



High Performance — The DVI-7348 is a compact, high performance fiber optic extender that supports SDI, HD-SDI, 3G-SDI and 12G-SDI signal extension over a single strand of Single-Mode optical fiber at distances up to 6.2 miles (~10 km). This extender set consists of an optical transmitter unit that converts the SDI signals into light pulses for transmission over an optical fiber cable. An optical receiver unit converts the light pulses back to an SDI signal for downstream processing or display on a monitor.

Superior Design — The transmitter unit includes an SDI input with a buffered loop-through SDI output, plus connections for RS-485 and Tally Light control. The receiver unit includes two buffered SDI outputs, as well as connections for RS-485 and Tally Light control, which allows equipment in the control room to access and control acquisition cameras over the optical link. Both units are housed in rugged, die-cast metal cases equipped with 75 ohm BNC connectors. A single LC fiber optic connection is used to link Tx and Rx units.

These features make the DVI-7348 the perfect solution for extension of SDI, HD-SDI, 3G-SDI, and 12G-SDI signals over very long distances in even the most demanding broadcast, studio, and live production environments.

FEATURES

- Supports:
 - SMPTE 259M (SD-SDI)
 - SMPTE 344M (ED-SDI)
 - SMPTE 292M (HD-SDI)
 - SMPTE 424M (3G-SDI)
 - SMPTE ST 2081 (6G-SDI)
 - SMPTE ST 2082 (12G-SDI)
- Supports data rates up to 11.88 Gbps
- Supports Single-Mode optical fiber distances up to 6.2 miles (~ 10 km)
- Extended length 25 miles (~ 40 km) option available
- Utilizes a single optical cable
- Compact, rugged metal enclosure with locking BNC connectors
- Supports RS-485 and Tally Light Control for remote control of acquisition cameras
- Wide operational temperature range: -40° to +185°F (-40° to +85°C)
- Low RFI / EMI profile for sensitive applications
- Optical fiber transmission is immune to environmental signal noise



DVI-7348-TX / RX Front View

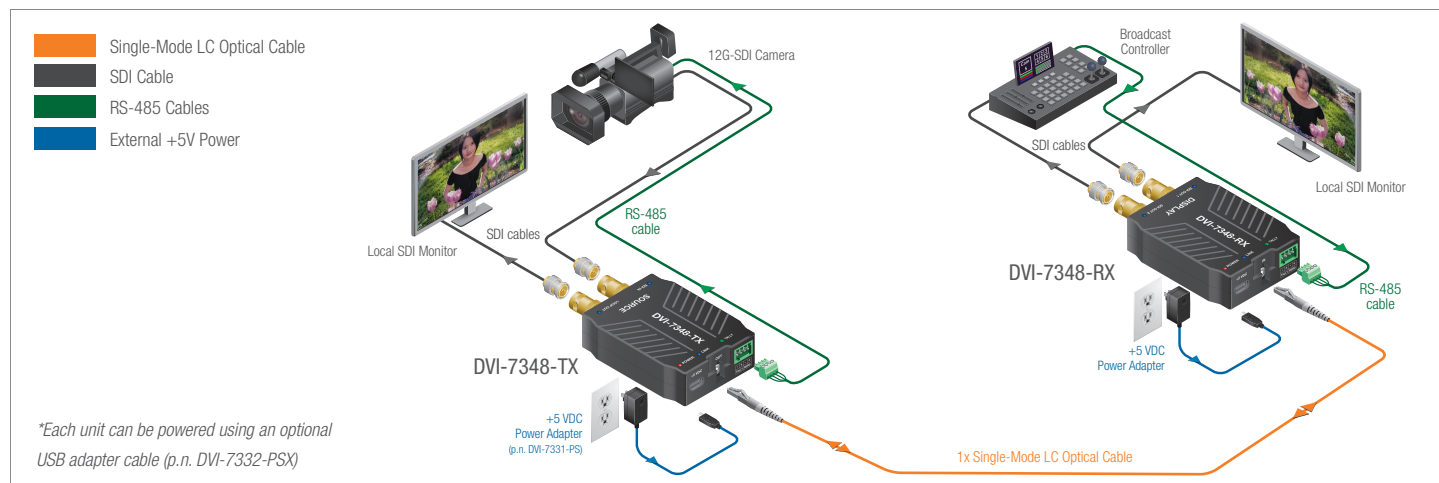


DVI-7348-TX Rear View

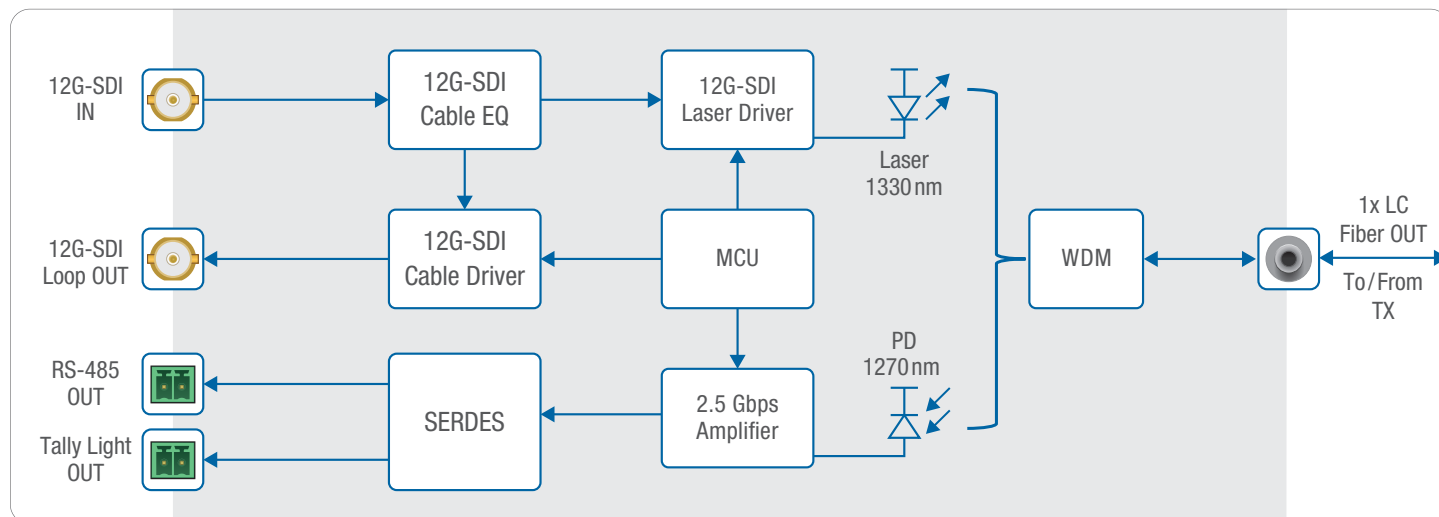
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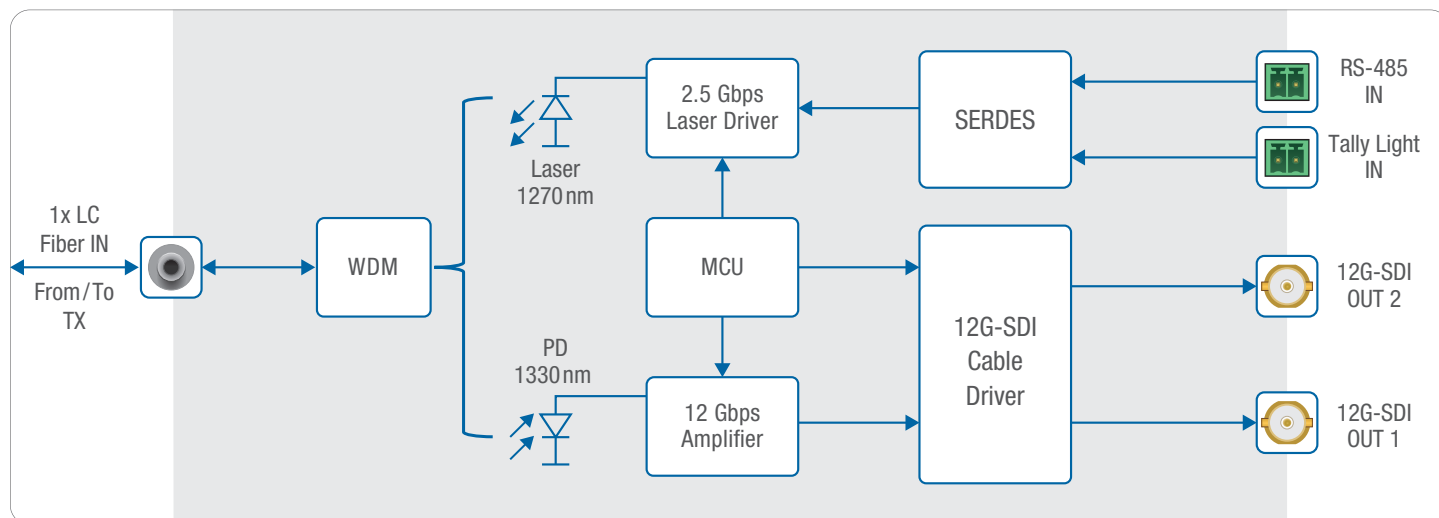
STAND-ALONE DIAGRAM



DVI-7348-TX INTERNAL BLOCK DIAGRAM

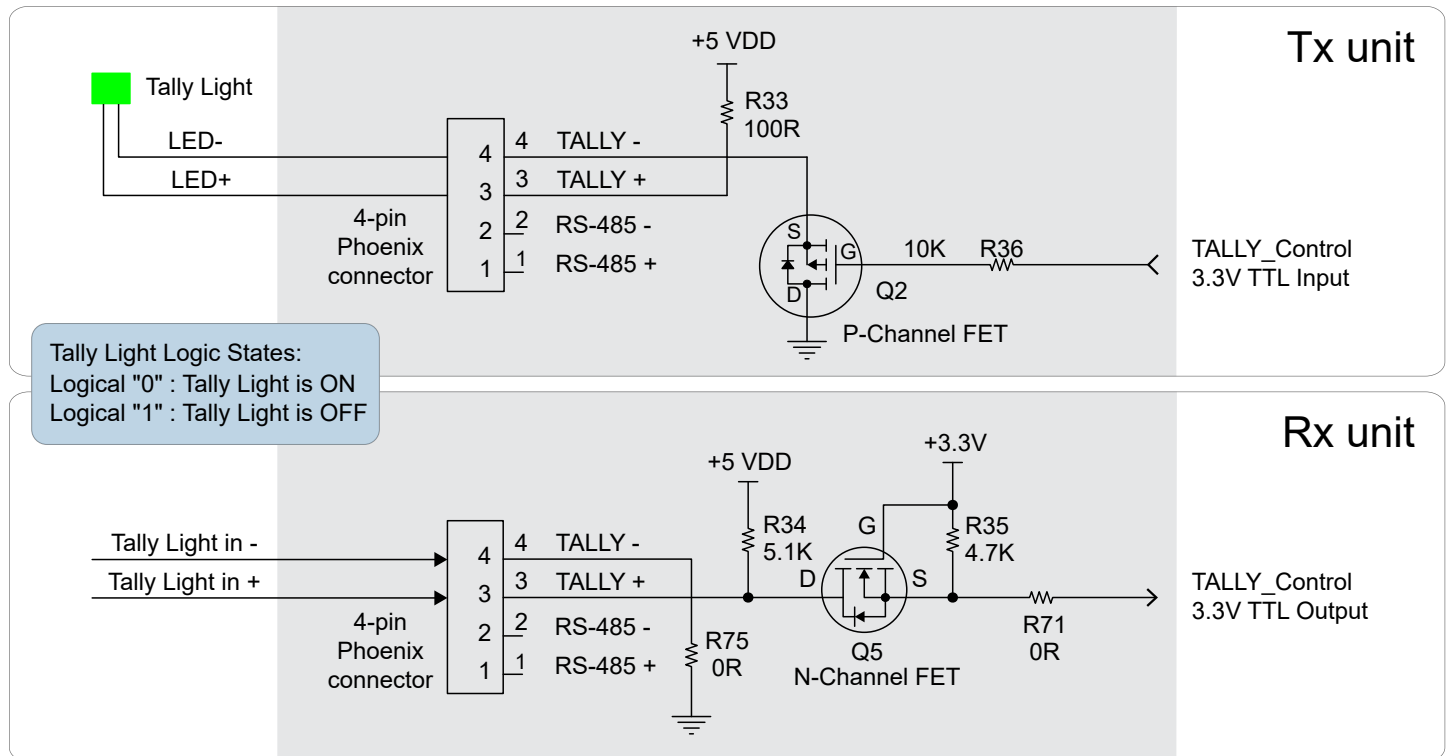


DVI-7348-RX INTERNAL BLOCK DIAGRAM



TALLY LIGHTS

Tally Lights are used to indicate the status of a camera in a live event production environment. For example, when the Tally Light is turned ON, a remote operator knows that their camera has been selected for the live production. In practice, the Tally Light is normally controlled by a production switcher or similar control device in the studio or OB van. This extender uses 3.3V TTL logic over the optical fiber to turn ON / OFF the Tally Light. The same control device in the studio can send RS-485 data over the optical fiber to control other camera functions.



SPECIFICATIONS

Performance	
Compliance	SMPTE 259M (SD-SDI); SMPTE 344M (ED-SDI); SMPTE 292M (HD-SDI); SMPTE 424M (3G-SDI); SMPTE ST 2081 (6G-SDI); SMPTE ST 2082 (12G-SDI)
Maximum Video Bit Rate	11.88 Gbps (12G-SDI)
Maximum RS-485 Bit Rate	4.0 Mbps
Supported Color Depth	12-bit
Input Impedance	75 ohms
Signal Level	800 mVpp +/- 50 mV
Supported Video Formats	480i, 480p, 576i, 576p, 720/30p, 720/60p, 1080i, 1080/30p, 1080/60p, 1080/120p, 2160/30p, 2160/60p
Digital Audio Support	HD-SDI = 16 Channels of embedded 48 kHz, 24-bit audio channels 3G-SDI = 32 Channels of embedded 48 kHz, 24-bit audio channels 12G-SDI = 64 Channels of embedded 48 kHz, 24-bit audio channels
Connections / Indicators	
SDI Input w/Looping Output	2x BNC Coaxial Male Connectors
Dual SDI Outputs	2x BNC Coaxial Male Connectors
Optical Input / Output	1x LC optical connector
RS-485 ⁽¹⁾	4-pin Phoenix Connector
Tally Light Control ⁽¹⁾	4-pin Phoenix Connector
Power Inputs	1x Female USB Micro-B connector

SPECIFICATIONS (CONTINUED)

Optical		
Optical Technology	2x Discrete Optical Channels	
Optical Data Rates	SDI Signals: up to 11.88 Gbps	RS-485, Tally Light: 2.5 Gbps
Optical Transmitter Unit	1x 1330 nm DFB Laser, Class 1 Laser Product	1x 1270 nm GaAs PIN Photo Diode
Optical Receiver Unit	1x 1270 nm DFB Laser, Class 1 Laser Product	1x 1330 nm GaAs PIN Photo Diode
Optical Transmitter Output Power	-4 dBm (minimum) / 0 dBm (maximum)	
Optical Transmitter Extinction Ratio	>5.0 dB	
Optical Receiver Input Sensitivity	-14.5 dBm (minimum) / 0 dBm (maximum)	
Optical Link Power Budget	8 dB (minimum)	
Cable		
Fiber Cable Type / Max. Length	9/125μ Single-Mode Fiber with 1x LC connector / 6.2 miles (10 km) ⁽²⁾	
DVIGear Fiber Cable	OFNP, Plenum-rated, Indoor/Outdoor-rated, Black PVC Jacket	
Cable Outside Diameter	0.12” – .2” (3.0 – 5.0 mm)	
Mechanical		
Construction	Heavy-duty, Die-cast metal enclosure with jet black finish	
Case Dimensions (L x W x H)	Case Only: 2.7” x 2.0” x 0.6” (68.0 mm x 50.0 mm x 15.0 mm)	Case and Connectors: 3.3” x 2.0” x 0.6” (84.8 mm x 50 mm x 15 mm)
Net Weight	DVI-7348-TX: 4.2 oz. (120 g) / DVI-7348-RX: 4.2 oz. (120 g)	
Environmental		
Operating / Storage Temperature	-40° to +185°F (-40° to +85°C)	
Operating / Storage Humidity	Operating: 5% to 80% (non-condensing)	Storage: 5% to 95% (non-condensing)
Power Requirements		
Optical Transmitter / Receiver	The Tx and Rx units can be powered from a functioning USB port using a USB adapter cable, or by the supplied external power adapters	
External AC Power Adapter	Input: 100-240 VAC, 50-60 Hz, 0.2 A	Output: 5 VDC, 2.0 A
Maximum Power Consumption	DVI-7348-TX: 450 mA (2.25 watt)	DVI-7348-RX: 300 mA (1.5 watt)
Regulatory Approvals		
Fiber Optic Extender Unit	FCC, CE, RoHS	
AC Power Adapter	FCC, CE, UL, C-UL, CEC, GS, PSE, RoHS	
Warranty		
Limited Warranty	3 Years Parts and Labor	
Model Numbers		
DVI-7348	Fiber Optic Extender, 12G-SDI, SMF, 1x LC	
DVI-7348-TX	Fiber Optic Transmitter, 12G-SDI, SMF, 1x LC	
DVI-7348-RX	Fiber Optic Receiver, 12G-SDI, SMF, 1x LC	
DVI-CUST-OPT	9/125μ Single-Mode Optical Fiber Cable, Plenum-rated, 1x LC (specify length)	
Accessories Included		Optional Accessories
2x External AC Power Adapters (p.n. DVI-7331-PS) with USA plug 1x Quick Start Guide		External AC Power Adapter (p.n. DVI-7331-PS) with Euro, UK, or Australia plugs USB Type A Male to USB Micro-B Male Adapter Cable (p.n. DVI-7332-PSX) +5 VDC Power Distribution Unit (p.n. DVI-7525-PDU) Custom Optical Cables (contact DVIGear for details)

Note 1: This feature is unidirectional from RX to TX.

Note 2: Extended range (40 km) version available on request.

All specifications are subject to change without notice.