

Overview

Metropolitan Service Providers (MSPs) must be able to move quickly to capture customers and provide IP-based services in the new Metro Business Internet. Versatile connectivity and comprehensive traffic shaping enable MSPs to rapidly light up metro buildings and convert raw optical and electrical bandwidth into profitable services.

Riverstone Networks' next-generation Long Haul Gigabit Ethernet module for the RS 3000 Optical Metro Access Router provides two 1000 Base-LH ports using SC connectors. It enables MSPs to significantly extend the reach of their optical fiber networks up to 70 kilometers from the nearest exchange point. Once connected at Gigabit rates, highly differentiated services can then be delivered directly to the metro access edge using a combination of advanced traffic engineering features such as hardware-based rate limiting, traffic prioritization and filtering, hardware-based accounting, policy-based routing, and MPLS traffic grooming.

2-Port Gigabit Ethernet LH Switch Router Module: RS 3000 Chassis

Features

- Long Haul Gigabit Ethernet connectivity from 10 to 70km to reach across the metro area to the furthest customers
- Hardware Rate Limiting (HRL) by Port or Aggregate Flow allowing pinpoint bandwidth control and dynamic bandwidth provisioning
- Jumbo Frame and hardware fragmentation support for up to 64,000 byte packets to increase data throughput for bulk content providers and media streamers
- Local Hardware Route Table (LHRT) supporting more than 200,000 routes on each module to speed up the connection set-up time for remote subscribers
- Weighted Fair Queuing (WFQ) and Weighted Random Early Discard (WRED) support to ensure that Service Level Agreements (SLAs) based on QoS policies can be offered and guaranteed
- Multi-Protocol Label Switching (MPLS) at the metro access edge to allow traffic to be identified and forwarded according to the appropriate routing policies

Key Applications

- Delivery of high-bandwidth variable-rate services to metro building tenants and data centers without the distance limitations of standard Gigabit Ethernet
- Rapid deployment of transparent LAN services over new or installed fiber, no matter what the distance
- Provisioning of billable IP services based on bandwidth or application usage
- Integration with standard OSS/BSS applications for improved accuracy and granularity of real-time monitoring and billing

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Technical Specifications

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Module Specifications

Switch/routing engine:	RapidPath™ ASIC Route Engine
Buffer memory:	16 MB per port
Layer 2 address table size:	512,000 entries
Layer 3, 4 table memory:	16 MB
Layer 3, 4 table size:	256,000 entries
Route table memory size:	Local route table on each module supports more than 200,000 routes
QoS support:	WFQ, WRED, and per-port/subnet/flow rate limiting
MTBF (predicted):	>200,000 hours
In-band management:	Remote SNMP and Telnet

Physical Specifications

Dimensions:	11" x 7.75" x 1.55" (27.94 cm x 19.68 cm x 3.94 cm)
Weight:	3 lbs. (1.4 kg)

Environmental Specifications

Operating temp:	+0° to +40°C (32° to 104°F)
Non-operating temp:	-40° to +70°C (-40° to 158°F)
Operating humidity:	10% to 90% (non-condensing)
Non-operating relative humidity:	5% to 95% maximum (non-condensing)
Altitude, operating and non-operating:	10,000 ft (3,000 m) maximum
Shock and vibration:	GR63

Power Requirements

AC Power	
Input voltage:	100-240 VAC
Input current:	3.0 to 1.5 A
Frequency:	50 to 60 Hz
DC Power	
Input voltage:	-48 to -60 VDC
Input current:	8.0 A

Agency Standards and Specifications

Safety:	Certified UL1950, CSA C22.2 No. 950, EN60950, IEC950, and 72/73/EEC
Electromagnetic compatibility:	Compliant with the requirements of FCC Part 15, CSA C108.8, EN55022, VCCI, EN50082-1, and 89/336/EEC

Interface Specifications

Interface specifications:	2-Port 1000 Base LH with SC connectors	
Fiber type for 1000 Base-LH:	10 mm SMF	
Transmit power:	Min 0.0 dBm, Max 5.0 dBm	
Receive sensitivity:	-24 dBm	
Maximum input power on receiver:	3 dBm	
Link power budget:	33 dBm	
Operating range: (Full duplex operation only):	Fiber type:	Range:
	10 mm fiber	10 Km to 70 Km

Ordering Information

Part No.	Product Description
G3M-GLHB8-02	2-Port Gigabit Ethernet LH Switch Router module with Hardware Rate Limiting and Jumbo Frame support

For complete ordering information, including specific modules, contact your Riverstone representative at **(408) 878-6500** or visit our Website at www.riverstonenet.com.



Module is specifically for the RS 3000 chassis



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