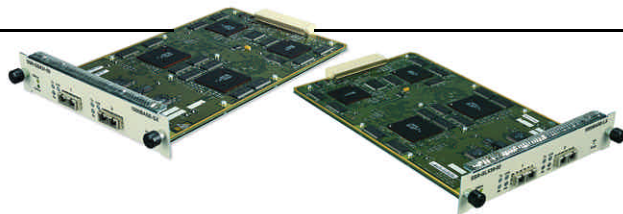# 2 & 4 Port Packet Over SONET/SDH Switch Router Modules: RS 8000 / 8600 Chassis

Overview

The Riverstone Networks' Packet Over SONET (POS) modules provide the critical high-speed interconnection of POPs to SONET networks in a seamless fashion. The OC-3c and OC-12c POS modules extend the WAN portfolio of the RS 8600 and 8000 family, now the most complete in the industry.

SONET/SDH based networks have been adopted by Service Providers as the backbone technology of choice for addressing ever-increasing bandwidth demands. Packet Over SONET/SDH interfaces for the RS switch router provide increased redundancy, bandwidth utilization and capacity. With the POS interfaces, all the benefits of the RS switch router are extended to the SONET infrastructure. Access Control List (ACL)-based filtering, Layer 4 application-aware switching, QoS and Server Load Balancing are integrated into the base module.

2 & 4 Port Packet Over SONET/SDH Switch Router Modules: RS 8000 / 8600 Chassis

Features

- High-speed Packet Over SONET (POS) OC-3c, OC-12c interfaces provide a cost-effective, high-performance backbone network for Service Providers

- Supports high port density with 2-port OC-12c and 4-port OC-3c configurations including redundancy using 1+1 Automatic Protection Switching

- Supports both SONET and SDH modes with industry standard PPP over SONET/SDH (RFC 1619) and PPP in HDLC-like Framing (RFC 1662) protocol support

- IP-based Weighted Fair Queuing (WFQ), Weighted Random Early Discard (WRED) and Rate Limiting features provide effective congestion management tools for Service Providers

Key Applications

- Enables connectivity of SONET and Gigabit Ethernet backbones

- Aggregate traffic directly from geographically distant POP sites to high-speed Internet backbones

- 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

2 & 4 Port Packet Over SONET/SDH Switch Router Modules (RS 8000 / 8600 Chassis):
Technical Specifications

Technical Specifications

Module Specifications

Switch/Routing Engine:	RS ASIC Route Engine
Buffer Memory:	OC-3c: 32 MB per port OC-12c: 64 MB per port
Layer 2 Address Table Size:	256,000 entries
Layer 3/4 Table Memory:	16 MB
Layer 3/4 Table Size:	256,000 entries
Route Table Memory Size:	Local hardware 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

Part Number	G8M-PO3B1-04	G8M-PO3B9-04	G8M-P12B1-02	G8M-P12B9-02
Port Density	4 OC-3c/STM-1	4 OC-3c/STM-1	2 OC-12c/STM-4	2 OC-12c/STM-4
Line Rate	155 Mbps	155 Mbps	622 Mbps	622 Mbps
Media Type	MMF	Intermediate Range SMF	MMF	Intermediate Range SMF
Connector	MT-RJ	MT-RJ	SC	SC
Wavelength	1300 nm	1300 nm	1300 nm	1300 nm
Transmit Power (min/max dbm)	-19/-14dBm	-15/-8 dBm	-19/-14 dBm	-15/-8 dBm
Receive Power (min/max dbm)	-30/-14 dBm	-30/-8 dBm	-26/-14 dBm	-28/-7 dBm
Link Budget	11 dB	15 dB	7 dB	13 dB
Maximum Distance	2 km	15 km	1 km	13 km

RFCs/MIBs

RFC 1333	Link Quality Monitor
RFC 1471	Managed Objects for the LCP of PPP
RFC 1473	Managed Objects for the IP NCP of PPP
RFC 1619	PPP Over SONET/SDH
RFC 1661	PPP
RFC 1662	PPP in HDLC-like Framing

Ordering Information

Part No.	Product Description
G8M-PO3B1-04	4 port OC-3c/STM-1 Packet Over SONET/SDH MMF module
G8M-PO3B9-04	4 port OC-3c/STM-1 Packet Over SONET/SDH SMF-IR module
G8M-P12B1-02	2 port OC-12c/STM-4 Packet Over SONET/SDH MMF module
G8M-P12B9-02	2 port OC-12c/STM-4 Packet Over SONET/SDH SMF-IR module

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