

High Resolution Video Fiber Optics Wideband Fiber Optic RGB Transmission System



The Meret model VGL3000 Series high resolution fiber optic video and data transmission product, provides the user with effective and reliable solutions for remoting RGB images to workstations, monitors, printing and storage devices at distances up to 4 kilometers.

The VGL3000 Series offers optional RS-232 or RS-422 data channels which support remoting extensions of keyboard, mouse, graphic tablet and other data input devices. There are separate inputs for R, G, B, sync and data.

The VGL3000 Series highly sensitive receivers are equipped with a true AGC, optical gain compensation system, a smart switch, as well as DC restoration. This allows for the best adjustment-free performance regardless of distance variations within the specified range between the system components.

Packaging options include a low-profile stand-alone enclosure that can sit on a desktop or be rack-mounted ("U-Box") and, for multiple system requirements, circuit cards ("G-Cards") that plug into a 6 slot rack mountable chassis with power supply (CRM-2000).

Model VGL3000 Series

APPLICATIONS

- CAD/CAM/CAE
- High-resolution graphics
- Stock trading
- Medical imaging
- Computer animation
- Flight simulation
- Air traffic control
- Military communications C4I

FEATURES

- Range up to 4 kilometers
- Up to 200 MHz bandwidth per channel
- Smart switch (automatic sync)
- Optional RS-232/422 data channels for remoting keyboard, mouse, and other input devices
- Automatic Gain Control
- DC restoration
- Standalone desktop enclosure or rack mount enclosure

BENEFITS

- Far greater range
- Wider bandwidth
- Immunity to EMI and RFI
- Lighter and smaller
- Secure from tampering
- Ideal for TEMPEST installations

Specifications

System Performance

Wavelength	850 nm or 1300 nm
Bandwidth (-3 dB)	10 Hz - 120 MHz (850 nm) 10 Hz - 200 MHz (1300 nm)
Resolution Supported	Up to 2048 x 2048
Rise Fall Time	≤ 3.0 ns (850 nm) ≤ 2.2 ns (1300 nm)
Signal-to-Noise Ratio (62.5 μm G1 fiber)	≥ 45 dB @ loss budget of 8 dB ≥ 48 dB @ loss budget of 6 dB
Loss Budget†	10 dB, 50 μm or 62.5 μm fiber
AGC Dynamic Range	≥ 8 dB
Linearity	≤ 4%
Overshoot/Undershoot	≤ 10%
Settling Time	≤ 5%, within 6 ns
Gain Stability	± 1% variance at peak white
Output Coupling	DC

Optical

Detector	PIN diode
Connector	ST

Video

Input Signal Level	1 V p-p nominal
Input Impedance	75 ohms unbalanced
Output Signal Level	1 V p-p nominal
Output Impedance	75 ohms, unbalanced
Connector	BNC or 13w3

Data

Six channel of RS-232, RS-422, TTL or PS/2 communications, in each direction.

Data asynchronous operations from DC to 120 kbps (nominal)

DB-25 connector type

+5 VDC option can be specified to provide power for keyboard/mouse remoting

† Distances vary according to user configuration characteristics. The specifications above list performance at a distance that will give the user the lowest loss of signal. Longer distances may result in a decrease in system specifications.

Special Features

Smart Switch	Automatically determines and sets the system to the proper video sync without operator intervention
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Electrical/Mechanical

Temperature Range	0 to +40° C, operating
Humidity Range	0 - 90%, non-condensing
Stand-alone desktop enclosure	16" L, 16.73" W, 2" H, Weight 10 lb.
Power	115/230VAC, ±10%, 47-63 Hz (Desktop enclosure) 100/120/220/240VAC, ±10%, 47-63 Hz, (CRM2000 chassis)
Plug-in module	10.5" W, 4.5" H (compatible with CRM2000 chassis)

Specifications are subject to change without notice