

RC953E-GESTM1 Channelized Gigabit Ethernet Gateway

RC953E-GESTM1 is a Channelized Gigabit Ethernet Gateway that interconnecting Gigabit Ethernet over channelized STM1, achieving a seamless interconnection between customers connected over the TDM network and customers connected over the packet network. It is typically deployed in central site, and up to 63 E1 carrying diversified Ethernet services from remote sites can be aggregated and transmitted to packet-switch network through the gigabit Ethernet interface. VLAN switching function of RC953E-GESTM1 permits packets with specific VLAN ID to be

forwarded while blocks others. With the VLAN awareness, different traffic profiles for different VLAN domains are available. RC953E-GESTM1 can be managed by SNMP/Telnet/Console, meanwhile both the remote interface converters such as RC953-FE4E1/8E1, RC952 and RC954 series and Ethernet media converters such as RC512 which is connected with the remote interface converters' optical port can be remotely managed by RC953E-GESTM1 through command line or Raisecom GUI-based NNM.



Feature

Working mode	*Single E1 Mode for aggregating up to 63 remote sites (with RC952 located in remote sites) *Inverse Multiplexing mode for flexibly transmitting Ethernet Service over multiple E1 links (with RC953-FE4E1/8E1 or RC954 series in remote sites)
E1 mode	*Single E1 Mode Framed E1 and Unframed E1 mode *Inverse Multiplexing Mode Framed E1 mode (PCM31, FAS+CRC4 by default)
VLAN switching	VLAN switching permits the packets with specific VLAN ID to be forwarded and blocks others
Automatic E1 Link Adjustment	In Inverse Multiplexing mode, RC953E-GESTM1 can automatically adjust the E1 link capacity of transmission channel if one or more E1 link fails and assures the high-reliable Ethernet data delivery
storm restraining	Restrain broadcast, multicast, DLF frame
Ethernet Encapsulation	HDLC-over-E1 (GFP on next version)
E1 Loop Back	Support local and remote loop back
BERT function	Inner BERT enables a flexible way of testing E1 links
Enhanced E1 link monitor	Traffic counter provides an effective E1 link monitoring by statistics collection of Rx, Tx, total and error packets amount on E1 port
Clock Mode	Master and Slave
Maximum Transmission Unit	1632 bytes
Trunking	Link Aggregation of Gigabit Ethernet port enables a redundant Ethernet access
Flow control	IEEE802.3x in full duplex
Tranparent transmission	Support BPDU, Dot1x, GMRP, GVRP, and ICMP on per port
Management	In-band and out-of-band (SNMP, Telnet, CONSOLE) management
Enhanced remote management	Remote RC953-FE4E1/8E1 RC952 and RC954 series can be remotely managed by RC953E-GESTM1 even through DXC equipment in the network
Redundant STM-1	Dual STM1 optical ports enable 1+1 protection for a higher reliability

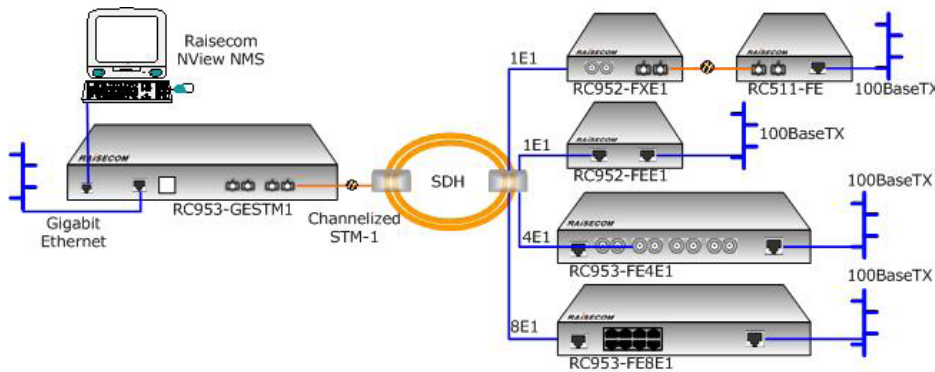
Specification

Electrical Gigabit Ethernet port	1* 10/100/1000BaseT Connector: RJ-45 MDI/MDIX auto crossover IEEE802.3x flow control
Optical Gigabit Ethernet port	1*1000M FX Connector: LC IEEE802.3x flow control
STM1 port	2*optical STM1 ports Connector: SC
SNMP port	1*10/100BaseT Connector: RJ-45 MDI/MDIX auto crossover
CONSOLE Port	Connector: RJ-45
System Indicator	SYS, Flashing indicates CPU works normally
Power Supply Indicaor	PWR, ON indicates the device is powered on; PWR1, ON indicates first power supply works normally; PWR2, ON indicates second power supply works normally.
Indicators for electrical Ethernet ports	LNK/ACT, FDX, 100M and 1000M indicators for electrical Ethernet port
Indicators for optical Ethernet ports	LNK/ACT and SD indicators for optical Ethernet port
Indicators for STM1 ports	LOS and LOF alarm indication for STM1 ports
Dimension	440(W)*360(D)*43.6(H)mm

Upgrade	Support local and remote on-line upgrade through FTP/TFTP
Redundant Power Supply	Two power supply modules enable the most uptime

Weight	4kg
Power supply	AC: 90~264V, 47~63Hz DC: -36~-75V
Power consumption	≤40W (at max load)
Working ambience	Temp: -5~50 centigrade RH: ≤90% non-condensing
Storage ambience	Temp: -25~85 centigrade RH: 20~90% non-condensing
Safety compliance	CE certification

Typical Application



Ordering Information

RC953E-GESTM1-A-B Channelized Gigabit Ethernet Gateway, 2 optical STM1 interfaces, 1* Combo Gigabit Ethernet interface (1*10/100/1000BaseT and 1 SFP-based optical port), redundant power supply.

A indicates the optical connector of STM1 interface: M, S1, S2, S3, SS1 and SS2;
B indicates power supply: redundant AC or DC power supply

Annex 1 - STM1 Interface Specification

Data speed	Model type	Connector type	Transmit wavelength (nm)	Launch power (dBm)	Saturation (dBm)	Receiving sensitivity (dBm)	Typical distance (km)	Optical loss (dB/km)
STM-1	M	SC	1310	-18~-14	-14	< -29	0~2	3
	S1	SC	1310	-15~-8	-8	< -34	0~25	0.5
	S2	SC	1310	-5~0	-8	< -34	10~60	0.5
	S3	SC	1550	-5~0(DFB)	-10	< -36	15~120	0.25
	SS1	SC	1310	-12~-3	-8	< -30	0~25	0.5
			1550	-12~-3	-8	< -30	0~25	0.5
	SS2	SC	1310	-5~0	-8	< -32	10~50	0.5
			1550	-5~0	-8	< -32	10~50	0.5

* For single-strand fiber SS1 and SS2, the TX of EAST interface is 1310nm and the TX of WEST interface is 1550nm.

Annex 2 - SFP Interface Specification

Part Number	Optical Connector	Wavelength (nm)	RX sensitivity (dBm)	Tx Power (dBm)	Typical distance (km)
USFP-GB/M	LC	850	<-17	-9.5 ~ -3	0.55
USFP-GB/S1	LC	1310	<-20	-10 ~ -3	15
USFP-GB/S2	LC	1550	<-20	-3 ~ 2	40
USFP-GB/S3	LC	1550	<-30	-3 ~ 2	80
USFP-GB/SS13	LC	1310	<-20	-10 ~ -3	15
USFP-GB/SS15	LC	1550	<-20	-10 ~ -3	15
USFP-GB/SS24	LC	1490	<-20	-3 ~ 2	40
USFP-GB/SS25	LC	1550	<-20	-3 ~ 2	40

Compliance

Standards & protocols	For SDH port:
	ITU-T G.707 ITU-T X.86 ITU-T G.7041 ITU-T G.813 ITU-T G.957 ITU-T G.703 ITU-T G.831
Standards & protocols	For Ethernet port:
	IEEE802.3
	IEEE802.3x full duplex on 10BaseT, 100BaseTX and 1000BaseT
	IEEE802.3
	IEEE802.3u
	IEEE802.3ab
	SNMPv1/v2c/v3

