

*10G Mux Transponder*

*Full Support for GbE, 1G  
and 2G FC*

*Physical Layer PM,  
Loopback Tests*

*100 km Dispersion Limit,  
Line Side*

*SFP Based Client Interfaces*

*Compact Design,  
Bi-Directional Support*

*High Quality Trunk Input /  
Output (ITU-T)*

## 10Gbps Ethernet Multiplexer

The GMGE10 multiplexer aggregates 10 x Gigabit Ethernet interfaces to a single 10G line-side wavelength. By utilizing SFP's interfaces on the client links, the module supports multimode optical inputs in the 850 nm band and singlemode inputs in the 1310 nm. As Ethernet services continue to expand, both in the core and edge networks, the ability to aggregate Ethernet efficiently for maximum wavelength utilization is key.

The GMGE10-10G card is a two-slot, 10 client-port module. One SFP is required for each input. The module supports internal, external and line clock synchronization. It also supports Performance Monitoring of the data streams, including loopback test features. Up to 10 x Gigabit Ethernet links are supported.

## Technical Specifications

### Dimensions

2 slot GigaMux 6400 linecard

### Power

40 watts

### Interfaces

Lineside type: SC-UPC (standard)

Clientside type: SFP based interfaces

Trunk Side FC/SC/ST

User Side Dual LC Singlemode/Multimode (SFP based)

Access Reach (1800 ps/nm dispersion)

Transmit

Min Tx: -2 dBm

Max Tx: +1 dBm

Min Rx: -28 dBm

Max Rx: -8dBm

### Standards Support

GigaBit Ethernet

Standard IEEE 802.3z/D5

Transparent, full-duplex with 1.25 Gbps throughout

### Protocol Support

Physical layer PM parameters: LBC, OPT, OPR, LTEMP

Facility alarms: LOS

Historical data: OPT-High / Low, LBC High, OPR-High / Low, LTEMP

15-minute

24-hour

### Management

Compatible with Giganest, GigaView, TeraManager, and ZMS

### Bandwidth/Distance

Signal rates: 10.5 Gbps

Fiber interface: G.652

Transmitter at the output point

Source type: SLM

Line coding: NRZ

Spectral characteristics: -20 dB down line-width (max.)

0.12, nm

Side mode suppression ratio (min.): 30 dB

Nominal central frequency: 192.1 to 196.1 THz

Max. central frequency deviation +/-: ±0.04 GHz

Channel spacing: 100 GHz

Mean launched power: max. +5 dBm, min. -1 dBm

Minimum extinction ratio: 10 dB

Eye diagram pattern (GR 253): X1. >0.25 UI,

Y1 <25%

Optical return loss (min.) (including any connectors):

24 dB

Dispersion tolerance: 1,800 ps / nm

Receiver at receiving point

Minimum sensitivity (BER-1.0E-12) dBm -22

Minimum overload for (BER-1.0E-12) dBm -8

Reflectance (max.) dB -27

Minimum OSNR for a 1.0E-12 BER dB 26

### Operating Requirements

5°C to 40°C

Chassis space: 2 slots

Hot swappable: Yes

## Ordering Information

GMGE10-10G-LR-40Cxx-01

10 X GBE MULTIPLEXER, 2 SLOT, ACCESS (100 KM), Fixed wavelength 10G mux data transponder (replace xx with ITU channel 20-59)

GMGE10-10G-LR-40CT-01

10 X GBE MULTIPLEXER, 2 SLOT, ACCESS (100 KM), fully tunable across C-Band



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