The DVI–6000 is a long–haul fiber optic transport solution for high–quality RGB–HV and DVI–D with a DVI–I interface. Ideal for keeping video and audio communications secure in Command and Control facilities, the DVI–6000 Single Link supports up to $1920 \times 1200$ and the Dual Link up to $2560 \times 1600$ resolution over a single fiber, and has optional stereo audio and bi–directional data for monitor control. The DVI–6000 transports a pixel–for–pixel image that is $100\%$ transparent with no frame dropping up to WUXGA, $1920 \times 1200$, and enables $100\%$ 24–bits for all scan rates with no contouring or bit reduction at a high scan rate.

The DVI–6000 system is a convenient single–fiber solution. It has been designed to increase the transmission distance limitations of high resolution RGB and DVI video and computer graphics. The system will transport virtually any VESA–compliant DVI or RGB signal from $640 \times 480$ VGA up to and including $1920 \times 1200$ @ $60\text{Hz}$ Reduced Blanking WUXGA or, with the dual link option, $2560 \times 1600$ WUXGA, as well as HDTV formats from $480$P up to and including $1080$P.

The DVI–6000 also supports HDTV and non–RGB video formats such as YUV, YCrCb or YPrPb. The DVI–6000 has built in relocking of the DVI signal to eliminate jitter. EDID data can be obtained from a local monitor connected to the loop thru port, a built in PROM, or, from a monitor connected to the receiver.

The DVI–6000 also supports the transport of 2 audio channels (one stereo pair) and unidirectional or bidirectional RS232, 422 or 485 type data. The audio path is intended not only for line–level audio such as might be obtained from a computer sound card, but for professional 600 ohm balanced audio applications as well. No additional fibers are required for the audio or data, although 2 fibers are required for bi–directional data and remote EDID options.

The DVI–6000 supports operation and setup via the front panel switches (hardware mode) or a software GUI (GUI mode). Most functions are automatic and should not require front panel switch setup. Firmware updates may also be applied via the USB port.

If your signal is $1080$P, the resulting transport stream is a SMPTE 424M video signal that can be received with an 3G capable optical receiver.

When the signal is not $1080$P, the resulting signal is a 3G SMPTE 348M SDTI data stream (3G mode) that will pass through a 3G infrastructure but, since it is not video, is not viewable.

Trust MultiDyne and our 7-year warranty for all of your display and video transport needs.

Designed and manufactured in New York.
Easy video display transport with the DVI-6000

Basic Configuration
In its basic form, the DVI-6000 will allow you to remote your computer monitor up to 10km from its source CPU. With the single-fiber version, there is minimal compression of the video signal. In the other versions, there is no compression at all.

There are two analog audio paths (balanced or unbalanced ) that can be used for either the line level output of a computer or workstation or for any other analog audio source material. There is also support for uni-directional RS-232,422 or 485 data. The loop video out connector can be used to simultaneously support a video projector for conference room applications. Finally, EDID is fully supported.

The DVI-6000 packs a lot of functionality into a very small package...and at a great price.

And More...
As an option, you can have bi-directional data and/or conversion of your DVI or RGB video signal into a SMPTE compliant format available as a BNC on the rear of the DVI receiver. In this mode the DVI video signal is packetized into a proprietary format and then transported via a 3G SMPTE envelope or physical layer signal. Instead of fiber transport, there is an optional 75 ohm coax cable transport feature for 3G mode. (Some features not available in cable transport mode).

In addition to the convenience of having your monitor signal converted to 3G video, the resultant video signal can now be patched or routed though any 3GB/sec capable routing switcher.

Fully Functional GUI
As if all of this wasn’t enough, the DVI-6000 system is fully controllable and monitorable via an elegant GUI interface. After the simple installation procedure you will be able to monitor every aspect of your fiber link as well as perform firmware updates. These functions are accessed via the front panel mini USB connector.

The 6-position DIP switch on the front of each unit provides control for DVI/RGB priority, 3G SMPTE mode, EDID information, audio attenuation and data formats and terminations.

A Note About Video Resolution
In the 1-fiber version, the DVI-6000 will transport completely uncompressed DVI single-link video or a slightly compressed DVI dual-link video signal. In 2-fiber versions, there is no compression in either format. So what does “slightly compressed” actually mean? We use what is called “color space” compression. With this compression scheme, all of the luminance information is preserved without compression but just half of the chrominance information is transported. Since human vision is far less sensitive to the position and motion of color, this 4:2:0 scheme results in the best possible compromise that is indiscernible from uncompressed video in a moving image and allows us to offer a single-fiber solution. The major benefit of a single fiber, single wavelength signal is that it can be easily patched and routed throughout our EOS line of routers.
Applications

Digital Signage & Scoreboards

Using a passive optical split to pass the converted 3G signal to a HD-3000 optical receiver

Displays Routable to Multiple Screens

One at a time or Multicast

System Block Diagram
Specifications

Video
DVI connector 1 w/ loop out, Dual outs on RX
Scan rates As per VESA standards
Standards DVI and RGB including VGA, SVGA, XGA, WXGA, HDMI (480i,480p,720p,1080i or 1080p) not HDCP encrypted

Serial Data
232,422,485 DC-3Mbps
232 In V +/- 25V max, 2V min
232 Out V +/- 5V @ 3Kohm
422,485 In V -7V to 12V, 0.2V diff min

Analog Audio
Connectors (unal) Connectors (bal)
S/N Frequency Response Distortion
Max Input level Max Output level
Impedance In (bal) Impedance In (unal) Impedance Out (bal)
Impedance Out (unal)
3.5mm stereo 9-pin DIN 0.05%
>90db < +/-0.1db (20Hz - 20kHz)
0.05%
< +/4db (bal) <+16db (unal)
Unity gain
600 Ohm
>10k Ohms
600 Ohms
<100 Ohms

Operating Distances
multimode Std. Singlemode
up to 150m up to 4km
DFB Singlemode up to 10km

Electro-Optical
Operating Wavelengths 850 and 1271-1591nm
TX Laser output power -2 - 0dBm, Class 1
Receiver Sensitivity Single or multimode
Fiber Compatibility ST, LC, SC
Optical Connector

Mechanical, Environmental
Dimensions (LxWxH) 6.75” x 5.5” x 1.75”
Weight 2 lbs.
Config port Mini-USB
Temperature Range -0° to +70°C
Humidity Range 0 to 95% RH
Power Input Noncondensing 2.5mm jack
Power rating, nominal Center pin +
Power Requirement 50w max@14 VDC
15w @9-24VDC

Ordering Information

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<tr>
<th>MULTIMODE</th>
<th>1-way data</th>
<th>Connector type = ST, SC or LC</th>
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<tbody>
<tr>
<td>DVI-6000-FTX-2-ST</td>
<td>DVI Single Link &amp; RGB-HV TX, WXGA, 1920 x 1200, with 2-Ch Audio &amp; RS-232 Data, One Fiber, Multimode</td>
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<tr>
<td>DVI-6000-FRX-2-ST</td>
<td>DVI Single Link &amp; RGB-HV RX, WXGA, 1920 x 1200, with 2-Ch Audio &amp; RS-232 Data, One Fiber, Multimode</td>
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<td>DVI-6000-FTX-50-ST</td>
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<td>DVI-6000-FTX-7-xxxx-ST</td>
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<td>DVI-6000-FRX-50-ST</td>
<td>DVI Single Link &amp; RGB-HV Receiver, WXGA, 1920 x 1200, with 2-Ch Audio &amp; RS-232 Data, One Fiber, Single-mode</td>
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<td>SINGLEMODE</td>
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<td>DVI-6001-FTX-50-ST</td>
<td>DVI Single Link &amp; RGB-HV TX w/ Two-way data, WXGA, 1920 x 1200, with 2-Ch Audio, One Fiber, Single-mode</td>
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<tr>
<td>DVI-6001-FRX-50-ST</td>
<td>DVI Single Link &amp; RGB-HV RX w/ Two-way data, WXGA, 1920 x 1200, One Fiber, Single-mode with 2-Ch Audio, One Fiber, Singlemode</td>
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<tr>
<td>DVI-6002-FTX-50-LC</td>
<td>DVI Single Link &amp; RGB-HV TX w/ Two-way data, WXGA, 1920 x 1200, with 2-Ch Audio, LC connectors, Two Fibers, Singlemode</td>
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<tr>
<td>DVI-6002-FRX-50-LC</td>
<td>DVI Single Link &amp; RGB-HV RX w/ Two-way data, WXGA, 1920 x 1200, with 2-Ch Audio, LC connectors, Two Fibers, Singlemode</td>
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<tr>
<td>OPTIONAL</td>
<td>-SDI</td>
<td>Add SDI conversion/transport to ANY of the above</td>
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ACCESSORIES

DVI-6000-PS Replacement Power Supply for KVM-6000 units
TRI-PS-5DC Three Output DC Power Supply for up to three DVI-6000 modules
RMT Triple Rack-mount Kit (1 kit)
BP-T Blank panel for RMT rack-mounting kit
DIN-BO DIN connector breakout for data and balanced audio
DVI-HDMI HDMI adapter cable

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