

Introduction

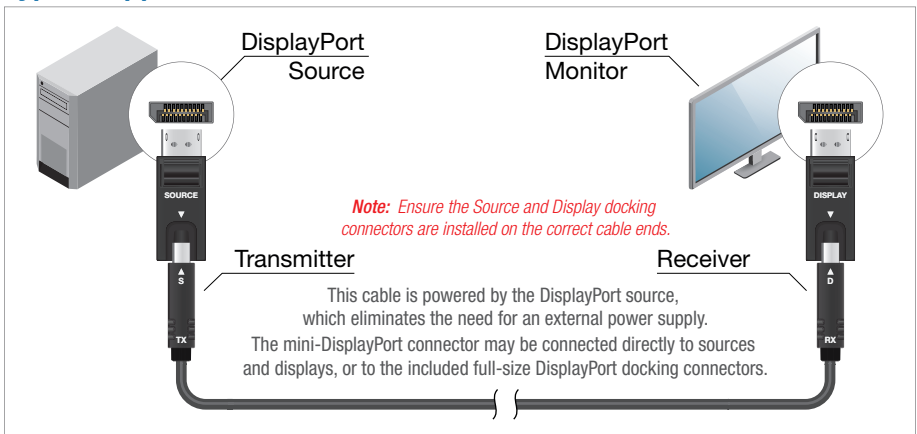
DVIGear's HyperLight® Series is a new generation of advanced Active Optical Cables (AOC) that employs cutting edge technology to deliver unprecedented resolution, performance and value. HyperLight cables support DisplayPort 1.4 and provide superior features in a compact, lightweight form-factor. They are fully HDCP 1.4 / 2.2 compliant and support signals with aggregate data rates up to 32.4 Gbps. (HBR3). These features enable HyperLight cables to support very high resolution applications at 4K / 60Hz (4:4:4) and 8K / 30Hz (4:4:4) with cable lengths up to 100 meters.

HyperLight cables support both DisplayPort and Mini DisplayPort connections. The cables are terminated with low profile Mini DisplayPort (mDP) connectors that measure less than 8x11 mm. This narrow cross-section makes it very easy to pull these cables through conduit or other tight spaces. The cables also include two detachable docking connectors that allow them to plug into full-size DisplayPort receptacles. The docking connectors include a locking pin for added security. This functionality enables seamless connections to content servers and use in other high-density applications without any intermediary dongles or adaptors.

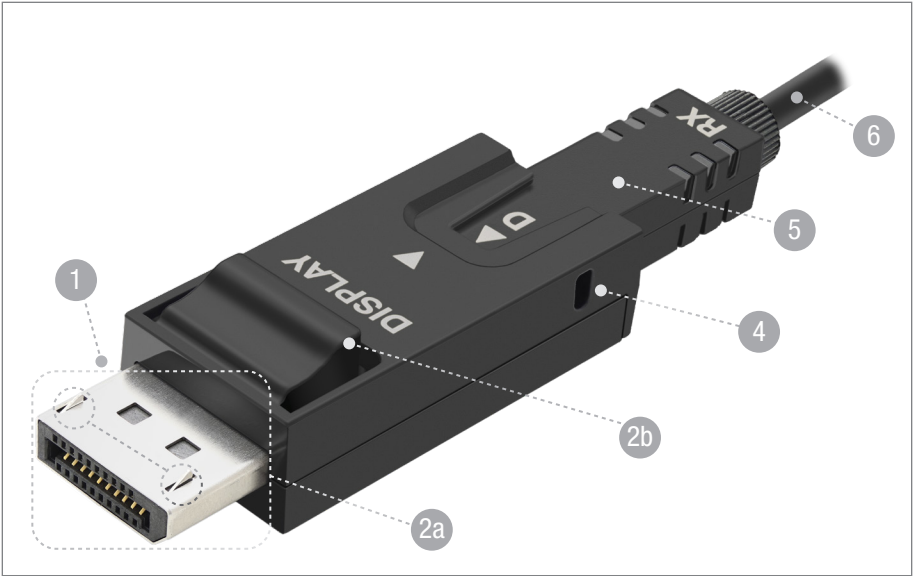
HyperLight cables are plenum rated (UL CMP-OF), compact, lightweight, and highly flexible. Constructed using a hybrid design of 4x GOF (Glass Optical Fiber) and 6x copper wires, they are rugged, yet flexible, with a minimum bend radius of 35 millimeters. This flexibility makes them an ideal solution for cable routing in tight spaces.

These cables are designed for use in mission-critical applications where image quality and dependability are paramount. HyperLight cables are engineered from the ground up for superior performance and unfailing reliability with MTBF >150,000 hours. 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 DisplayPort source, eliminating the need for an external power supply. HyperLight AOC cables are ideally suited for applications that require ultra-high resolution DisplayPort signals to be extended over long cable runs with flawless image quality.

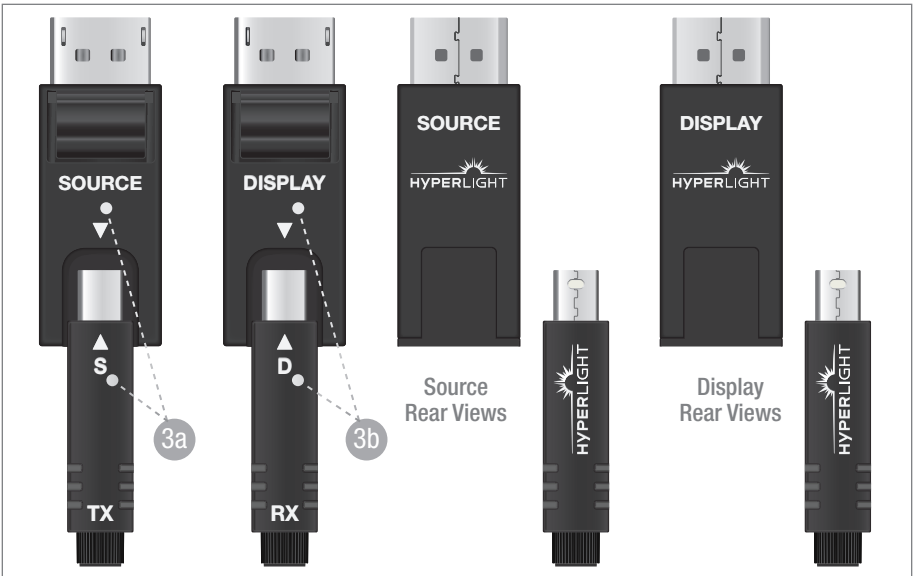
Typical Application



DVI-28xxx-AOC DisplayPort / mDP 1.4 Active Optical Cable



Cable mated in full-size DisplayPort Docking Connector



The mini DisplayPort cable ends mate with their appropriate Source / Display docking connectors.

DVI-28xxx-AOC

1. Full-size DisplayPort Connector	Connect the Transmitter (TX) end to the DisplayPort source device. Connect the Receiver (RX) end to the display device.
2a. Locking Mechanism	Connector includes locking mechanism for added security.
2b. Latch Release Button	Press to release locking mechanism on the DisplayPort connector.
3a. Source Docking Connector ⁽¹⁾	Insert TX end of cable into the docking connector labeled Source.
3b. Display Docking Connector ⁽¹⁾	Insert RX end of cable into the docking connector labeled Display.
4. Locking Pin	Ensures the docking connector is secured to the cable.
5. Mini-DisplayPort Connector	The cable's Mini DisplayPort connector may be mated directly to a source or display device, matching endpoints appropriately.
6. Hybrid Optical / Copper Cable	The DisplayPort 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 35 mm.

Note 1: WARNING: Take care that the DisplayPort Docking Connectors are installed as shown. Mating the TX or RX cable end 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

The DVI-28xxx-AOC cable includes an integrated transmitter module (labeled “TX” and “S”) and a receiver module (labeled “RX” and “D”). The transmitter end must be connected to the output port of a DisplayPort signal source (such as a PC). The receiver end should be connected to the input port of a DisplayPort display or projector. If connections to full-size DisplayPort products are required, then use the included docking connectors while taking care to install them on the correct cable ends.

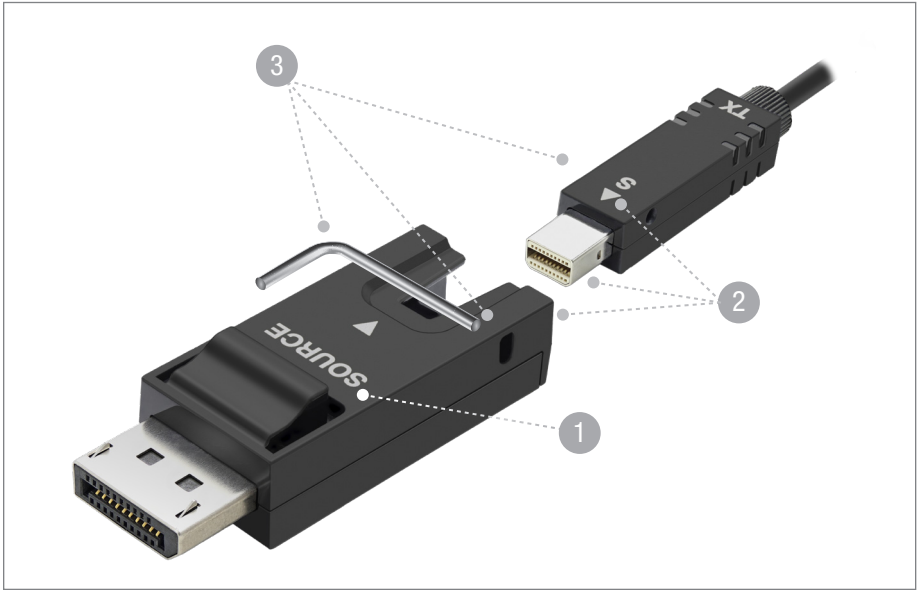
The video signals in this cable travel over internal optical fibers and are UNIDIRECTIONAL. Other signals (AUX Channel, HPD, power, etc.) travel over internal copper wires.

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

1. Connect the Transmitter end of the cable (labeled TX, S, Source) to the source device.
2. Connect the Receiver end (labeled RX, D, Display) to a display or projector.
3. This cable draws power from the connected DisplayPort source, which eliminates the need for an external power supply.
4. Turn ON the Display, and then turn ON switchers and other distribution equipment (if used). Finally, turn ON the source. Test the system to ensure proper performance.

Cable Mating Diagram

Detaching and attaching the full-size DisplayPort Docking Connector to the Cable End⁽⁴⁾



1. Hold the DisplayPort Connector with the Latch Release Button facing upwards.
2. Insert the correct end of the cable into the appropriate DisplayPort Docking Connector until it is firmly seated in place:
 - a. Ensure that the TX cable end (side labeled TX and S facing up) is seated in the Source Docking Connector (p.n. DVI-28000-TX).
 - b. Ensure that the RX cable end (side labeled RX and D facing up) is seated in the Display Docking Connector (p.n. DVI-28000-RX).
3. Install the Locking Pin by inserting it firmly through the docking connector and the cable connector as shown above. Take care to ensure that it is flush when seated.

Note 4: WARNING: Always use the supplied Docking Connectors when connecting this cable to products with full-size DisplayPort receptacles.

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