cause an injury and/or malfunction.
5. Avoid exposing the product to extreme temperatures or to high humidity levels as this may result in damage to the product.
6. 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.
7. Do not twist or exert excessive force on the ends of the optical cable as this can cause it to malfunction. Take precaution to ensure that the fiber optic cable is not forced to bend tighter than its minimum bend radius.

## **Product Liability**

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Every effort has been made to ensure that this product is free of defects. DVI Gear cannot be held liable for the use of this product or for any direct or indirect consequential damages arising from its use. It is the responsibility of the users of this product to check that it is suitable for their requirements and that it is installed correctly.

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## 1. INTRODUCTION

The DVI-7360 HDMI™ Fiber Optic Extender enables the transmission of very high-speed (10.2 Gbps.) HDMI and single-link DVI signals over distances up to 4500 meters (2.8 miles) without any signal degradation. This makes it an ideal solution for applications where HDMI or DVI signals must be routed long distances from the source without introducing artifacts in the image.

Our professional digital distribution products have been serving the industry for over ten (10) years. DVI Gear offers a full line of high-quality Digital Matrix Routers, Switchers, Splitters, Video Scalers, Up/Down/Cross Converters, Format Converters, Analog-Digital Converters, as well as a wide range of long-reach Digital Cables, Extenders, and Optical Transmission systems.

### Features

This product offers several unique features and benefits:

- Long distance transport of high-speed single-link DVI or HDMI signals using either single-mode or multi-mode fiber optic cables.
- Uses detachable 2-strand fiber optic cables that can easily be pulled through 1/2" conduit and can be terminated in the field.
- No copper cables are required. EDID and HDCP communications are supported through the fiber optic connection.
- Cable distances up to 4.5 kilometers can be achieved with single-mode fiber. Up to 500 meters can be achieved with multi-mode fiber. With HDCP encrypted signals, the maximum cable length is 350 meters.
- Supports HDTV resolutions up to 1080p/60 with 16-bit color and PC resolutions up to 4096 x 2160 (p24).
- Supports HDMI bit rates up to 3.4 Gbps/color (10.2 Gbps. total).
- Immune to environmental signal noise.
- Low RFI/EMI emissions for sensitive applications.
- Includes +5VDC External AC Power Adapters for both Transmitter and Receiver units.



## 2. SPECIFICATIONS

General Specifications	
Maximum Pixel Clock Rates	up to 340 MHz
Maximum Bit-Rates	up to 3.4 Gbps per color, 10.2 Gbps total
Maximum Supported Resolutions	PC: up to 4096 x 2160 (p24) HDTV: up to 1080p / 60 with 16 bit color
Connector Types	HDMI I/O Ports: HDMI female 19-pin connector Optical I/O Ports: 2x LC connectors Power Supply: 5.5 mm locking mini-jack IR Transmitter: 3.5 mm mono mini-jack IR Receiver: 3.5 mm stereo mini-jack
Maximum Cable Length	9 $\mu$ / 125 $\mu$ Single-Mode Fiber : 4,500 meters, 2.8 miles 50 $\mu$ / 125 $\mu$ Multi-Mode Fiber : 500 meters, 1,640 ft. SM or MM fiber with HDCP: 350 meters, 1,150 ft.
Optical Specifications	
Optical Transmitter	Laser Source: 1310nm FP / 1430nm FP / 1550nm FP
Optical Receiver	PIN Photo Diode O/E Converter
Suggested Fiber Optic Cable	50/125 $\mu$ Multi-Mode or 9/125 $\mu$ Single-Mode fiber, 2x LC connectors
Power	
Power Source	Both Tx and Rx units must use the included AC power adapters.
External AC Power Adapters	Input: 100-240 VAC / 50-60 Hz, 0.5A Output: +5 VDC, 3.0 A
Power Consumption	DVI-7360-Tx: 3.5 watts DVI-7360-Rx: 3.5 watts
Mechanical	
Dimensions (L x W x H)	4.61" x 2.95" x 1.16" (117.2 mm x 75 mm x 29.5 mm)
Net Weight (RX and TX each)	6.1 oz. (172 g)
Shipping Weight	2.4 lb. (1.1 kg)
Construction	Extruded Aluminum enclosure with black anodized finish
Environmental Specifications	
Operating Temperature Range	32° to 122° F ( 0° to 50° C)
Storage Temperature Range	-4° to 158° F (-20° to 70° C)
Relative Humidity	10% - 90% non-condensing
Model Number	
DVI-7360	HDMI™ Fiber Optic Extender
Regulatory Compliance	
Extenders	FCC Class B, CE, RoHS
Power Adapters	UL, CUL, GS, PSE, CE, FCC, RCM, RoHS
Conformance	DVI v1.0, HDMI v1.3, HDCP v1.4

### 3. PACKAGE CONTENTS

Before starting installation, please check the package contents:

- 1x DVI-7360-Tx Transmitter Unit
- 1x DVI-7360-Rx Receiver Unit
- 1x IR Transmitter (p.n. DVI-7360-IR-TX)
- 1x IR Receiver (p.n. DVI-7360-IR-RX)
- 2x External AC Power Adapters (p.n. DVI-7205-PS)
- 1x User Guide

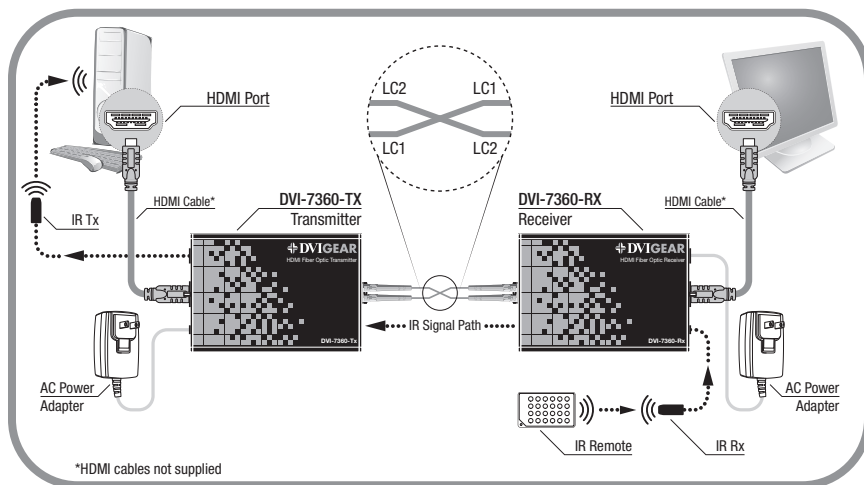


### 4. INSTALLATION

This product includes both a Transmitter and a Receiver unit. The Transmitter unit should be connected to the HDMI output port of the signal source (such as a PC or BluRay player). The Receiver should be connected to the HDMI input port of a digital display. This product may be connected to a DVI source and/or display using a DVI to HDMI cable (DVI Gear p.n. DVI-24xx-HR, where xx = length in meters).

The HDMI signal components are routed from the Transmitter unit to the Receiver unit using an optical cable with two (2) fibers that are terminated with LC optical connectors. The optical cable may use either single-mode or multi-mode fiber. The longest cable distances may be obtained with single-mode fiber. Systems that require HDCP support are limited to cable distance of 350 meters (1,150 ft.).

## 5. SYSTEM CONNECTIONS



Typical System Diagram

### HDMI Interconnections

1. Connect each strand of the fiber optic cable to the corresponding optical ports on the Transmitter and Receiver units that are marked LC1 and LC2.
2. Connect the Transmitter unit to the source using a high-quality HDMI cable (e.g., PC, Blu-Ray, receiver/switcher output).
3. Connect the Receiver unit to the display using a high-quality HDMI cable (or receiver input, switcher input).
4. Connect the supplied External AC Power Adapters to the power input jacks on the Transmitter and Receiver units and then to an active AC power source. The red POWER LEDs should illuminate on both units.
5. First turn ON the Display, and then turn ON switchers and other distribution equipment (if present). Finally, turn ON the source. The green LINK LEDs should illuminate on both units. Test the system to ensure proper performance.

### IR Interconnections

This unit is equipped with an IR repeater port that supports remote extension of certain IR devices over the optical link. The IR information is sent upstream in the opposite direction w.r.t. the HDMI signal. Connect the IR receiver to the DVI-7360-RX Receiver unit and the IR transmitter to the DVI-7360-TX Transmitter unit. Note that the IR receiver must be visible to the remote control device and the IR transmitter must be visible to the source device for proper operation.



## 6. TROUBLESHOOTING

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

- The DVI-7360-TX Transmitter unit must be connected to the Source. The DVI-7360-RX Receiver unit must be connected to the Display.
- Both the Transmitter unit and the Receiver unit must be connected to the included external AC power adapters, which must be connected to a working AC power source. Confirm that the red Power LEDs on both units are illuminated, indicating that there is power to both devices.
- Both strands of the fiber optic cable must be routed to the LC optical port with the corresponding number on both the Transmitter and Receiver units. For example, Fiber Strand #1 must be connected to Optical Port LC1 on both the Transmitter and Receiver units. This applies to strand 2 as well.

Once all connections have been verified, power ON the monitor first, then any intermediate equipment such as switchers, and finally the HDMI signal source. The green LINK LEDs should illuminate on both units.

If the system still fails to display an image, check to ensure that the HDMI signal source is compatible with the display by making a direct connection between the two so as to bypass the DVI-7360 HDMI Fiber Optic Extender. If there is still no image, then there is a compatibility issue between the source and the display that must be resolved.

After trying the above suggestions, should the problem still persist, contact your dealer for additional suggestions. Should the dealer's technical personnel be unable to assist you, please contact DVI Gear via telephone at 1.888.463.9927 (United States and Canada); international callers may dial 1.770.421.6699 or send an e-mail to [support@dvigear.com](mailto:support@dvigear.com).





## **7. 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 (3) years from the date of purchase. DVIgear assumes no liability to distributors, resellers, 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 damages are direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user, or any third party.

## **8. REGULATORY COMPLIANCE**

This product has been tested and found to be in compliance with applicable FCC and CE rules and regulations. The External AC Power Adapter is compliant with UL, CUL, CE, PSE, and GS regulations. These products are RoHS compliant.



Your Digital Connectivity Experts

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