

## MultiPort 4K Fiber Optic Extenders



### DVI-7340

MultiPort 4K Fiber Optic Extender, 1x LC

### DVI-7341

MultiPort 4K Fiber Optic Extender, 1x ST

**Designed for Extreme Requirements** — The DVI-7340 and DVI-7341 are high-performance, cost-effective 4K Optical Extenders designed to meet and exceed even the most demanding system requirements. They support an enormous array of signal types with or without HDCP content protection, provide long-distance extension over a single fiber cable, and support ultra-high resolutions up to 4K (UHD).

**Multiple Signals, High Resolutions, One Cable** — These extenders support multiple signals such as uncompressed HDMI or DVI, embedded audio, balanced or unbalanced external audio, bidirectional IR, RS-232 and Ethernet using a single fiber optic cable. They support HDMI with embedded audio as well as independently routed balanced audio signal extension. They extend HDMI v1.4 (HDCP compliant) signals with flawless image quality at resolutions up to 3840x2160 /30p (4:4:4) and 3840x2160 /60p (4:2:0). Three EDID modes are provided: Pass-through, Learn, and Factory Default. The units support cable distances of up to 1,000 ft. (300 m) with or without HDCP. In applications where HDCP support is not needed, these extenders support optical links up to 1.2 miles (2 km).

**Fiber Optic Technology** — Each extender set consists of an optical transmitter module that converts the AV 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 AV signals for the display as well as other downstream devices. By using fiber optic technology, these extenders can achieve much greater distances than other extension methods such as copper cables or CAT-X extenders. The DVI-7340 includes an LC fiber port, while the DVI-7341 includes a rugged locking ST connector. All these features make the DVI-7340 and DVI-7341 the ideal future-proof, cost-effective choice for systems designers and integrators who need to support high resolution HDMI / DVI signals with or without HDCP over extreme distances.

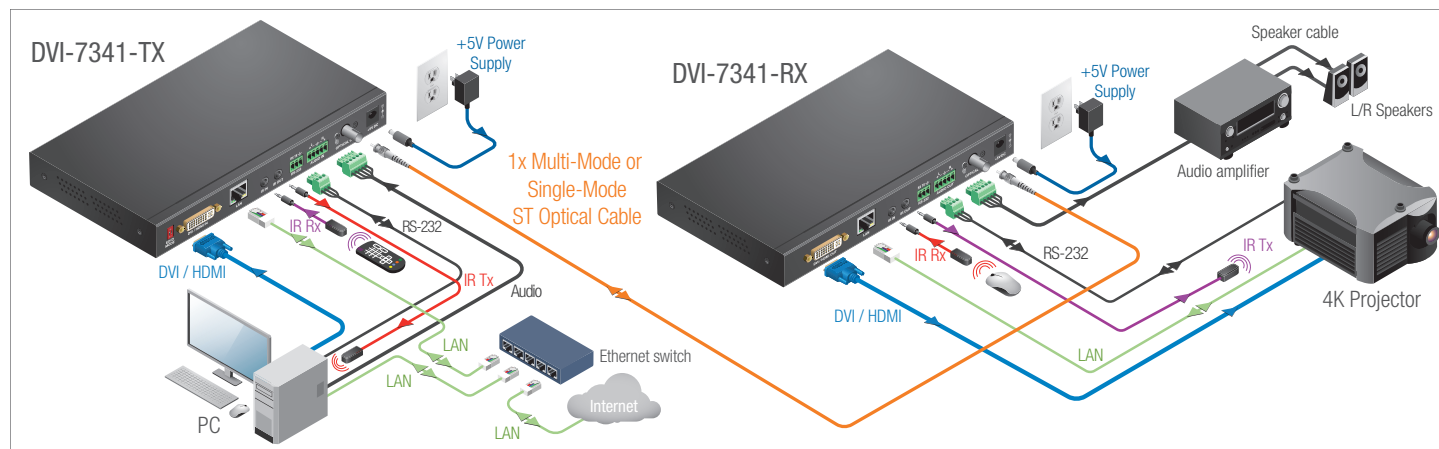
### FEATURES

- Supports HDMI v1.4 (HDCP compliant)
- Extends HDMI, Balanced or Unbalanced Audio, Ethernet (10/100Base-T), RS-232, and bidirectional IR over a single fiber optic cable
- Supports resolutions up to 4K (UHD):  
3840x2160 /30p (4:4:4), 3840x2160 /60p (4:2:0)
- **Maximum extension distances:**  
HDCP Not Supported:  
Single-Mode Fiber: > 1.2 miles (~ 2,000 m)  
OM3 Multi-Mode Fiber: > 1,000 ft. (~ 300 m)  
HDCP Supported:  
All Fiber Types: 1,000 ft. (~ 300 m)
- Extends signals over a single strand of LC or ST-terminated optical fiber
- Three EDID Modes: Pass-through, Learn, and Factory Default
- Optical fiber transmission is immune to environmental signal noise
- Low RFI / EMI profile for sensitive applications
- Locking DVI and DC power connectors for added security and reliability
- Heavy-duty mounting brackets are included

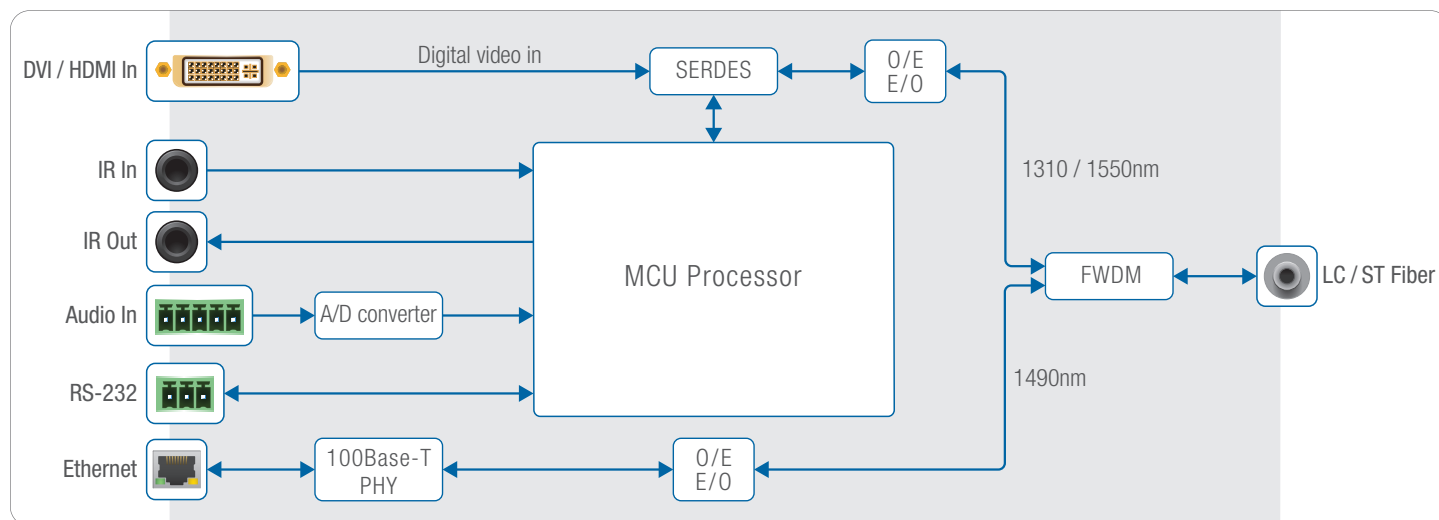
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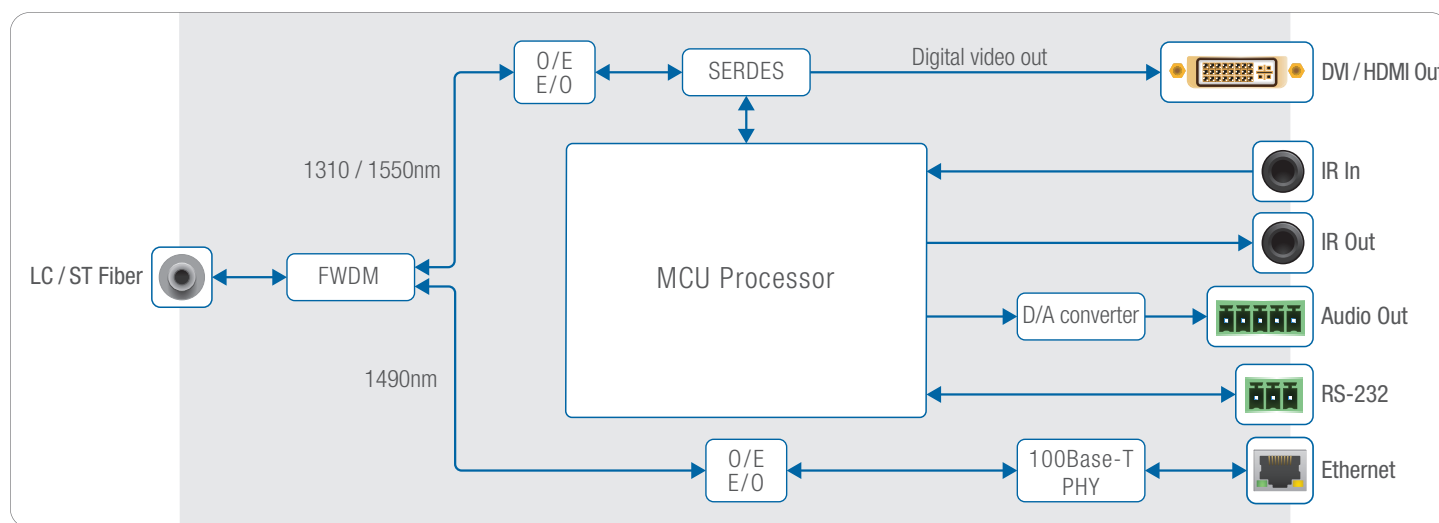
### STAND-ALONE DIAGRAM



### DVI-7340-TX / DVI-7341-TX INTERNAL BLOCK DIAGRAM



### DVI-7340-RX / DVI-7341-RX INTERNAL BLOCK DIAGRAM



## MultiPort 4K Fiber Optic Extenders

### DVI-7340 / DVI-7341 FRONT AND REAR VIEWS<sup>(1)</sup>



**Note 1:** Each DVI-7340 and DVI-7341 set consists of a Transmitter (TX) and a Receiver (RX). The TX units are shown above. The RX units have a similar form factor as the TX units with a few exceptions. The front of the RX units does not include an EDID LED or learn button. The rear of the RX units does not include an EDID DIP switch.

### SPECIFICATIONS

Performance	
Standards Compliance	DVI v1.0, HDMI v1.4, HDCP v1.4
Maximum Pixel Clock Frequency	340 MHz
Maximum Video Bit Rate	3.40 Gbps. / 10.3 Gbps. (Aggregate)
Supported Color Depth	12-bit
Supported Resolutions	Up to 4K: 3840x2160 /30p (4:4:4), 3840x2160 /60p (4:2:0)
Digital Audio Support	Embedded HDMI digital audio up to 8-channel (7.1)
Analog Audio Support	Independent balanced or unbalanced stereo audio channel
Connections	
DVI Input / DVI Output	1 ea. 24+5 DVI-D female connector
Audio Input / Audio Output	1 ea. Balanced or Unbalanced Stereo Audio on 5-Pin Phoenix connector
Optical	DVI-7340: 1 ea. LC fiber optic connector; DVI-7341: 1 ea. ST fiber optic connector
Ethernet	1 ea. RJ-45 female connector
RS-232	1 ea. 3-Pin Phoenix connector
IR Input / IR Output	IR IN: 1 ea. 3.5mm stereo mini-jack; IR OUT: 1 ea. 3.5mm mini-jack
Power	1 ea. Twist-locking 2.5 / 5.5 mm female connector
Control	
Rear Panel (TX Only)	EDID Mode settings on 2x DIP switches
Diagnostic LEDs	EDID Mode (TX only), Power, Fiber Link, and Hot Plug Detect
Optical	
Optical Technology	FWDM (Filter Wavelength Division Multiplexing) using 3 optical wavelengths
Optical Wavelengths / Data Rates	1310nm = 10.2 Gbps.; 1550nm = 250 Mbps.; 1490nm = 125 Mbps.
Optical Transmitter Unit	Transmitters: 1310nm and 1490nm FP Laser Diodes (Class 1 Laser) Receivers: 1490nm and 1550nm PIN Photo Diodes
Optical Receiver Unit	Transmitters: 1490nm and 1550nm FP Laser Diodes (Class 1 Laser) Receivers: 1310nm and 1490nm PIN Photo Diodes
Optical Transmitter Output Power	1310nm: -6.0 dBm (minimum) / 0.0 dBm (maximum)
Optical Transmitter Extinction Ratio	1310nm: 3.5 dBm (minimum) / 7.0 dBm (maximum)
Optical Receiver Input Sensitivity	1310nm: -14.5 dBm (minimum)
Optical Receiver Maximum Input Power	1310nm: 0 dBm (maximum)
Optical Link Power Budget	8.5 dB (minimum)

## MultiPort 4K Fiber Optic Extenders

### SPECIFICATIONS (CONTINUED)

Cable	
Maximum Cable Length (typical)	<b>HDCP Not Supported:</b> 9/125µ Single-Mode Fiber: > 1.2 miles (~ 2,000 meters) 50/125µ OM3 Multi-Mode Fiber: > 1,000 ft. (~ 300 meters)  <b>HDCP Supported:</b> 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 Management	Three EDID Modes are available: Pass-through (transparent), Learn (cached), Factory Default (1080p 2-Ch audio)
HDCP Support	Supports HDMI signals with or without HDCP encryption (in Pass-through EDID Mode only)
Mechanical	
Case Dimensions (H x W x D)	<b>Without Brackets:</b> 1.1" x 8.6" x 5.6" (26.7 mm x 218.2 mm x 141.7 mm) <b>With Brackets:</b> W = 10.5" (266.2 mm) <b>DVI-7340:</b> D = 5.6" (142.5 mm)
Weight	1.75 lbs. / 796 g (each unit)
Construction	High-impact metal enclosure with black finish
Mounting Options	Mounting Brackets, Optional 1U Full Width Rack Mount Kit (supports two units side by side)
Environmental	
Operating / Storage Temperature	32° to +122° F (0° to +50°C); -22° to +158° F (-30° to +70°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
External AC Power Adapters	Model No: DVI-7207-PS Input: 100-240VAC / 50-60Hz 0.6A; Output: 5VDC, 3.0A
Maximum Power Consumption	TX Unit: 900mA (4.5 watts); RX Unit: 900mA (4.5 watts)
Regulatory Approvals	
Fiber Optic Extender Unit	FCC Class B, CE, RoHS
Laser	US-FDA CDRH Class 1
External AC Power Adapters	FCC, CE, UL, C-UL, CEC, PSE, GS, RoHS, RCM & WEEE
Warranty	
Limited Warranty	3 Years Parts and Labor
Model Numbers	
DVI-7340: (DVI-7340-TX and DVI-7340-RX)	MultiPort 4K Fiber Optic Extender, 1x LC
DVI-7341: (DVI-7341-TX and DVI-7341-RX)	MultiPort 4K Fiber Optic Extender, 1x ST
DVI-CUST-OPT	Custom Fiber Optic Cable, Plenum-rated; Specify: Length, Fiber Type (MMF, SMF) and Connector (LC or ST)
Accessories Included <sup>(2)</sup>	Optional Accessories
1x External AC Power Adapter (DVI-7207-PS) with USA plug per unit 1x User Guide 1x 5-Pin Phoenix Connector (Phoenix p.n. 1840395) 1x 3-Pin Phoenix Connector (Phoenix p.n. 1840379) 1x IR Transmitter (DVI-7360-IR-TX) included with TX Unit 1x IR Receiver (DVI-7361-IR-RX) included with RX Unit 2x Mounting Brackets with Screws 4x Rack Mounting Screws	External AC Power Adapter (p.n. DVI-7207-PS) with Euro, UK, or Australia plugs +5 VDC Power Distribution Unit (p.n. DVI-7525-PDU) 19" Rack Mount Kit (p.n. DN-100-RMK) Custom Optical Cables (contact DVIGear for details)

**Note 2:** The Transmitter and Receiver Units are sold separately. The accessories shown here are included per unit.

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