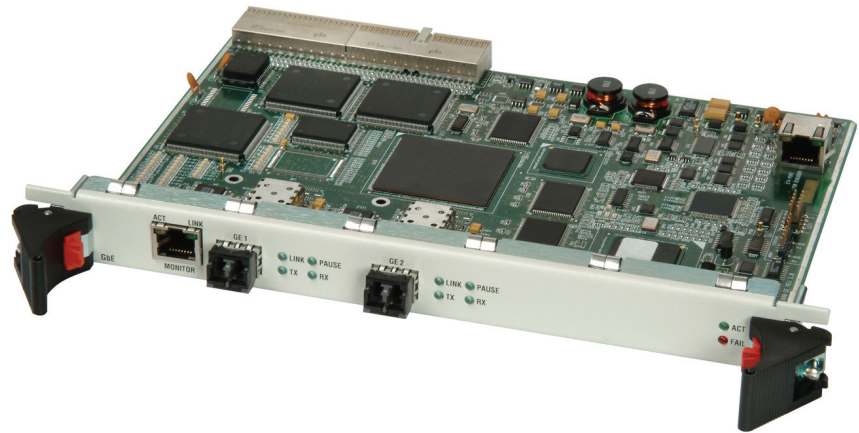


## Gmux-2000 Module

## GbE

## PSN Gigabit Ethernet Interface Module



## Gigabit Ethernet physical interface to a packet-switched network

- Non-blocking switching fabric for Gmux-2000
- Gigabit Ethernet physical interface to a packet-switched network (PSN)
- TDM pseudowire priority by QoS marking: ToS, VLAN priority or EXP bits
- Two SFP-based external GbE ports and one FE monitor port
- 1+1 (802.3ad), 1:1 link and module redundancy

The Gigabit Ethernet module has two main functions:

- Handling the packet traffic between the PSN and the Gmux-2000 modules, via internal StarLAN buses
- Providing the physical interface to the packet-switched network (PSN).

Layer-3/4 switch forwards the packets according to:

- UDP port number
- MPLS label.

The module features two 1000BaseSx or 1000BaseTx SFP-based interfaces with autonegotiation support.

### QoS SUPPORT

GbE supports VLAN tagging and priority labeling according to 802.1p&Q. TDMoIP packets are assigned a dedicated VLAN ID and 802.1p bit.

The ToS or Diffserv of the outgoing packets are user-configurable. This allows the packets to be given a higher priority in IP networks.

EXP bits are used for QoS marking of the TDMoMPLS traffic in MPLS networks.



**data communications**

The Access Company

## GbE

## PSN Gigabit Ethernet Interface Module

**REDUNDANCY**

The module supports link aggregation (1+1) based on 802.3ad requirements.

Dual homing technology (1:1) allows GbE to be connected to two different upstream devices.

When redundancy is enabled at the module level, the two ports of one module are active at any time, while the ports of the other module serve as backup.

**MANAGEMENT AND DIAGNOSTICS**

A dedicated 10/100BaseT port allows connection of monitoring equipment to the Gigabit Ethernet module. The port provides automatic polarity and crossover detection, and polarity correction.

The Gigabit Ethernet module performs automatic self-test at power-up to monitor the module subsystems.

The module provides real-time alarms to alert the user on fault conditions.

**Specifications****External Ports**

- Two SFP-based GbE ports
- One 10/100BaseT monitoring port

**Interface Type**

Fiber optic or electrical 1000 Mbps port, autonegotiation, MDI/MDIX

**SFP Types**

SFP-5: 850 nm multimode VCSEL, 0.55 km (0.3 miles)

SFP-6: 1310 nm single mode laser, 10 km (6.2 miles)

SFP-7: 1550 nm single mode laser, 80 km (49.7 miles)

SFP-8: 1310 nm single mode laser, 40 km (24.8 miles)

SFP-9G: 1000BaseT, UTP, RJ-45, 100m (328 ft)

**Note:** *It is strongly recommended to order this device with **original RAD SFPs installed**. This will ensure that prior to shipping, RAD has performed comprehensive functional quality tests on the entire assembled unit, including the SFP devices. RAD cannot guarantee full compliance to product specifications for units using non-RAD SFPs. For detailed specifications of the SFP transceivers, see the SFP Transceivers data sheet.*

**Monitoring Port**

Type: 10/100BaseT, autonegotiation

Connector: RJ-45, 8-pin

**Indicators**

SFP:

LINK (red): Ethernet connection status

PAUSE (red): Pause frame received

RX (red): Rx status

TX (red): Tx status

MONITOR port

ACT (yellow): Activity status

LINK (green): Link status

GbE module:

ACT (green): Module activity status

FLT (red): Module fault detected

**Physical**

Fits a single slot of the Gmux 2000 chassis (slot 6 or 8)

**Environment**

Operating temperature: 0–55°C (0–131°F)

Storage temperature: -20–50°C (0–150°F)

Humidity: Up to 90%, non-condensing

**Ordering**

GMUX-M-GE/\$/\$

Legend

\$ SFP type:

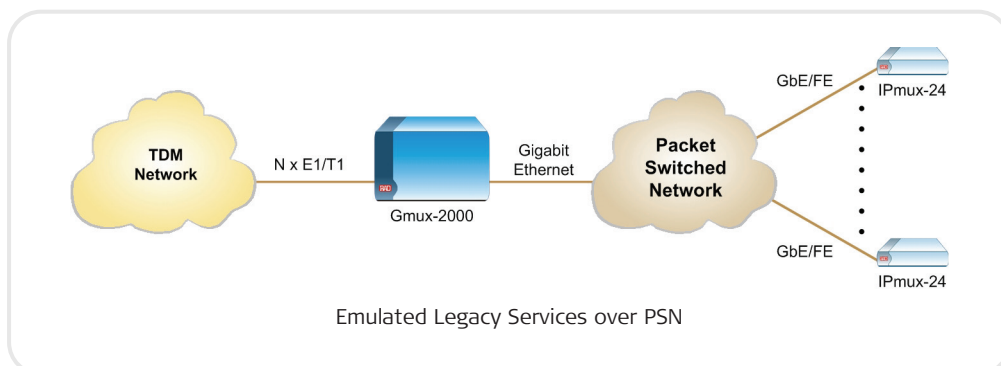
SFP-5 SFP-5 transceiver

SFP-6 SFP-6 transceiver

SFP-7 SFP-7 transceiver

SFP-8 SFP-8 transceiver

SFP-9G SFP-9G transceiver

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