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Raisecom Technology Co., Ltd

RC959-GESTM1(Rev.B) Gigabit Ethernet Gateway

RC959-GESTM1 is a Gigabit Ethernet Aggregation Gateway over channelized STM-1 circuits that performing a seamless Ethernet access for customers over the existing TDM network. It is typically deployed in central office, aggregating up to 63 E1 circuits which deliver Ethernet services from remote sites. Remote Ethernet services are aggregated and transmitted to packet switching network through its Gigabit Ethernet interfaces. VLAN switching function of RC959-GESTM1 permits packets with specific VLAN ID to be forwarded while isolate others. By supporting 802.1Q VLAN and Q-in-Q, different traffic profiles for different VLAN domains are available. RC959-GESTM1 can be managed via SNMP/Telnet/CONSOLE, meanwhile the remote GFP based EoPDH devices can be remotely discovered by the central RC959-GESTM1. Both RC959-GESTM1 and its remotes can be monitored and network managed on the GUI of Raisecom NView NNM system.

RC959-GESTM1 (Rev.B)

Highlights

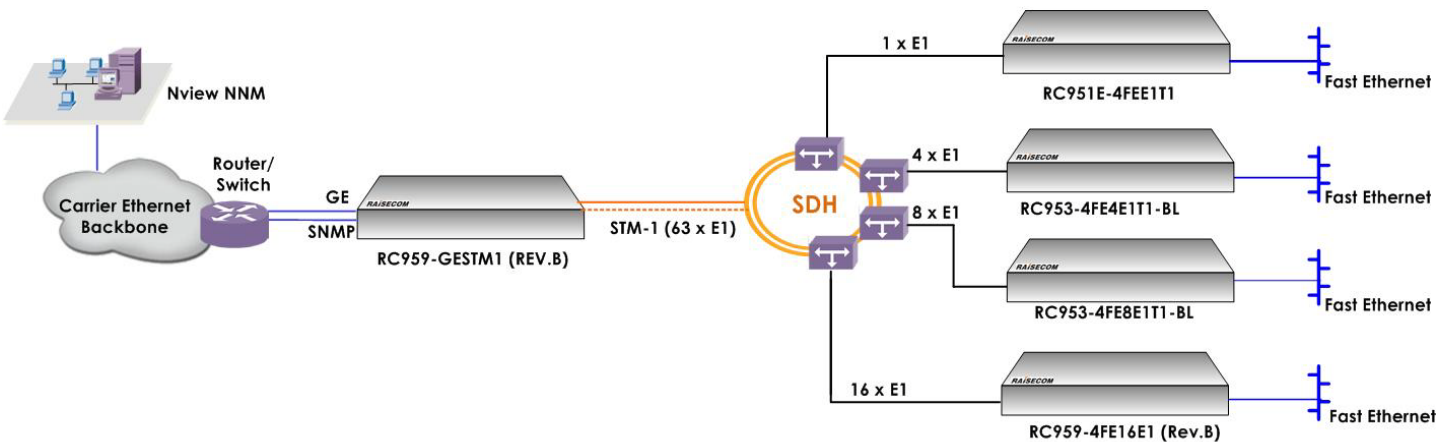|	
Topology Flexibility	Fits in point-to-multipoint EoPDH solutions as an aggregation gateway
Standard GFP	Capable of working with EoPDH devices of other vendors adopting standard GFP encapsulation
Layer-2 Switching	Capable of working as an intelligent layer-2 switch on Ethernet switching
Demarcation Feature	Advanced Ethernet diagnostics tools standard OAM and CFM available on the device
Easy Management	Management via local CLI, and GUI-based NView NNM system

Typical Application

Figure.1 Point-to-Multipoint Topology

Features

EoPDH	2 GE over 2 STM1(up to63 E1 channel)
	Standard GFP encapsulation
	GFP: 63 VCG, 1-16 E1 members allowed in one VCG
	Standard VCAT, LCAS
SDH port	2 STM1 SFP/LC ports, 1+1 Low Path Protection
	Support SFP DDMI and ALS
	Master and slave clock, clock source auto-switchover in Slave mode
	Internal/External loopback
	SDH overhead bytes readable and configurable
	SDH MS, HP, LP performance statistics and monitoring
	SDH alarms report
	Timeslot assignment function from E1 to VC12
E1 channel	Up to 63 E1 channel
	Framed, PCM31, FAC+CRC4, CRC-auto configurable
	E1 external loopback test and in-built BER test
	E1 port loopback detection
	E1 clock configurable
	Local and remote E1 LOS, LOF, AIS, CRC, GID error report
Ethernet port	2 Gigabit Ethernet Combo:
	GE: 10/100/1000Mbps auto-negotiation, speed and duplex mode configurable
	Optical SFP-based 100/1000Mbps auto-sensing
	MTU: 1916 Bytes
	Flow Control: IEEE 802.3x in full duplex mode
	Back pressure in half duplex mode
MAC Address Table	16K MAC address
	Add/remove/search MAC address table entries
	View MAC address table statistics
	MAC address aging time configurable: 10-100000s
	MAC address learning threshold per port
	Optional MAC address table limit per port: 1-255
VLAN	4K active VLAN
	Q-in-Q
QoS	4 queue per port
	CoS/DSCP-based
	Global queue scheduling : SP/WRR/SP+WRR
Rate Limit	Per port (ingress/egress/both) with increments 64Kbps

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Storm Control	Broadcast/Multicast/DLF storm control
Link Aggregation	Support
Loopback Detection	Support
Traffic shaping	Port/Vlan-based
Packet Relay	Optional STP/DOT1X/LACP relay Destination MAC transparent
OAM	IEEE 802.3ah OAM (discovery, link performance monitor, remote loopback testing, remote failure indication)
CFM	IEEE 802.1ag ITU-T Y.1731 Connectivity check protocol Loopback protocol Linktrace protocol
SLA	Layer-2/Layer-3 SLA
ACL	IP-based/MAC-based ACL
Remote power-off alarm	Support
RMON	Group 1, 2
Syslog	Support
Routing Protocol	Static routing & default gateway
Auto-Configuration	Automatic configuration loading
Scheduling	Execute command script periodically
Security	User classification and password protection RADIUS
Hardware Environment Monitoring	Monitor temperature and voltage
Management	CLI-based management through local CONSOLE or remote Telnet/SSH GUI-based SNMP management on Raisecom NView NNM system

Specifications

Capacity	256MB SDRAM
	32MB Flash
LAN interface	2*GE Combo
	2*10/100/1000Base-T
	RJ-45 connector
	2*1000M fiber SFP slot
WAN interface	2*STM1 ports
	fiber SFP/LC slot
	Bit Rate: 155/520Mbps±50ppm
CONSOLE port	RS232
	Baud Rate: 9600
	RJ-45 connector
SNMP port	10/100Base-TX
	RJ-45 connector
Indicator	PWR for power supply
	PWR1 for power supply 1
	PWR2 for power supply 2
	SYS for system operation
	LNK/ACT, 100M, 1000M, FDX, SD for each GE port
	LNK/ACT, 100M for SNMP port
	LOS, LOF for STM1 port
Dimension	43.6(H)x440(W)x360(D)mm
Weight	≤ 4.65kg
Power supply	AC: 100-240V
	DC: -48V
Power consumption	≤ 60W
Working environment	Temp: 0~50 Celsius
	RH:≤ 90% (35 Celsius)
Storage environment	Temp : -40~80 Celsius
	RH : 5~90% non-condensing

Compliances

Standards & protocols	IEEE802.3-2002
	IEEE802.3 10BaseT
	IEEE802.3u 100BaseTX
	IEEE802.3x Flow Control
	IEEE802.1Q VLAN
	IEEE802.1ad QinQ
	IEEE802.3ad Link Aggregation
	IEEE802.1pCoS Prioritization
	IEEE802.3ah OAM
	IEEE802.1ag CFM
	ITU-T Y.1731 Service OAM
	Static Routing
	RMON I and II standards
	SNMP v1/v2c/v3
	ITU-T G.703, G.704, G.823, G.824
	ITU-T G.7041, G.7042, G.7043, G.8040

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Ordering Information

RC959-GESTM1-AC	Intelligent EoPDH aggregation gateway, 2 STM1 SFP ports and 2 GE Combo ports (10/100/1000M RJ-45 + 1000M SFP fiber), redundant AC power supply
RC959-GESTM1-DC	Intelligent EoPDH aggregation gateway, 2 STM1 SFP ports and 2 GE Combo ports (10/100/1000M RJ-45 + 1000M SFP fiber), redundant DC power supply
RC959-GESTM1-AC_DC	Intelligent EoPDH aggregation gateway, 2 STM1 SFP ports and 2 GE Combo ports (10/100/1000M RJ-45 + 1000M SFP fiber), one AC and one DC power supply