OTP-1DVI2A1UKM (1920x1200/1080P)

DVI / VGA / RGB / RBGHV / YPbPr, Analog Audio, USB KVM

DATASHEET FIBER OPTICS

Features

- DVI-I Supports DVI, VGA or Component Video with Format Conversion
- Stereo Analog Audio
- USB Keyboard/Mouse Extension
- Supports Full HD 1920 x 1200 Resolutions
- Real Time or Emulated HID Modes
- Full EDID Over Duplex Data Stream
- Instant Video Scaling to Display's Native Resolution up to 1920x1200
- Multimode Fiber Operation up to 0.5 km or Singlemode Fiber up to 25 km
- 3-Year Warranty

Applications

- Digital Signage / Remote Kiosks
- Command & Control Room
- Live Events
- Video Conferencing

DVI with Audio & USB KVM Transmission over Fiber

The Optiva OTP-1DVI2A1UKM provides for the transmission of uncompressed DVI, VGA or Component (RGB / RGBHV / YPbPr) video, stereo analog audio, with USB KVM over long or short distances, using single or dual fiber up to 1920x1200 @ 60 Hz.

Our innovative Optiva video, audio and data media transport system is designed to maintain lossless fiber extension between input and output signals. The OTP-1DVI2A1UKM includes two methods for EDID and HID management: The first is real DDC over fiber where the source and display communicate in real time. The other method is emulated EDID and HID where all standard VESA resolutions are stored in the transmitter from the factory and HID is emulated for uninterrupted communications even when devices are plugged and unplugged continually.

The Optiva line of products also includes insert cards for up to 16 channels of multiplexing/demultiplexing, 16x16 matrix switching, optical add/drop, as well as remote system monitoring.

System Design

Optiva insert cards support both 19" rackmount and compact tabletop or wall-mountable enclosures. The 3 RU 19" rackmount enclosures (Models: OT-CC-16 & OT-CC-16F) can support up to 16 insert cards as well as dual-redundant, hot-swappable power supplies utilizing two 100 watt or two 200 watt power supplies. Also available in the rackmount form factor is our 1 RU enclosure (Model: OT-CC-6-1U) which can accomodate six insert cards and utilizes two 60 watt power supplies. For desktop or wall mounting applications there are one-slot (Model: OT-DTCR-1) and two-slot (Model: OT-DTCR-2) enclosures. Both use an external wall mount power supply.

Resolutions Supported

Resolution	Code	DVI	HDMI	RGB/HV	Refresh Rate (Hz)
640 x 480	VGA	✓	✓	✓	60, 72, 75, 85
800 x 600	SVGA	✓	✓	✓	56, 60, 72, 75, 85
854 x 480	FWVGA	✓	✓	✓	60, 70, 75, 85
1024 x 768	XGA	✓	✓	✓	60, 70, 75, 85
1024 x 852		✓	✓	✓	60, 70, 75, 85
1152 x 768	XGA+	✓	✓	✓	75
1152 x 864	XGA+	✓	✓	✓	75
1280 x 768	WXGA	✓	✓	✓	60, 75, 85
1280 x 854	WXGA+	✓	✓	✓	60, 75, 85
1280 x 800	WXGA	✓	✓	✓	60, 75, 85
1280 x 1024	SXGA	✓	✓	✓	60, 75, 85
1360 x 765		✓	✓	✓	50, 60, 72
1366 x 768	WXGA	✓	✓	✓	60
1365 x 1024		✓	✓	✓	50, 60
1400 x 1050	SXGA+	✓	✓	✓	60, 75, 85

Resolution	Code	DVI	HDMI	RGB/HV	YPbPr	Refresh Rate (Hz)
1440 x 900	WXGA+	✓	✓	✓		60, 75, 85
1440 x 960	WXGA+	✓	✓	✓		60, 75, 85
1600 x 900	WSXGA	✓	✓	✓		60, 75, 85
1600 x 1024	WSXGA	✓	✓	✓		60, 75, 85
1680 x 1050	WSXGA+	✓	✓	✓		60, 75, 85
1600 x 1200	UXGA	✓	✓	✓		50, 60
480i (720 x 483)	SD Video	✓	✓	✓	✓	50, 60
480p (720 x 483)	SD Video	✓	✓	✓	✓	50, 60
576p (720 x 576)	SD Video	✓	✓	✓	✓	50
720p (1280 x 720)	HD Video	✓	✓	✓	✓	60
1080i (1920 x 1080)	HD Video	✓	✓	✓	✓	60
1080p (1920 x 1080)	HD Video	✓	✓	✓	✓	60
1864 x 1050		✓	✓	✓		50, 60
1920 x 1200 (CVT)	WUXGA	✓	✓	✓		60, 75, 85

- All VESA resolutions supported, plus any other resolution up to dual-link for DVI-D 2K4K/UHD and single-link for Component video. Some resolutions utilize Reduced Blanking Technology.
- 4.25 Gbps "E" optics supports Component video up to 1920x1200/60Hz for digital signage and 1600x1200/60Hz for PC graphics.

U.S. Patent #'s 7720385 & 8064773

P 626 293 3400 E video-sales@emcore.com W www.emcore.com/opticomm

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DATASHEET FIBER OPTICS

Models

Transmitter	Receiver
OTP-1DVIT2AT1UKMTR-*XX/XX*-LC	OTP-1DVIR2AR1UKMRT-*XX/XX*-LC

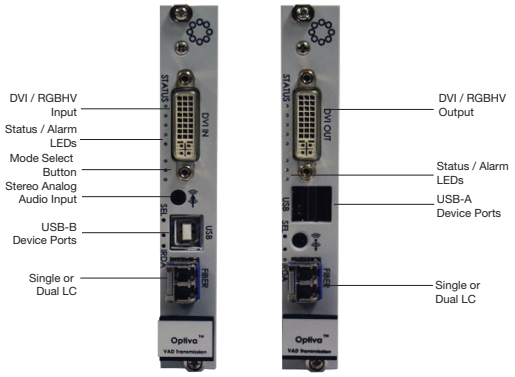
- When ordering replace "*XX/XX*" with one of the Optical Codes
- Chromatic dispersion as well as other losses should also be taken into account
- Stated distances are the maximum range, shorter distance may require attentuation
- Standard connection type is UPC

Duplex Optical Specifications

Optical Code "*XX/XX*"	Fiber Type / Number	Wavelength (nm)	Min. Output Power (dBm)	Rx Sensitivity (dBm)	Optical Budget (db)	Distance (km)	Connector
E0/E0	MM/2	850	-10	-3	7	0.5	LC (Dual)
E2/E2	SM/2	1310	-5.5	-12.5	10	10	LC (Dual)
E2/E3*	SM/1	1310/1550	0	-18	18	20	LC (Single)
E3/E2*	SM/1	1550/1310	0	-18	18	20	LC (Single)
L4*x*5/L4*x*5*	SM/1	1270 to 1610 (CWDM)	-4	-18	13	25	LC (Dual)

- Optics supports Component video up to 1920x1200/60Hz for digital signage and 1600x1200/60Hz for PC graphics.
- *Use "*XX/XX*" as is for ordering transmitter models but reverse for ordering receiver models
- When ordering CWDM, replace "*x*" in the Optical Code L4x5 with A (1270 nm), B (1290 nm), C (1310 nm), D (1330 nm), E (1350 nm), F (1370 nm), G (1390 nm), H (1410 nm), I (1430 nm), J (1450 nm), K (1470 nm), L (1490 nm), M (1510 nm), N (1530 nm), O (1550 nm), P (1570 nm), Q (1590 nm) or R (1610 nm)

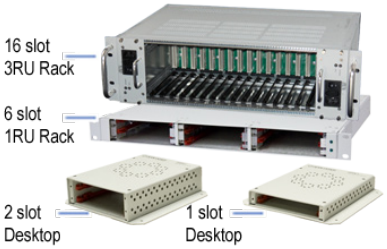
Connection Diagram



OTP-1DVIT2AT1UKMTR OTP-1DVIR2AR1UKMRT

- VGA to DVI-I adapter included

Enclosure Options



General

Specifications	Values
Dimensions (Insert Card)	6.3"D x 0.8"W x 4.0"H
Weight	11 oz.
Operating Temperature	0° to +50°C
Storage Temperature	-30°C to +85°C
Humidity	0 to 95% (non-condensing)
Power Consumption	<6 Watts
Warranty	3 Years

Video

Specifications	Values
Digital Signals	DVI 1.0 / VESA
Resolutions	(see chart on front side)
Connector	DVI-I
Color Depth	24-Bit
Analog Signal Types	RGBHV / VGA / RGB / YPbPr (with VGA to DVI-I adapter)
VGA Video Bandwidth	450 MHz
Analog Video Output Level	1V p-p
Video Signal-to-Noise Ratio	> 55 dB

Analog Audio

Specifications	Values
Inputs/Outputs	Unbalanced audio 2 channels (1L/1R)
Channels	24-Bit Dual Channel
Impedance	47 K Ohm Unbalanced
Audio Levels	700 mVrms (maximum)
Gain	~ 0 dB (unity gain)
Frequency Response	20 Hz to 20 KHz (±0.1 dB)
Signal-to-Noise Ratio	> 80 dB @ 1KHz
Total Harmonic Distortion	< 0.1% @ 1 KHz
Crosstalk	>70 dB @ 10 KHz
Input Connector	>10 K ohm (unbalanced, AC coupled)
Connector Type	3.5mm Stereo Headphone Jack

USB

Specifications	Values
Connector	Transmit: USB Type B, Receive: Dual USB Type A
Data	USB 2.0 HID and Programming

Monitoring & Control

Specifications	Values
Local	Front panel LED status and alert indicators
Remote	OptivaView SNMP Management Suite*
Push Button	Selecting product mode

- *Requires OptivaView SNMP Controller Card (Model: OPV-CTLR)

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