DVIGEAR®

Quick Start Guide

DVI-23xxx-AOC

DVI Active Optical Cables

HYPERLIGHT®

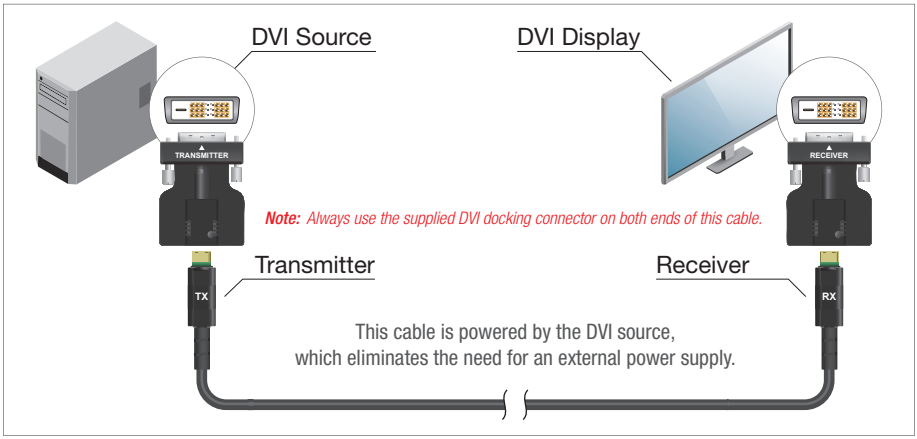
Introduction

DVIGear's HyperLight® Series is a new generation of advanced Active Optical Cables (AOC) that employs cutting edge technology to deliver unprecedented resolution, performance and value. HyperLight DVI cables provide robust features in a rugged yet compact and lightweight form factor. They are fully HDCP 1.4 compliant and support signals with data rates up to 4.95 Gbps. These features enable HyperLight cables to support any Single-Link DVI resolution with cable lengths up to 100 meters.

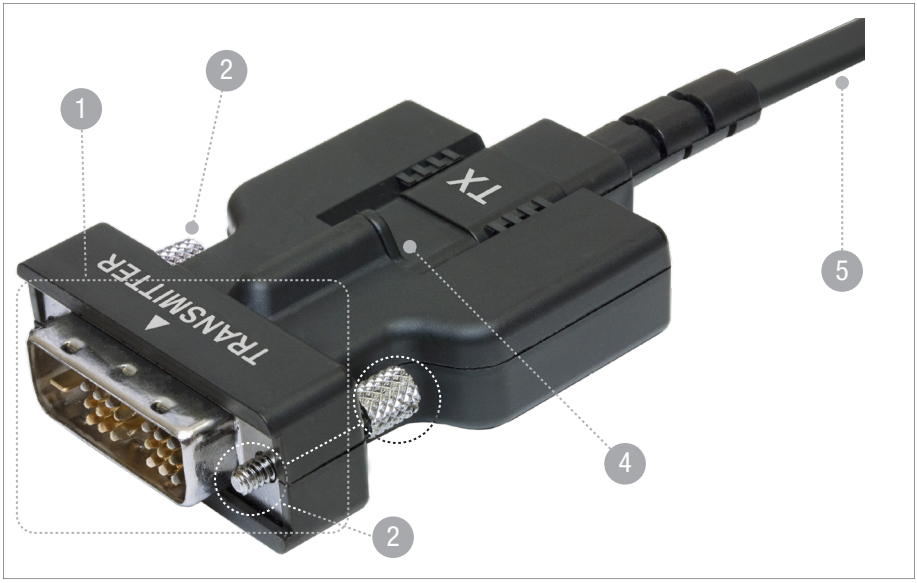
These cables are plenum-rated (UL CMP-OF), compact, lightweight and highly flexible. Constructed using a hybrid design of 4x POF (Polyfluorinated Optical Fiber) and 6x copper wires, they are rugged, yet flexible, with a minimum bend radius of just two millimeters. To minimize cable diameter, two removable DVI docking connectors may be detached, revealing a connector cross section that measures just 13.9 x 14.2 millimeters. The docking connectors include fixation screws for added security, as do the removable cable pull covers. These features make the cables easy to install even in narrow conduits, as well as in plenum spaces.

HyperLight cables are designed for use in mission critical applications where image quality and dependability are paramount. The video signals are transmitted over four optical fibers, which make them immune to interference from environmental noise. The optical transmission path provides a very low RFI / EMI profile, which allows the cables to be installed in sensitive applications with strict security requirements. The cables draw power from the connected DVI source, eliminating the need for an external power supply. HyperLight AOC cables are ideally suited for applications that require ultra-high resolution DVI signals to be extended over long cable runs with flawless image quality.

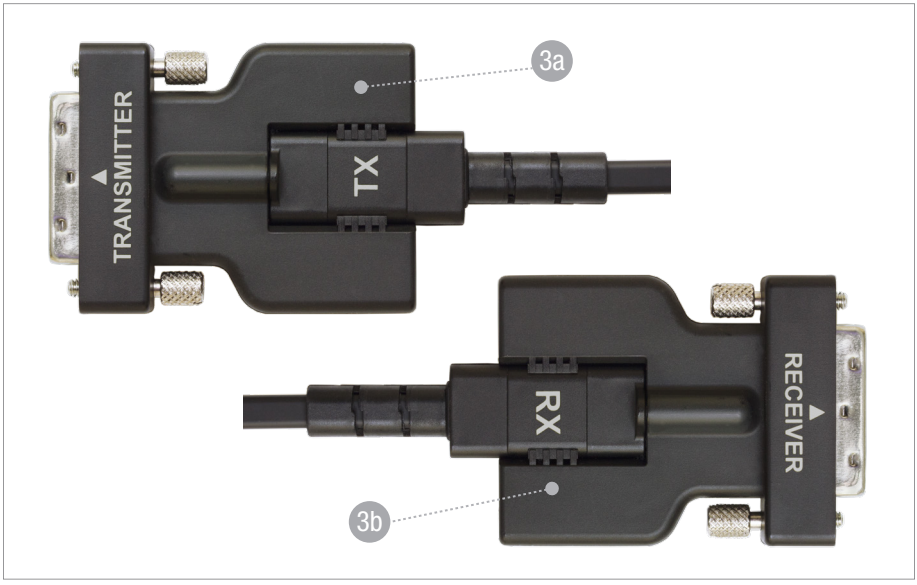
Typical Application



DVI-23xxx-AOC DVI Active Optical Cable



Cable Mated in DVI Docking Connector



TX / RX Cable Ends Mate with Transmitter / Receiver Docking Connectors Respectively

1. DVI Connector	Connect the Transmitter (TX) end to the DVI source device. Connect the Receiver (RX) end to the display device.
2. DVI Securing Screw	Insert and tighten screws on the DVI connectors when mating with the source and display units.
3a. Transmitter Docking Connector	Insert TX side of cable into the docking connector labeled Transmitter / Source. Secure with provided screw.(1)
3b. Receiver Docking Connector	Insert RX side of cable into the docking connector labeled Receiver / Display. Secure with provided screw.(1)
4. Fixation Screw	Used to ensure the docking connector is secured to the cable.
5. Hybrid Optical / Copper Cable	The DVI signal is transported from the TX module to the RX module over a hybrid optical / copper cable. The minimum bend radius(2) for this cable is 2 mm.

Note 1: WARNING: *Take care that the DVI Docking Connectors are used as shown. Mating the TX or RX cable ends to the wrong docking connector could cause damage to the cable.*

Note 2: WARNING: *Take care that the cable is not forced to bend beyond its minimum bend radius.*

Installation Instructions

1. If the cable must be pulled through a conduit or other tight space, please install the cable pull cover using the two screws provided. After the cable pull has been completed, remove this cover.
2. This cable includes two DVI docking connectors. One is labeled “Transmitter” on the front side and “Source” on the back; the other is labeled “Receiver” and “Display.” Connect the TX end of the cable to the Transmitter docking connector, and the RX end of the cable to the Receiver docking connector.
3. Connect the Transmitter / Source docking connector to a DVI source device (such as a PC).
4. Connect the Receiver / Display docking connector to a display or projector.
5. First, turn ON the Display and then turn ON any signal distribution equipment (if used). Finally, turn ON the source device. Test the system to ensure proper performance.

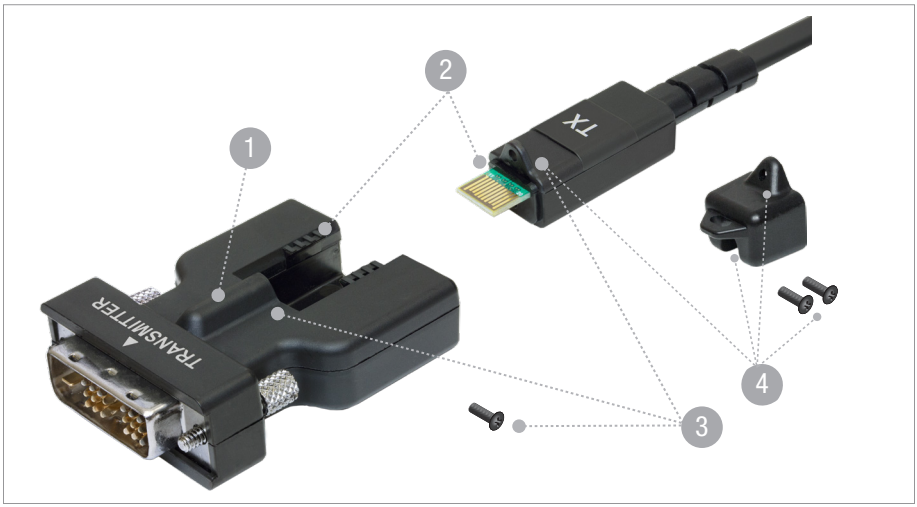
Info 1: *This cable requires very low power, which it draws from the connected DVI source. This eliminates the need for an external power supply.*

Info 2: *This cable may be connected to an HDMI source and/or display using a DVI to HDMI Adapter Cable (Model No. DVI-8511b or DVI-8511c).*

Note 3: WARNING: *This cable is UNIDIRECTIONAL and will not function if it is installed backward. Always connect the TX end (labeled Transmitter / Source) to the source device and the RX end (labeled Receiver / Display) to the display.*

Cable Mating Diagram

Detaching and Attaching the DVI Docking Connector and Cable Pull Cover to the Cable End[4]



1. Hold the DVI Connector with the docking slot facing upwards.
2. Insert the correct end of the cable into the appropriate DVI docking connector until it clicks firmly in place. Ensure that the TX cable end is seated in the Transmitter docking connector. The RX cable end should be seated in the Receiver docking connector.
3. Secure the cable end and the docking connector with the provided fixation screw.
4. Two protective cable pull covers (p.n. DVI-2300-AOC-CVR) are included that can be attached to the cable ends to facilitate ease of installation in narrow conduits as well as in plenum spaces. Secure each cover with two provided Phillips head screws prior to running the cable, then remove when finished.

Note 4: WARNING: *The electronics in the DVI Docking Connectors are length-specific. Do not swap docking connectors from cables of alternate lengths as this could result in degraded performance. Spare docking connectors can be ordered as follows:*

DVIGear Model No.	Product Description	Cable Lengths
DVI-2300-AOC-TX	DVI-AOC, Passive Docking Connector, Tx	10 – 30 m
DVI-2300-AOC-RX	DVI-AOC, Passive Docking Connector, Rx	10 – 30 m
DVI-2301-AOC-TX	DVI-AOC, Active Docking Connector, Tx	40 – 100 m
DVI-2301-AOC-RX	DVI-AOC, Active Docking Connector, Rx	40 – 100 m

DVIGear
1059 Triad Court, Suite 8
Marietta, GA 30062 USA

Toll Free: 888.463.9927
Tel: +1.770.421.6699
Fax: +1.770.234.4207

support@dvigear.com
www.dvigear.com