Raisecom Technology Co., Ltd

Datasheet

RC1201-2GE16E1T1 TDMoverIP Gateway

RC1201-2GE16E1T1 is a TDMoverIP access gateway device for enterprises and mobile operators, offering TDM lease line extension or TDM traffic backhaul over a packet switched network. It provides a legacy service over Ethernet/IP solution supporting transmission of E1/T1 streams over Packet Switching Networks.

RC1201-2GE16E1T1 is integrated with 16 x E1/T1 interfaces,2 x GE ports and two expansion slots for 4/8 x GE ports and clock signal input/output. It is designed to act as the TDM over IP aggregation gateway at the central office, aggregating TDM over IP traffics from remote sites. It converts legacy TDM service from 16 E1/T1 ports into packets for transmission over the packet switching network such as MPLS, IP, and Ethernet network.

RC1201-2GE16E1T1 TDMoP Gateway

Highlights

Topology Flexibility	Flexibly fits in both point-to-point and point-to-multipoint TDMoP solutions as an aggregation or a remote Gateway
Ethernet Compatibility	Expand 8 GE interfaces for connecting remote gateway on line side or transparent transmit on client side
Carrier Ethernet Service	Support IEEE 802.3ah Link OAM, UDP/IP OAM connection of PW for diagnostics
Pseudowire Capability	Support up to 64 MPLS tunnels and 64 PWs
Easy Management	Management via local CLI, remote SNMP telnet, and GUI-based NView NNM system

Typical Application

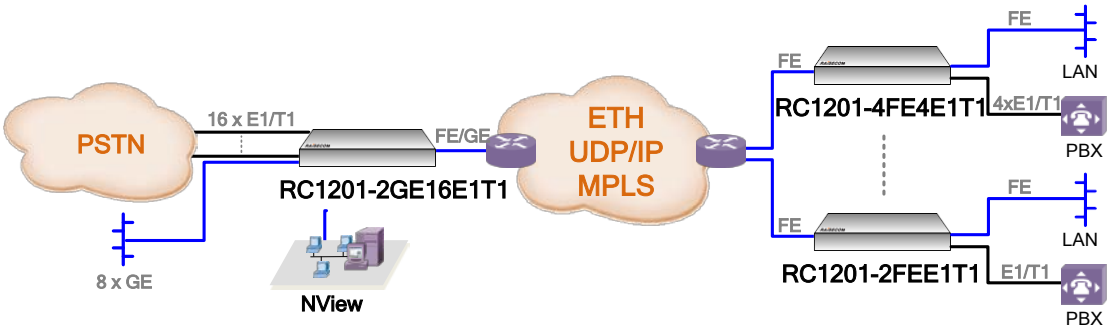

Figure.1 Aggregate remote Pseudowire traffic

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Features

Ethernet interface	2 Gigabit Ethernet SFP ports (fiber or copper module) Support SFP DDMI; 2 expansion slots support up to 8 Gigabit Ethernet copper ports
Switching Mode	Store and forward mode; Broadcast/Multicast/DLF storm control
Packet Forwarding	Support Jumbo Frame; MTU: 12k byte configurable (default 12,288byte)
MAC Address Table	MAC address learning/add/remove/searching/ageing; Up to 8K MAC addresses Support 1024 static MAC address, 16K dynamic MAC address forward list
Bandwidth Profile	Ingress rate limit per port; Egress traffic shaping per port; Rate limit per VLAN
VLAN	IEEE 802.1Q VLAN: 4094 active VLANs; Support QinQ
Link Aggregation	Up to 16 link aggregation group, with up to 8 ports in each group
Flow Control	IEEE 802.3x flow control based on full duplex mode Back-pressure flow control based on half duplex mode Bi-direction flow control configurable
Port Mirroring	Mirroring of egress/ingress traffic of ports configurable
Protection	Port based Ethernet local loopback detection
Firmware Upgrade	TFTP upgrade in BOOTROM mode FTP/TFTP upgrade and backup BOOTROM, system file and configuration file
Time Management	Time zone management Time modification DST System time synchronization by SNTP Client/NTP
Router Protocol	Static routing and default gateway PING (Packet Internet Groper)
OAM	IEEE802.3ah EFM OAM including discovery, link performance, remote loopback, fault detection & performance stats per OAM standards; OAM Active/Passive mode, Dying Gasp
QoS	Support port/CoS/DSCP mapping; Priority trust based on port/CoS(default)/DSCP; Up to 8 queues per port; Support SP, WRR and DRR scheduling; WRR/DRR weight range 1-127;

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	Flow-based statistics /rate-limiting/redirecting/Rewriting of 802.1p CoS/DSCP/IP Precedence based on flow
PWE3 (TDMoP)	Up to 64 Tunnels; Up to 64 PWs; PW payload type: SAToP, CESoPSN; PSN type: UDP/IP, MPLS, MEF; PW clock: Internal clock, Loopback clock, Recovery clock; Payload size: 8-1280 Bytes; Configurable Jitter Buffer size: 375 -128,000μs; UDP/IP OAM connection based on PW; OOS control; PW Vlan configuration: TPID, inner/outer Vlan ID, outer Vlan priority; IP encapsulation header configuration: IP TOS, IP TTL, destination IP/MAC, next hop IP/MAC; MPLS encapsulation header configuration: outer label number, label ID, EXP, TTL, next hop MAC; PW connection status, packet statistics and clear statistics
TDM(E1/T1)	Up to 16 E1/T1 service ports to access legacy voice services; E1 interface: Bit rate: 2.048Mbps; Lice code: HDB3; Framing: Unframed/Framed with or without CRC-4; Signaling: CAS and transparent CCS; Jitter: ITU-T G.823 T1 interface: Bit rate: 1.544Mbps; Lice code: B8ZS/AMI, Bellcore GR-499-CORE, ANSI T1.403; Jitter: ITU-T G.824 TX clock mode configurable; Internal/external/bidirectional loopback; E1/T1 alarm statistics
Management options	Local management through console port and CLI Remote management through SNMP and Telnet GUI-based SNMP management on Raisecom NView NNM system

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Specifications

Physical Interface	Management port: 1 console (RJ45); 1 SNMP(RJ45); E1/T1 interface: 16 x E1/T1 interfaces (8 x RJ45 connector, 2 x E1/T1 each RJ45 port); Client interfaces: 2 expansion slots Network interfaces: 2 x100/1000M SFP connector;
ETH Expansion Card	Client interfaces: 4 x 10/100/1000Base-T RJ45 ports;
Clock Expansion Card (available in phase-2)	Mini-BNC connector: 1 x 2Mbit/2MHz input/output; 1 x 10MHz input/output; 1 x 1PPS input/output; RJ45 connector: 1 x TOD input/output;
Power Specs	Dual AC: 100~240V; Or dual DC: -48V hot-swappable; Full load: ≤25.0W
User Conditions	Operating temp: [Normal version] 0~50˚C (32~122˚F); [Hardening version] -25~50˚C (-13~122˚F); Storage temp: -25~60˚C (-13~140˚F); Humidity: 10~100% non-condensing
Lightning Proof	6kV
Dimensions	440(L) x 266(W) x 44(H) mm³
Weight	≤ 5.0Kg

Compliances

Standards & protocols	TDM interface: ITU-T G.703 ITU-T G.704 ITU-T G.706 ITU-T G.732 ITU-T G.823 Ethernet port: IEEE802.3 IEEE802.3x IEEE802.3u IEEE802.3ad Link Aggregation IEEE802.1p IEEE802.1Q VLAN IEEE802.1ad QinQ IEEE802.3ah OAM IEEE802.1ag CFM ITU-T Y.1731 Services OAM SNMPv1/v2c/v3 CE marking EMC RoHS compliance

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Ordering Information

RC1201-2GE16E1T1-AC/D	TDMoP aggregation gateway, 16 x E1/T1 interfaces (8 x RJ-45 ports, each for 2 x E1/T1 channels), 2 x GE SFP fiber or copper ports, 2 x Expansion slots; dual AC power supply
RC1201-2GE16E1T1-DC/D	TDMoP aggregation gateway, 16 x E1/T1 interfaces (8 x RJ-45 ports, each for 2 x E1/T1 channels), 2 x GE SFP fiber or copper ports, 2 x Expansion slots; dual DC power supply
RC1201-2GE16E1T1-AC_DC	TDMoP aggregation gateway, 16 x E1/T1 interfaces (8 x RJ-45 ports, each for 2 x E1/T1 channels), 2 x GE SFP fiber or copper ports, 2 x Expansion slots; one AC and one DC power supply
RC1201-2GE16E1T1-AC/S	TDMoP aggregation gateway, 16 x E1/T1 interfaces (8 x RJ-45 ports, each for 2 x E1/T1 channels), 2 x GE SFP fiber or copper ports, 2 x Expansion slots; signal AC power supply
RC1201-2GE16E1T1-DC/S	TDMoP aggregation gateway, 16 x E1/T1 interfaces (8 x RJ-45 ports, each for 2 x E1/T1 channels), 2 x GE SFP fiber or copper ports, 2 x Expansion slots; signal DC power supply

Assembly Parts List

RC1201-SUB-4GE	Ethernet Expansion Module, 4 x GE (RJ45 port) for line side

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