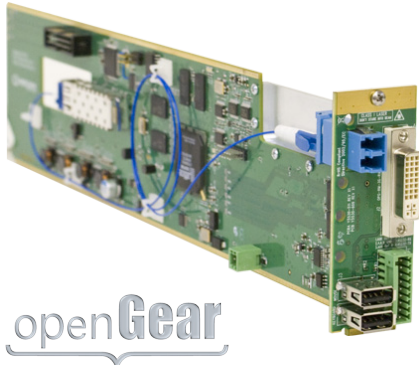


OPG-1DVI2A1D1UKM

DVI / VGA / RGBHV, Stereo Audio, S/PDIF, RS-232 and KM



DATASHEET FIBER OPTICS



Features

- Convert Analog to Digital or Digital to Analog across the fiber optic link
- RS-232 Serial Data & USB Keyboard/Mouse Extension (KM)
- Multimode or Singlemode fiber options
- Up to 43 miles (70 Km) over one fiber
- Supports single / dual-link DVI resolutions up to 2560 x 1600
- Supports VGA resolutions up to 1920 x 1200
- Supports Component Video (RGBHV) up to 1080p
- H & V Sync Frequency range of 60 to 85 Hz
- Standard DVI-I video connector (HD-15 adapter is available for RGBHV/VGA interface)
- Stereo Analog Audio and S/PDIF
- 3-Year Warranty

Applications

- Digital Signage / Remote Kiosks
- Control Room / Remote Workstations
- Digital Cinema
- DVI / VGA Switching & Routing
- Professional Home Theater

DVI with Audio & Serial Data Transmission over Fiber

The openGear OPG-1DVI2A1D1UKM fiber optic link provides for the digital transmission of video with audio and serial data at broadcast quality.

The OPG-1DVI2A1D1UKM is an excellent choice for transmitting the full range of dual-link DVI and SMPTE compliant digital/analog video with audio and serial data over long or short distances using optical fiber. It includes features such as DVI, VGA or RGB video input, format conversion, S/PDIF digital audio, stereo analog audio, RS232 serial data and USB Keyboard/Mouse data. The openGear system offers the flexibility of an open source platform while EMCORE fiber optic links provide greater capabilities and overall best value.

System Design

The standard openGear frame is a 19" rackmount enclosure (Model: OPG-8320) that can hold up to 20 insert cards. Each enclosure utilizes 2U of rack space, maximizing the overall usage of the equipment rack.



Emcore openGear cards are compatible with their Optiva counterparts allowing both to be used in the same link. The option of combining openGear with Optiva provides the maximum amount of features and flexibility for any application.

Video Resolutions

| VGA | DVI | RGBHV | Resolutions | | Max Refresh Rate (Hz) |
|-----|-----|-------|-------------|---------------|-----------------------|
| • | • | | 640 x 480 | VGA | 85 |
| | | • | | 480i / 480p | 30 / 60 |
| • | • | | 800 x 600 | SVGA | 85 |
| • | • | | 1024 x 768 | XGA | 85 |
| • | • | | 1280 x 720 | WXGA | 85 |
| | | • | | 720p | 60 |
| • | • | | 1280 x 1024 | SXGA | 85 |
| • | • | | 1400 x 1050 | SXGA+ | 75 |
| • | • | | 1600 x 1200 | UXGA | 60 (VGA), 75 (DVI) |
| • | • | | 1680 x 1050 | WSXGA+ | 60 |
| • | • | | 1920 x 1080 | UXGA (1080p) | 60 (VGA), 75 (DVI) |
| | | • | | 1080i / 1080p | 30 / 60 |
| • | • | | 1920 x 1200 | WUXGA | 60 (VGA), 75 (DVI) |
| | • | | 2048 x 1536 | QXGA | 60 |
| | • | | 2560 x 1600 | WQXGA | 60 |

■ Some Resolutions utilize Reduced Blanking Technology

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DATASHEET FIBER OPTICS

Models

| Transmitter | Receiver |
|-------------------------------------|-------------------------------------|
| OPG-1DVIT2AT1DTR1UKMTR-XX/XX-LC | OPG-1DVIR2AR1DRT1UKMRT-XX/XX-LC |
| OPG-1DVIT2AR1DTR1UKMTR-L4x3/L4x3-LC | OPG-1DVIR2AR1DRT1UKMRT-L4x3/L4x3-LC |

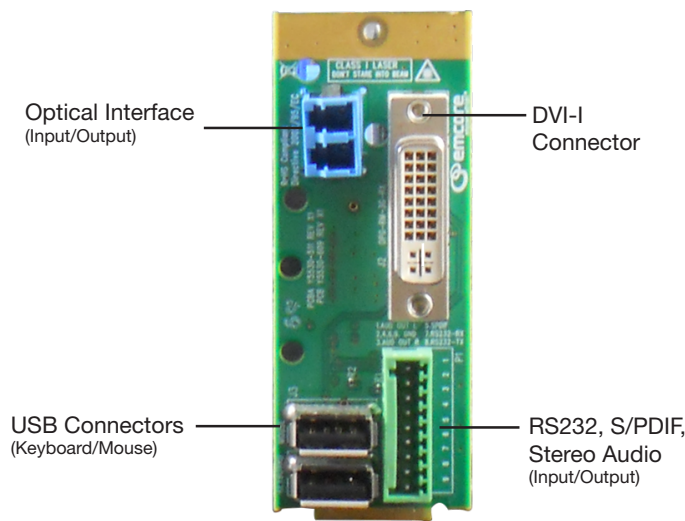
- When ordering, replace "XX/XX" with one of the optical codes specified below
- Standard connector type is UPC

Optical Specifications

| Optical Code | Fiber Type / Number | Wavelength (nm) | Optical Budget (dB) | Distance (km) | Connector Options |
|--------------|---------------------|-------------------|---------------------|---------------|-------------------|
| C0/C0 | MM/2 | 850/850 | 7 | 0.2 | Dual LC |
| C1/C1 | MM/2 | 1310/1310 | 5 | 0.8 | Dual LC |
| C2/C2 | SM/2 | 1310/1310 | 7 | 10 | Dual LC |
| C2D/C2D | SM/2 | 1310/1310 | 12 | 20 | Dual LC |
| C2H/C2H | SM/2 | 1310/1310 | 25 | 60 | Dual LC |
| C3/C3 | SM/2 | 1550/1550 | 17 | 40 | Dual LC |
| C3D/C3D | SM/2 | 1550/1550 | 25 | 60 | Dual LC |
| C1/C3M | MM/2 | 1310/1550 | 5 | 1.5 | Dual LC |
| C2/C3 | SM/2 | 1310/1550 | 12 | 20 | Dual LC |
| C2/C3D | SM/2 | 1310/1550 | 17 | 40 | Dual LC |
| C2/C3H | SM/2 | 1310/1550 | 25 | 60 | Dual LC |
| L4x3/L4x3 | SM/2 | 1270 -1610 (CWDM) | 25 | 20-70 | Dual LC |

- Chromatic dispersion as well as other losses should also be taken into account
- Stated distances are the maximum range, shorter distance may require attenuation

Connection Diagram



OPG-1DVI2A1D1UKM

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 |
| VGA Video Bandwidth | 780 MHz |
| Analog Video Output Level | 1V p-p |
| Video Signal-to-Noise Ratio | > 55 dB |
| Connector | DVI-I to VGA adapter |

Audio & Data

| Specifications | Values |
|---------------------------|--|
| Digital Audio | S/PDIF |
| Input Level | 0.2V |
| Connector Type | Terminal Block |
| Analog Audio | Dual Channel 24-Bit |
| Impedance | 47k Ohm Unbalanced |
| Input Level | 2V p-p Max |
| Frequency Response | 20 Hz to 20 KHz (+/- 0.1 dB) |
| Signal-to-Noise Ratio | > 85 dB @ 1 KHz (weighted) |
| Total Harmonic Distortion | < 0.1% A 1 KHz |
| Connector Type | Terminal Block |
| Serial Data | Up to 250 Kbps |
| Connector Type | RS232 (terminal block), Keyboard/Mouse (USB) |

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 | ~8 Watts |
| Warranty | 3 Year |

Monitoring & Control

| Specifications | Values |
|----------------|--------------------------------------|
| Local | LED status and alert indicators |
| Remote | Dashboard Remote Management Software |

Compliance

