an emcore company
opticomm
travel by light®

OTS-1DVI2A
Optiva® Standard, DVI/VGA/RGBHV

DVI (Single-Link & Dual-Link), Analog VGA, RGB-HV and Analog Audio transport over a single fiber, single wavelength
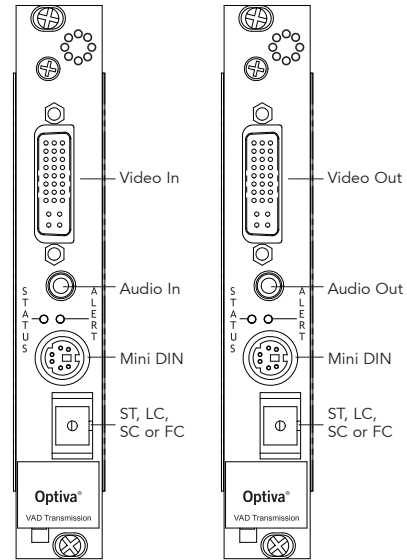
1 →

Video

2 →

Audio

Data

Opticomm's OTS-1DVI2A is the perfect solution for transmitting the full range of VESA and SMPTE compliant video resolutions over long or short distances with a single wavelength. Other systems simply do not offer as wide of a range of signals and resolutions over a single wavelength. This single fiber, single wavelength solution is perfect for any professional audio/visual application such as remote digital theaters, video conferencing, concerts and other similar applications like electronic billboards and sports arena screens. In addition to DVI, VGA and RGB-HV transmission, Stereo Audio is also supported on the same fiber. Optiva® was designed to maintain a quality uncompressed signal and as always, the resolution you input is the resolution that we output. The OTS-1DVI2A lets you input DVI and output VGA or vice-versa, the choice is yours! Switching and multicasting the OTS-1DVI2A over the OptiLinx® Switching Platform is quick and simple, making this solution perfect for large-screen, high-resolution digital presentations allocating only one fiber to each display.

System Design

The OTS-1DVI2A comes in a standard Optiva® insert card form factor (See pg. 2 for dimensions). These cards fit easily into our 3RU rack mount enclosure or stand alone desktop enclosures. The desktop enclosures can hold 1, 2 or 4 cards, creating compact, mountable, stand-alone systems, while the rack-mount enclosure can accommodate up to 16 insert cards.

The use of separate enclosures allows for future flexibility and expansion as all cards are hot-swappable and can be used in any enclosure. Each one of our card housing units operate with an appropriate power supply.

Video In
Audio In
Mini DIN
ST, LC, SC or FC

Video Out
Audio Out
Mini DIN
ST, LC, SC or FC

Optiva®
VAD Transmission

Optiva®
VAD Transmission

OTS-1DVIT2AT   **OTS-1DVIR2AR**

Features

- Optiva® patent-pending Daisy-Chain™ Technology
- Multimode or singlemode options (up to 70 km over one fiber)
- Supports DVI resolutions up to 2048x1536
- Supports VGA resolutions up to 2048x1536
- Supports component video up to 1080p
- H & V Sync Frequency range of 60 to 85 Hz (vertical)
- Uses all-digital processing for crystal clear picture with no compression
- Real-time video transmission for exceptional quality and resolution
- Standard DVI-I video connector with HD-15 adapter is included for RGB/VGA interface
- 1RU rack-mount version also available

Models Available

Wavelength (nm) & Fiber	Transmit*	Receive*	Data Rate (Gb/s)	Optical Connector	Optical Budget (dB)	Range** (km)	Form Factor
850 Multimode	OTS-1DVIT2AT-C0-XX-IC	OTS-1DVIR2AR-C0-XX-IC	3.125	ST, FC, LC or SC	5	0.5	IC (1-slot)
1310 Multimode	OTS-1DVIT2AT-C1-XX-IC	OTS-1DVIR2AR-C1-XX-IC	3.125	ST, FC, LC or SC	7	1.5	IC (1-slot)
1310 Singlemode	OTS-1DVIT2AT-C2-XX-IC	OTS-1DVIR2AR-C2-XX-IC	3.125	ST, FC, LC or SC	7	10	IC (1-slot)
1310 Singlemode (D)	OTS-1DVIT2AT-C2D-XX-IC	OTS-1DVIR2AR-C2D-XX-IC	3.125	ST, FC, LC or SC	12	20	IC (1-slot)
1550 Singlemode	OTS-1DVIT2AT-C3-XX-IC	OTS-1DVIR2AR-C3-XX-IC	3.125	ST, FC, LC or SC	17	40	IC (1-slot)
1550 Singlemode (D)	OTS-1DVIT2AT-C3D-XX-IC	OTS-1DVIR2AR-C3D-XX-IC	3.125	ST, FC, LC or SC	25	60	IC (1-slot)
1270-1610 SM (CWDM)	OTS-1DVIT2AT-C4-XX-IC	OTS-1DVIR2AR-C4-XX-IC	3.125	ST, FC, LC or SC	Varies	20-70	IC (1-slot)

* XX indicates the type of optical connector. Each of ST, FC, LC or SC are available.
** Chromatic dispersion and additional losses should be taken into account.

Video Resolutions Supported*

VGA Resolutions		Max Refresh (Hz)
600x480	VGA	85
800x600	SVGA	85
1024x768	XGA	85
1280x720	WXGA	85
1280x1024	SXGA	85
1400x1050	SXGA+	75
1600x1200	UXGA	75
1920x1200	WUXGA	75
2048x1536	QXGA	60

Note: supports all standard VESA resolutions.

DVI (SL and DL Resolutions)		Max Refresh (Hz)
600x480	VGA	85
800x600	SVGA	85
1024x768	XGA	85
1280x720	WXGA	85
1280x1024	SXGA	85
1400x1050	SXGA+	75
1600x1200	UXGA	75
1680x1050	WSXGA+	75
1920x1200	WUXGA	75
2048x1536	QXGA	60

Component Video Resolutions	Max Refresh (Hz)
480i	60
480p	60
720p	60
1080i	60
1080p	60

Note: supports all standard SMPTE resolutions for component video

*Higher resolutions utilize selective refresh technology. A higher bandwidth version (Model OTS-1HDVI) is available for high-grade Dual Link DVI applications.

Video

Resolutions	See chart above
Connector	DVI-I (DVI to VGA adapter included)
Color Depth	24-Bit

Audio

Channels	24-Bit Stereo Audio
Audio In/Out Impedance	47k Ohm Unbalanced or 600 Ohm Balanced
Audio In/Out Level	6 dBm (differential) single-ended; 2.5V p-p
Frequency Response	20 Hz to 20 KHz (±0.1 dB)
Signal to Noise Ratio	> 85 dB @ 1 kHz (weighted)
Total Harmonic Distortion	< 0.1% @ 1 KHz
Connector Type	1/8" stereo headphone jack or 6-pin mini DIN (for differential)

General

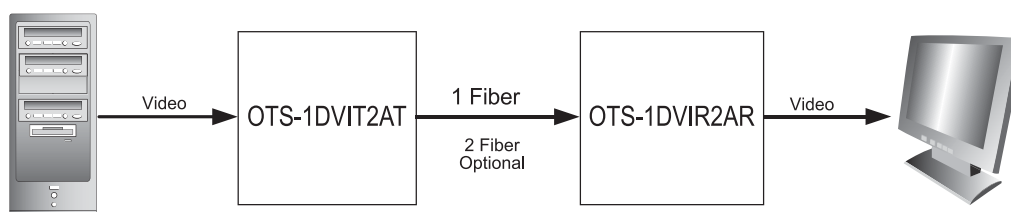|	
Dimensions & Weight	Insert Card (IC): 6.3"L x 0.8"W x 4.0"H 11 oz.
Operating Temperature	0° C to +50° C
Storage Temperature	-30° C to +85° C
Humidity	0 to 95% non-condensing
Power Consumption	< 8W

Local Monitoring   Front panel LED status indicators and push buttons

Remote Monitoring & Control   Compatible with OptivaView™ SNMP Management Suite

Sample Configuration

Video → OTS-1DVIT2AT → 1 Fiber (2 Fiber Optional) → OTS-1DVIR2AR → Video

ISO 9001:2000 CERTIFIED

CE

FCC PART 15 COMPLIANT

MADE IN THE USA