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VX-1DVI-SD
DVI Video, RS-232, Stereo Audio Fiber Optic Extender

Features

- Extends DVI-D graphics resolutions up to 1920x1200 and video resolutions up to 1080p/60Hz
- RS-232 control of surgical displays via duplex data channel
- True Plug & Play - Passes CEC, EDID & HDCP, No EDID Learning Necessary
- Diagnostic LED for power and fiber communication status
- HDCP V1.2 compliant. HDCP over DVI
- Multimode operation up 305m using OM3 fiber
- Singlemode operation up to 10 km
- Uses low profile LC optical connector
- Transmitter powered via pin 14 of graphics card
- UL/EN 60601-1-3 and FCC certifications pending

Applications

- Medical OR Integration / Endoscopy
- Airport / Train / Information Displays
- Digital Signage / Video Walls
- Classrooms
- Home theater

Uncompressed DVI Video & Serial Data over One Optical Fiber

The VX-1DVI-SD optical extender is a single fiber DVI extender that can send 1 channel of DVI video, 1 channel of serial data and 2 channels of analog audio (with adapter) up to 10 km. The extender is a low profile unit that transports over standard multimode or singlemode fiber using LC type optical connectors for a secure cable connection. LC connectors are the smallest and most widely used type. This allows the easiest installation possible through conduit or wall/ceiling mounted boom arms.

Graphic resolutions up to 1920x1200 and video resolutions up to 1080p/60Hz are possible over a single fiber. Both video and data can be extended out to 10 km without the need for distribution amplifiers, cable equalization or in-line repeaters that are normally associated with copper cable extension. The VX-1DVI-SD is the most economical solution for sending a single channel of digital video with data and audio over long distances.

True Plug & Play with HDCP

No more EDID learning or blanked out screens! Critical EDID information is read directly from the monitor and passed to the graphics card via the duplex data channel. The VX-1DVI-SD is also HDCP compliant allowing the exchange of keys between the source and display. Copyrighted material can be sent over the fiber link.

Supported Resolutions		Supported Resolutions	
640 x 480	VGA	1280 x 960	SXGA- (UVGA)
480i / 480p		1280 x 1024	SXGA
720 x 576		1360 x 768	WXGA (HD)
576i / 576p		1366 x 768	WXGA (HD)
768 x 480	WVGA	1400 x 1050	SXGA+
800 x 600		1440 x 900	WXGA+
854 x 480		1600 x 900	WSXGA (HD+)
960 x 600		1600 x 1000	
960 x 1200		1600 x 1024	WSXGA
1024 x 600	WSVGA	1600 x 1200	UXGA
1024 x 640		1600 x 1280	
1024 x 768	XGA	1680 x 1050	WSXGA+
1152 x 864	XGA+	1792 x 1344	
1280 x 720	WXGA	1856 x 1392	
720p		1920 x 1080	UXGA
1280 x 768	WXGA	1080i / 1080p	FHD
1280 x 800	WXGA	1920 x 1200	WUXGA

- All VESA resolutions supported.

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Models

DVI Unit Transmitter	DVI Unit Receiver	DVI Unit Transmitter/Receiver Set
VX-1DVI-SD/XMT-XX-LC	VX-1DVI-SD/RCV-XX-LC	VX-1DVI-SD/LINK-XX-LC
VX-1DVI-SD/XMT-XX-LC-UN	VX-1DVI-SD/RCV-XX-LC-UN	VX-1DVI-SD/LINK-XX-LC-UN

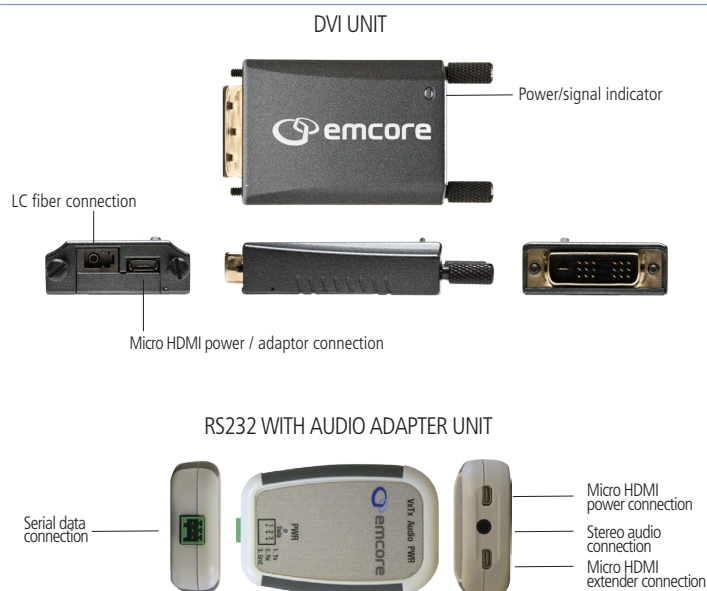| Adapter Unit Transmitter	Adapter Unit Receiver
VX-1DVI-SD/XMT-RSA	VX-1DVI-SD/RCV-RSA

Included For DVI Unit	Included For Adapter Unit
PC-USB-MHDMI	DC-MHDMI-MHDMI
Power Cord for USB to Micro HDMI [P/N Y5538-508]	Data Cable for Micro HDMI to Micro HDMI [P/N Y5538-509]
PS-501 (with -UN model)	
Universal 100-240VAC power supply and EU, USA, UK, AUS kit [P/N G0220-160]	

- When ordering replace "XX" with one of the Fiber Type Options
- UN = With universal power supply
- Chromatic dispersion as well as other losses should also be taken into account
- Stated distances are the maximum range, shorter distance may require attenuation
- Standard connection type is UPC
- Multimode TX must be used with multimode RX and singlemode TX must be used with singlemode RX

Optical Specifications

Fiber Type "XX"	Wavelength (nm)	Data Rate	Optical Budget (db)	Distance (km)	Connector
MM	850/1310/1550	6.25 Gbps	<12	0.3	LC
SM	1490/1550/1310	6.25 Gbps	<12	10	LC

Connection Diagram

DVI UNIT

Power/signal indicator

LC fiber connection

Micro HDMI power / adaptor connection

RS232 WITH AUDIO ADAPTER UNIT

Serial data connection

Micro HDMI power connection

Stereo audio connection

Micro HDMI extender connection

Compliance (pending)

General

Specifications	Values
Dimensions (DVI unit)	1.58″ x 2.26″ x 0.57″
Dimensions (Adapter unit)	1.97″ x 2.96″ x 0.99″
Weight (DVI unit)	3.12 oz.
Weight (Adapter unit)	1.16 oz.
Operating Temperature	0℃ to +50℃
Storage Temperature	20°C to 85°C
Humidity	10 to 95% (non-condensing)
Input Voltage	1.8V DC
Power Consumption	1.0W Max.
Power Connector	Micro HDMI
Power Supply	Not required if the video source or the display can provide +5V 500ma on DVI pin 14
Monitoring	LED on - Tx & Rx Rapid flash - Boot up Gradual on/off - Fiber disconnect Steady on - Link established
Warranty	1 Year

Video

Specifications	Values
Standards	DVI standard resolutions up to WUXGA
Resolutions	(see chart on front side)
Connector (DVI unit)	Single Link DVI-D (18 pin male)
Connector (Adapter unit)	Micro HDMI
HDCP Compliance	v1.2
EDID	Plug & Play
Color Depth	24-bit

Audio

Specifications	Values
Inputs/Outputs	Unbalanced audio 2 channel (1L/1R)
Channels	24-Bit Dual Channel
Impedance	47k Ohm Unbalanced
Audio Levels	700 mVrms (maximum)
Frequency Response	20 Hz to 20 KHz (±0.1 dB)
Signal-to-Noise Ratio	> 80 dB @ 1KHz
Total Harmonic Distortion	< 0.1% @ 1KHz
Crosstalk	>70dB @ 10KHz
Connector Type	3.5mm Stereo Headphone Jack

Data

Specifications	Values
Serial Data	1 Channel RS-232
Connector Type	Terminal block (3 pin)