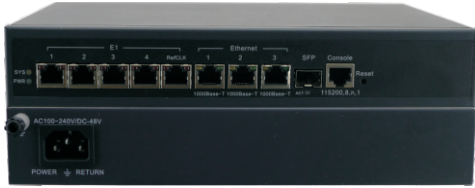


# EoE2000G Series

## 1, 2 or 4-port E1 over Gigabit Ethernet TDM Pseudowire Access Gateway



- Comprehensive support for Pseudowire/circuit emulation standards including PWE3, CESoPSN, SAToP
- E1 emulation over MPLS, IP and Ethernet networks
- Framed (full or fractional) and unframed E1 traffic
- Four Gigabit Ethernet and 4 TDM service ports
- Two fiber ports for redundant ring (recovery time < 20 msec)
- Support 1 or 2 layers VLAN Tags (802.1q)
- Configure via CLI/Web/SNMP (v1/v2c/v3)
- Provide statistics for Ethernet
- Support software and firmware upgrade
- AC/DC dual power supply Adaptive input

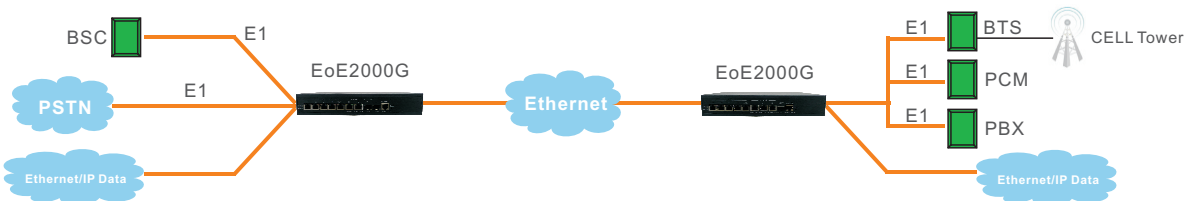
## Overview

The EoE2000G device ensures the circuit emulation traffic priority, Restructuring any slot group of each E1 interface with built-in time slot allocation circuit-TSA, providing Channel associated signal processing capability. Having the performance of high transmission efficiency, low transmission delay, high precision clock recovery.

Support up to 4 E1 interface and IP internet transmission of 4 1000M Ethernet interface .

## Typical Applications

EoE2000G can establish 1-4 E1 transparent channels over Ethernet or IP network for the provision of voice, images and other real-time business. Typical applications as shown in figure The typical application as below:



In the Figure above, EoE2000G provide 1~4 channels of E1 over Ethernet to connect the base station controller, the PSTN access network equipment and other E1 terminal equipment. The two routers at two sides can share local Ethernet data by any Ethernet port of EoE2000G. The internal QoS mechanisms of EoE2000G can ensure the priority of E1 signal.

## Specifications

### E1 Interface

- Number of E1 Ports:  
EoE2001G: 1; EoE2002G: 2; EoE2004G: 4
- Interface Standard: ITU-T G.703 G.704
- Line Impedance and Connector:  
120 Ω, balanced, RJ-45, 75Ω, unbalanced, DIP
- Data Rate: 2.048 Mb/s
- Line Code: HDB3
- Framing: unframed, framed, multiframe, with or without CRC-4
- Jitter and Wander Performance:  
ITU-T G.823 (for internal, loopback and external clock modes)
- Signaling: CAS, CCS (transparent)
- Number of differential Clock Input Interface: 1
- Point-to-point one-way additional processing delay (Minimum delay setting): ≤ 1.2ms
- Output frequency stability(adaptive timing, Stable): ≤ 50ppb
- Output Jitter(adaptive timing): ≤ 0.03UI

### Ethernet Interface

- Number of Ports:  
EoE2000G-nE13TX1FX: 3-port UTP and 1-port SFP  
EoE2000G-nE12TX2FX: 2-port UTP and 2-port SFP
- Interface Type:  
10/100/1000 GE RJ45 ports and 100/1000M SFP optical ports
- Data Rate: 32Kbps~1000Mbps(Minimum setting unit is 32Kbps)
- Protection:  
1+1 Protection, Ring Protection (recovery time < 20 msec)
- Max Frame Size: 9Kb
- Protocol: IPV4, IPV6 (Planning), MPLS, MEF,UDP
- Standard  
IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-T)  
IEEE 802.3z (1000BASE-X), IEEE 802.3ab (1000BASE-T)  
IEEE 802.1ad (Q in Q), IEEE 802.3ad (Link Aggregation) (Planning)  
IEEE 802.3x (Flow Control), IEEE 802.1p (COS priority)  
IEEE 802.1Q (Virtual LAN)
- Magnetic Isolation Protection: 1.5 KV built-in

### Physical Characteristics

- Housing: Metal
- Dimensions: 217 x 138 x 35mm(8.5×5.4×1.4in.)
- Weight: 0.7 kg (1.5 lb)

### PSEUDOWIRE

- Compliance  
IETF: RFC4623 (PWE3), RFC4553 (SAToP), RFC5086 (CESoPSN),  
ITU-T: Y.1413 and Y1453, MFA: IA 8.0.0, MEF: 8
- Number of PW Connections: 128
- Timing  
Internal (from internal oscillator)(optional)  
External (E1 via dedicated port)(optional)  
Loopback (derived from the E1/T1 receive line)  
Adaptive (regenerated from Ethernet link)
- Adaptive Clock accuracy: ±10 ppb
- Jitter Buffer Size: 1 to 256 ms

### Internal Bridge

- Number of VLANs : 1-4094 with 16 VLAN support
- Compliance: 802.1Q
- LAN Table: Up to 2K MAC addresses
- L2CP handling: transparent and Termination
- QoS Priority Queues: 4
- Port-Based VLAN: Untagged, tagged, transparent or double tagged(planning)
- LAN Table: Up to 2K MAC addresses (learned)

### Management Ports

- Console Port  
Interface standard: RS-232  
Connector: RJ-45  
Data rate: 115.2 kbps
- SNMP(v1/v2), SNMPv3(Planning)
- Support: telnet,web, SYSLOG, Activity logging(user activities), TACACS+, SNTp
- Out-of-Band Ethernet Management: Any one of the User Ethernet port should be configured as an out of band management port.

### Environmental Limits

- Operating Temperature: 0~50°C (32~122°F)
- Ambient Relative Humidity: ≤ 90% (non-condensing)

### Power Requirements

- AC/DC dual power supply Adaptive input
- Input Voltage:  
AC: 100~260V/50Hz  
DC: -36~-72V
- Power Consumption: <6 watts

## Ordering Information

Standard Type	Description
EoE2001G-1E13TX1FX-A/D-T	1E1 over 3GE+1SFP TDM Pseudowire Access Gateway;Timing: Adaptive/Loopback;WEB/CLI/SNMP;adaptive power: -48VDC or 100~240VAC
EoE2001G-1E12TX2FX-A/D-T	1E1 over 2GE+2SFP TDM Pseudowire Access Gateway;Timing: Adaptive/Loopback;WEB/CLI/SNMP;adaptive power: -48VDC or 100~240VAC
EoE2002G-2E13TX1FX-A/D-T	2E1 over 3GE+1SFP TDM Pseudowire Access Gateway;Timing: Adaptive/Loopback;WEB/CLI/SNMP;adaptive power: -48VDC or 100~240VAC
EoE2002G-2E12TX2FX-A/D-T	2E1 over 2GE+2SFP TDM Pseudowire Access Gateway;Timing: Adaptive/Loopback;WEB/CLI/SNMP;adaptive power: -48VDC or 100~240VAC
EoE2004G-2E13TX1FX-A/D-T	4E1 over 3GE+1SFP TDM Pseudowire Access Gateway;Timing: Adaptive/Loopback;WEB/CLI/SNMP;adaptive power: -48VDC or 100~240VAC
EoE2004G-2E12TX2FX-A/D-T	4E1 over 2GE+2SFP TDM Pseudowire Access Gateway;Timing: Adaptive/Loopback;WEB/CLI/SNMP;adaptive power: -48VDC or 100~240VAC