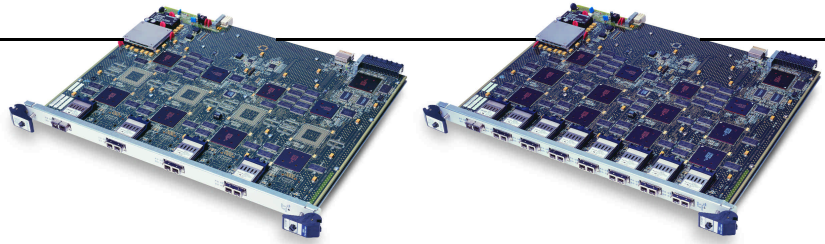# Gigabit Ethernet GBIC Module: **RS 32000 Chassis**

Overview

The Gigabit Ethernet switch router modules offer a flexible means of interconnecting sites. There are two base versions of the modules, a four port and an eight port card. Each module utilizes GBIC technology allowing for mixing and matching media as needed, whether Multi-Mode Fiber (MMF), Single Mode Fiber for Intermediate ranges (SMF-IR) up to 10 km, or SMF for long range (SMF-LR) up to 70 km.

The RS 32000 Gigabit Ethernet switch router modules support the Business enabling Quality of Service (*e*-QoS) feature set for provisioning tiered levels of service to customers. They also support the internet Business Intelligence Gathering (iBIG) feature set for supplying accounting and billing information for *e*-QoS services.

Gigabit Ethernet GBIC Module: RS 32000 Chassis

Features

• Offers flexible selection in Gigabit Ethernet Interconnection, MMF, SMF-IR, and SMF-LR through GBIC modules

• Select the port density you need, add the media when needed

• Support the *e*-QoS feature set for provisioning tiered levels of services

• Supports iBIG features for gathering real-time service intelligence data for accounting and billing

Key Applications

• Traffic aggregation over Gigabit Ethernet links for POP sites and data centers

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

• Enable rapid deployment of transparent LAN Services and leverage low-cost Gigabit Ethernet for metro area network facility interconnections over new or installed fiber

• Integrate iBIG billing and monitoring with real-time port-level flow accounting and full RMON statistics

• Provision billable *e*-QoS IP services per user or per application

e. **nabling**
Service Provider
Infrastructure

Gigabit Ethernet GBIC Module (RS 3200 Chassis): **Technical Specifications**

Technical Specifications

Module Specifications

MTBF (Predicted): >200,000 hr.

Interface Types: 4 or 8 GBIC

Physical Specifications

Dimensions: 11" x 17"
(27.94 cm x 43.18 cm)

Weight: 10.0 lbs. (4.7 kg)

Environmental Specifications

Operating Temp: +0° to +40°C (32° to 104°F)

Non-Operating Temp: -30° to +90°C (-22° to 194°F)

Operating Humidity: 5% to 95% (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 Compliant with the requirements of
Compatibility: FCC Part 15, CSA C108.8, EN55022,
VCCI V-3/93.01, EN50082-1 and
89/336/EEC

Interfaces

IETF Standards Support

RFC 1058	RIP v1
RFC 1105	BGP
RFC 1157	SNMPv1
RFC 1163	BGP-2
RFC 1213	MIB-2
RFC 1253	OSPF v2 MIB
RFC 1256	ICMP Router Discover Message
RFC 1265	BGP Protocol Analysis
RFC 1266	Experience with the BGP Protocol
RFC 1267	BGP-3
RFC 1293	Inverse ARP
RFC 1332	PPP Internet Protocol Control Protocol (IPCP)
RFC 1349	Type of Service in the Internet Protocol Suite
RFC 1397	BGP Default Route Advertisement
RFC 1490	Multiprotocol Interconnect over Frame Relay
RFC 1519	CIDR
RFC 1548	The Point-to-Point Protocol (PPP)
RFC 1552	The PPP Internetwork Packet Exchange Control Protocol (IPXCP)
RFC 1570	PPP LCP Extensions
RFC 1573	Evolution of the Interfaces Group of MIB-II
RFC 1583	OSPF v2
RFC 1631	IP Network Address Translator
RFC 1638	PPP Bridging Control Protocol (BCP)
RFC 1656	BGP-4 Protocol Document Roadmap and Implementation Experience
RFC 1657	BGP-4 Definitions of Managed Objects
RFC 1661	PPP (Point-to-Point Protocol)
RFC 1662	PPP in HDLC-like Framing
RFC 1723	RIP v2
RFC 1771	BGP-4
RFC 1772	Application of BGP in the Internet
RFC 1812	Router Requirements
RFC 1966	BGP Route Reflection
RFC 1990	PPP Multi-Link Protocol
RFC 1997	BGP Communities Attribute
RFC 2096	IP Forwarding MIB
RFC 2131	Dynamic Host Configuration Protocol
RFC 2225	Classical IP and ARP over ATM
RFC 2236	Internet Group Management Protocol, Version 2
RFC 2391	Load Sharing using IP Network Address Translation (Load Balance)

IETF Standards MIB Support

RFC 1471	PPP LCP (Link Control Protocol)
RFC 1472	PPP Security Protocol
RFC 1473	PPP IP NCP (Network Control Protocol)
RFC 1474	PPP Bridge NCP
RFC 1493	Definitions of Managed Objects for Bridges
RFC 1643	Ethernet Like Interface MIB
RFC 1654	BGP4 MIB
RFC 1724	RIPv2 MIB
RFC 1757	Remote Network Monitoring (RMON) Management Information Base
RFC 1850	OSPF and OSPF Trap MIB
RFC 2011	Internet Protocol using SMIv2
RFC 2021	Remote Network Monitoring Version 2 (RMON 2)
RFC 2096	IP Forwarding MIB
RFC 2115	Frame Relay DTE using SMIv2
RFC 2233	Interfaces Group using SMIv2
RFC 2271	SNMP Management Frameworks
RFC 2618	Radius Authentication Client

Ordering Information

Part No.	Product Description
R32-GBCC-04	4 Port Gigabit Ethernet Switch Router Module with blank GBIC bays
G2M-SECAC-04	8 Port Gigabit Ethernet Switch Router Module with blank GBIC bays
GIC-11	MMF GBIC Module
GIC-18	SMF-IR GBIC Module
GIC-17	SMF-LR GBIC 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.
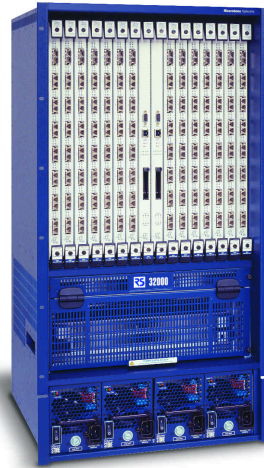
Modules are specifically for the RS 32000 chassis