



## Overview

Riverstone Networks' Fast Ethernet network connectivity for the RS 2000 chassis is provided through either an 8-port 10/100 Base TX module with SC connectors or an 8-port 100 Base FX (MMF) module with MT-RJ connectors. The RS product family is the only wire-speed Layer 2/3 and 4 switch router product line proven to maintain throughput with features enabled.

By implementing all features in hardware, the Riverstone architecture enhances network performance compared with software-based routers. Use Network Address Translation (NAT) to enable flexible addressing or add addresses to the available pool. Turn on Access Control Lists (ACLs) to increase security or use integrated Server Load Balancing (SLB) to improve e-commerce sessions. The Riverstone switch router enables the Service Provider to implement all of these features with no loss in performance.

## 8 Port Fast Ethernet TX / FX Module: RS 2000 Chassis

### Features

- Advanced wire-speed features including Network Address Translation (NAT) and Server Load Balancing (SLB) on every port
- Layer 4 application-aware switch routing and extensive QoS support on every port
- Wire-speed, standards-based IP routing including BGP-4, OSPF and RIP
- Full-function, standards-based Layer 2/3 and 4 switching on every port

## Key Applications

- Traffic aggregation for multi-tenant unit buildings, or for content and application hosting environments
- Provision billable IP services per user or per application
- Provision bandwidth from 1 kbps to 100 Mbps
- Integrate SLA billing and monitoring packages with real-time port-level flow accounting and full RMON statistics

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# 8 Port Fast Ethernet TX / FX Module (RS 2000 Chassis): Technical Specifications

## Technical Specifications

### Module Specifications

Switch/Routing Engine:	RS ASIC Route Engine
Buffer Memory:	1 MB per port
Layer 2 Address Table Size:	48,000 entries
Layer 3/4 Table Memory:	16 MB
Layer 3/4 Table Size:	256,000 entries
QoS Support:	Weighted fair queuing and per flow rate limiting
MTBF (Predicted):	>200,000 hours
In-band Mgmt:	Remote SNMP and Telnet

### Physical Specifications

Dimensions:	11.00" x 7.75" x 1.55" (27.94 cm x 19.68 cm x 3.94 cm)
Weight:	3.0 lbs (1.4 kg)

### Environmental Specifications

Operating Temp:	+5°C to +40°C (41°F to 104°F)
Non-Operating Temp:	-30°C to +73°C (-22°F 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

8 Port 10/100 Base-TX with RJ-45 connectors  
8 Port 100 Base-FX (MMF) with MT-RJ connectors

### IEEE 802.3 10 Base T Characteristics

Segment Length:	IEEE 802.3 10BaseT standards of 100 m (328 ft) per segment using 24-gauge unshielded twisted pair (UTP) cable
Insertion Loss:	11.5 dB between 5.0 and 10.0 MHz, maximum. (This includes the attenuation of the cable, connectors, and patch panel.)
Impedance:	Between 85 and 110 ohms

### IEEE 802.3u 100 Base TX Characteristics

Segment Length:	IEEE 802.3u 100BaseTX standards of 100 m (328 ft) per segment using Category 5, 24-gauge unshielded twisted pair (UTP) cable
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Jitter: Must not generate more than 1.4 ns

Impedance: Between 85 and 110 ohms

### IEEE 802.3u 100 BaseFX Characteristics

Segment Length:	IEEE 802.3u 100BaseFX standards: Multimode Fiber: 412 meters in half duplex, 2 kilometers in full duplex
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	MMF Cable Type	Worst Case Budget	Typical Budget
Transmitter Power:	50/125 $\mu$ m	6.0 dB	9.0 dB
	62.5/125 $\mu$ m	9.0 dB	12.0 dB
	100/140 $\mu$ m	15.0 dB	18.0 dB

## Ordering Information

Part No.	Product Description
G2M-HTXA2-08	8 Port Fast Ethernet 10/100 TX Switch Router Module
G2M-HFXA4-08	8 Port Fast Ethernet 100 FX (MMF) Switch Router 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](http://www.riverstonenet.com).



Modules are specifically for the RS 2000 chassis



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