DVI-7317

4K HDMI Fiber Optic Extender, 1x LC

Preliminary

Unsurpassed Performance – The DVI-7317 is a high performance 4K Optical Extender that transmits high resolution HDMI signals over extreme distances using a single fiber optic cable. It supports HDMI v1.4 (HDCP compliant) signals with resolutions up to 3840x2160 /30p (4:4:4) and 3840x2160 /60p (4:2:0) over cable distances of up to 1,000 ft. (~ 300 m).

Fiber Optic Extension — The extender set consists of an optical transmitter module that converts the HDMI signals into light pulses for transmission over a single strand of Multi-Mode or Single-Mode optical fiber cable. An optical receiver module converts the light pulses back to an HDMI signal for display on a monitor or projector.

FEATURES

- Supports HDMI v1.4 (HDCP compliant)
- Supports resolutions up to 3840x2160 /30p (4:4:4) and 3840x2160 /60p (4:2:0)
- Maximum extension distances:

  Non-HDCP Applications:

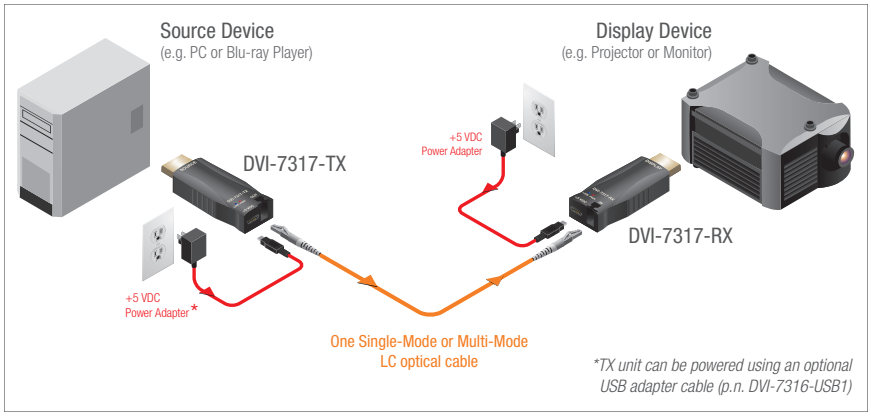
  Single-Mode Fiber: > 1.2 miles (~ 2,000 m)
  OM4 Multi-Mode Fiber: > 2,600 ft. (~ 800 m)
  OM3 Multi-Mode Fiber: > 1,800 ft. (~ 500 m)

  HDCP Applications:

  All Fiber Types: 1,000 ft. (~ 300 m)
- Extends signals over a single strand of LC-terminated optical fiber
- Supports EDID pass-through communications
- Optical fiber transmission is immune to environmental signal noise
- Low RFI / EMI profile for sensitive applications
- The Transmitter may be powered from most USB Ports using an optional USB adapter cable

Multiple Signals Over One Cable – While the video component of the signal is one-way, the unit also simultaneously supports extension of bidirectional signals such as EDID and HDCP pass-through. The data rate from the TX to RX is 10.3 Gbps. using the 1310nm wavelength, while the reverse channel travels from RX to TX over 1550nm at 250 Mbps. The extender uses wavelength-division multiplexing (WDM) to enable both signals to travel over a single strand of optical fiber. This enables DDC communications without the need for additional cables. These features make the DVI-7317 the ideal future-proof choice for systems designers and integrators who need to support high resolution HDMI / DVI signals with or without HDCP over extreme distances.

APPLICATION DIAGRAM



HDMI Connector

USB Micro-B and LC Connectors

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SPECIFICATIONS

Performance		
Standards Compliance	DVI v1.0, HDMI v1.4, HDCP v1.4	
Max. Pixel Clock / Max. Video Bit Rate	340 MHz / 3.40 Gbps. (Aggregate: 10.3 Gbps.)	
Supported Resolutions / Color Depth	Up to 4K: 3840x2160 /30p (4:4:4), 3840x2160 /60p (4:2:0) / 12-bit	
Digital Audio Support	Embedded HDMI digital audio up to 8-channel (7.1) LPCM, 192 kHz, 24-bit audio capability	
Connections / Indicators		
HDMI Input / HDMI Output	1 ea. 19-pin Female HDMI connector	
Optical / Power	1 ea. LC fiber optic connector / 1 ea. USB Micro-B female connector	
Diagnostic LEDs	Power, Optical Link	
Optical		
Optical Technology	2x Discrete Optical Channels	
Optical Wavelengths / Data Rates	1310 nm and 1550 nm / 10.3 Gbps. and 250 Mbps.	
Optical TX Unit	1310nm FP laser diode and 1550nm PIN photo diode, Class 1 laser products	
Optical RX Unit	1550nm FP laser diode and 1310nm PIN photo diode, Class 1 laser products	
Optical TX Output Power	10.3 Gbps.: -6.0 dBm (minimum) / 0.0 dBm (maximum)	
Optical TX Extinction Ratio	10.3 Gbps.: 3.5 dBm (minimum) / 7.0 dBm (maximum)	
Optical RX Input Sensitivity	10.3 Gbps.: -14.5 dBm (minimum)	
Optical RX Max. Input Power	10.3 Gbps.: 0 dBm (maximum)	
Optical Link Power Budget	8.5 dB (minimum)	
Cable		
Maxium Cable Length (typical)	**Non-HDCP Applications:** 9/125µ Single-Mode Fiber: > 1.2 miles (~ 2,000 meters) 50/125µ OM4 Multi-Mode Fiber: > 2,600 ft. (~ 800 meters) 50/125µ OM3 Multi-Mode Fiber: > 1,800 ft. (~ 500 meters)	**HDCP Applications:** All Fiber Types: 1,000 ft. (~ 300 meters)
DVIGear Fiber Cable	OFNP, Plenum-rated – additional data and custom lengths available on request	
Cable Jacket	OFNP, Plenum-rated, Black PVC Jacket	
Cable Outside Diameter	0.2" (4.4 mm)	
DDC Support		
EDID Support	EDID of connected display is transparent	
HDCP Support	Supports HDMI signals with or without HDCP encryption	
Mechanical		
Construction	High-impact metal enclosure with jet black finish	
Case Dimensions (L x W x H)	2.3" x 0.9" x 0.4" (59.4 mm x 22.3 mm x 10.9 mm)	
Net Weight	DVI-7317-TX: 0.92 oz. (26 g); DVI-7317-RX: 0.92 oz. (26 g)	
Environmental		
Operating / Storage Temperature	32° to +158° F (0° to +70°C); -40° to +185° F (-40° to +85°C)	
Operating / Storage Humidity	5% to 80% (non-condensing); 5% to 95% (non-condensing)	
Power Requirements		
Optical Transmitter / Receiver	The TX and RX units should be powered by the supplied external power adapters. The TX can be powered using an optional USB adapter cable (see below).	
External AC Power Adapter	Model No: DVI-7330-PS; Input: 100-240VAC / 50-60Hz 0.4A; Output: 5VDC, 2.0A	
Maximum Power Consumption	DVI-7317-TX: 320mA (1.76 watts); DVI-7317-RX: 320mA (1.76 watts)	
Regulatory Approvals		
Fiber Optic Extender Unit	FCC Class B, CE, RoHS, IEC EN60601-1-2:2007	
Laser	US-FDA CDRH Class 1, IEC60950, IEC60825-1	
External AC Power Adapters	FCC, CE, UL, C-UL, CEC, PSE, GS, RoHS, WEEE	
Warranty		
Limited Warranty	3 Years Parts and Labor	
Model Numbers		
DVI-7317	4K HDMI Fiber Optic Extender, 1x LC	
DVI-7317-TX / DVI-7317-RX	4K HDMI Fiber Optic Transmitter, 1x LC / 4K HDMI Fiber Optic Receiver, 1x LC	
DVI-CUST-OPT	Custom Fiber Optic Cable, Plenum-rated, 1x LC; Specify: Length and Fiber Type (MMF OM4, SMF)	
Accessories		
Included: 2x External AC Power Adapters (DVI-7330-PS) with USA plug, 1x Quick Start Guide, 4x Heat Insulation Pads Optional: External AC Power Adapter (p.n. DVI-7330-PS) with Euro, UK, or Australia plugs, USB Type A Male to USB Micro-B Male Adapter Cable (p.n. DVI-7316-USB1), HDMI Female to DVI-D Male Adapter Cable (p.n. DVI-8410a)		