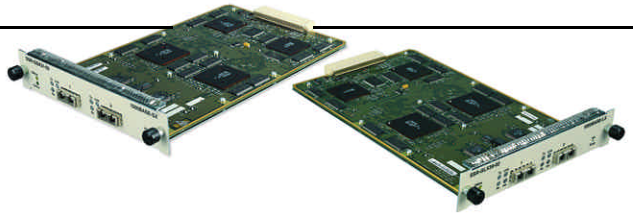
DATA SHEET

2 Port Gigabit Ethernet SX and LX Modules: RS 8000 / 8600 Chassis



Overview

Riverstone Networks' next-generation Gigabit Ethernet modules for the RS 8000 and 8600 switch router chassis provide two port 1000 Base-SX or 1000 Base-LX connectivity through SC connectors. These modules are ideal for high-speed connectivity in Service Provider environments where high-performance and full-featured capabilities are a requirement. Riverstone's advanced architecture enhances overall network performance by eliminating bottlenecks caused by a single central processor. These modules deliver full-function Layer 2/3 and 4 switching and routing as well as advanced functionality including Network Address Translation (NAT), Server Load Balancing (SLB) and Access Control Lists (ACLs).

The unique capabilities of the Gigabit Ethernet modules' architecture are Hardware Rate Limiting (HRL), Local Hardware Route Table (LHRT) and Jumbo Frame support. These features are well suited to address the aggressive needs of Service Providers. HRL includes Port Rate Limiting and Aggregate Rate Limiting which are ideal for Application, Content and Multi-Tenant-Unit Service Providers. These environments require the ability to set up and manage a large number of new connections per second. A Local Hardware Route Table (LHRT) enables routing tables to be stored locally on the modules which enhances the connection set up time compared to cache-based routers. Jumbo Frames extend the Ethernet payload size which in turn increases throughput for content providers. The Riverstone module performs fragmentation in hardware allowing seamless integration between Jumbo Frame and non-Jumbo Frame supported equipment.

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Features

- Hardware Rate Limiting (HRL) including Port Rate Limiting and Aggregate Rate Limiting
- Jumbo Frame and hardware fragmentation support for up to 64,000 byte packets
- Local Hardware Route Table (LHRT) supporting more than 200,000 routes on each module
- Advanced wire-speed features including Network Address Translation (NAT) and Server Load Balancing (SLB) on every port
- Weighted Fair Queuing (WFQ) and Weighted Random Early Discard (WRED) support

Key Applications

- Traffic aggregation over Gigabit Ethernet links for POP sites and data centers
- Enable rapid deployment of transparent LAN Services over new or installed fiber
- Provision billable IP services per user or per application
- Integrate SLA billing and monitoring packages with real-time port-level flow accounting and full RMON statistics

e.nabling Service Provider Infrastructure

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2 Port Gigabit Ethernet SX and LX Modules (RS 8000 / 8600 Chassis): Technical Specifications

Technical Specifications

Module Specifications

Switch/Routing Engine:	RS 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 hr.
In-band Mgmt:	Remote SNMP and Telnet

Physical Specifications

Dimensions:	11.00" x7.75"x1.55" (27.94 cm x 19.68 cm x 3.94 cm)
Weight:	3.0 lbs (1.4 kg)

Environmental Specifications

Operating Temp:	+5° to +40°C (41° to 104°F)
Non-Operating Temp:	-30° to +73°C (-22° to 164°F)
Operating Humidity:	15% to 90% (non-condensing)
Power Consumption:	100 to 125 VAC Max or 200 to 250 VAC Max, 50 to 60 Hz

Agency Standards and Specifications

Safety:	Meets the requirements of 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 V-3/93.01, EN50082-1 and 89/336/EEC

Interfaces

2 Port 1000 Base SX with SC connectors

2 Port 1000 Base LX with SC connectors

Fiber Type for 1000 Base SX	62.5mm MMF	50mm MMF
Transmit Power (Minimum):	–9.5 dBm	–9.5 dBm
Receive Sensitivity:	–17 dBm	–17 dBm
Link Power Budget:	7.5 dB	7.5 dB

Operating Range	Fiber Type	Modal Bandwidth @ 850 nm	Range
	62.5 mm Fiber	160 MHz/km	2 to 220 m
	62.5 mm Fiber	200 MHz/km	2 to 275 m
	50 mm Fiber	400 MHz/km	2 to 500 m
	50 mm Fiber	500 MHz/km	2 to 550 m

Fiber Type for 1000 Base-LX	62.5 µm MMF	50 µm MMF	10 µm SMF
Transmit Power (Minimum):	–11.5 dBm	–11.5 dBm	–11.0 dBm
Receive Sensitivity:	–19 dBm	–19 dBm	–19 dBm
Link Power Budget:	7.5 dB	7.5 dB	8.0 dB

Operating Range:	Fiber Type	Modal Bandwidth @ 1300 nm	Range
	62.5 µm	500 MHz/km	2 to 550 m*
	50 µm	400 MHz/km	2 to 550 m*
	50 µm	500 MHz/km	2 to 550 m*
	10 µm	N/A	2 to 5000 m*

Ordering Information

Part No.	Product Description
G8M-GSXB1-02	2 Port Gigabit Ethernet SX Switch Router Module with Hardware Rate Limiting and Jumbo Frame support
G8M-GLXB9-02	2 Port Gigabit Ethernet LX 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**. You may also visit our Website at www.riverstonenet.com.

Modules are specifically for the RS 8000/8600 chassis

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