

# OP-4E1\*4GE\*360VO

## SNMP Managed Fiber Multiplexers for 4 E1 and Ethernet and Voice

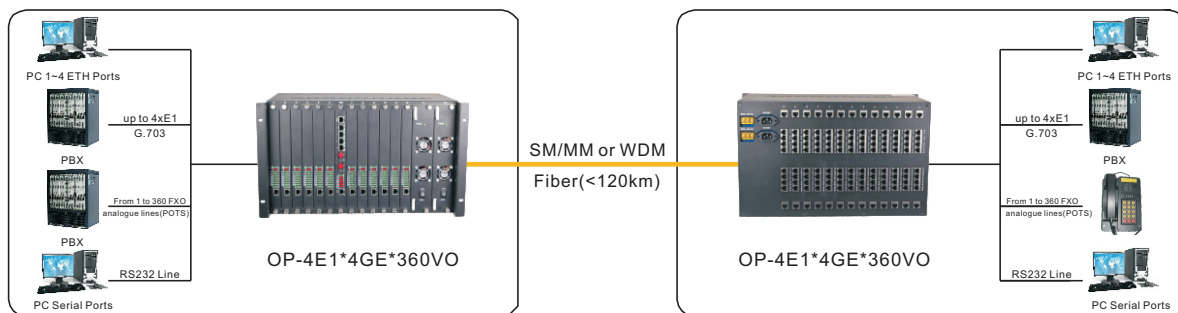


- Up to 360 Voice and 4 E1 links and full bandwidth 1000 Mbps Ethernet traffic multiplexed into fiber optic uplink
- Convenient expansion, only increase the card, convenient maintenance, only replacement the card.
- Single-mode, multimode, single-mode over single fiber
- 1-360 Channel voice access, supports caller ID feature and reverse polarity billing functions
- Provide 4 expansion interface, can access 2 channel of RS232/422/485
- Support E1 loopback and fiber loopback function
- Range of up to 100 km
- -48VDC/110/220VAC flexible redundant power inputs

## Overview

6U 19 inch Rack frame, total of 12 30\*Voice card plus one fiber card provides 4 Gigabit Ethernet and 1+1 optical interface, 30-360 Voice Optical Multiplexer Series provides a simple and cost-effective solution for transporting multiple E1 links, as well as 1000M Ethernet, for distances up to 100 kilometers.

## Typical Applications



In private networks, 360 Voice Optical Multiplexer shares services such as Voice E1, Ethernet, in P2P topologies over fiber. 360 Voice Optical Multiplexer establishes TDM and Ethernet connectivity between the remote branches and headquarters for educational, financial, military sectors.

## Specifications

### Fiber Interface(Main and backup)

- Number of Ports: 2(1+1)
- Optical wavelength :  
850/1310nm for multi-mode fiber,  
1310/1550nm for single-mode fiber
- Transmission distance: 20-100Km
- Fiber Optic Interface Type: FC/SC/ST/LC
- Data Rate: 1.5 Gb/s(GRANCOM proprietary)
- Typical output power  
single mode 1310/1550nm:  $\geq -8$ dBm  
multi-mode 850nm:  $\geq -18$ dBm  
multi-mode 1310nm:  $\geq -25$ dBm
- Receiver Sensitivity:  $\leq -36$ dBm

### E1 Interface

- Number of Ports: up to 4
- Interface Standard: G.703 G.704
- Data Rate and Line Code: 2.048Mb/s HDB3
- Line Impedance and Connector  
120  $\Omega$ , balanced, RJ-45  
75 $\Omega$ , unbalanced, BNC
- Nominal Pulse Width: 244 ns
- Jitter Performance: Comply with ITU-T G.823 recommendation"
- Test Function: Support E1 loopback and BERT function

### Gigabit Ethernet Interface

- Number of Ports: 4
- Interface Type: 10/100/1000 Mbps, auto-negotiation, full/halfduplex, flowcontrol, MDI/MDX crossover
- Compliance: IEEE 802.3z, 802.3ab and 802.1p&q
- Max Frame Size: 10240
- Number of VLANs: 1-4094 with 64 VLAN support
- Port-Based VLAN: Untagged, tagged, transparent or double tagged
- Connector and LAN Table: RJ-45; 1KMAC
- Electrical Cable Type: Cat.5

### Voice(FXS/FXO) Interface

- Number of Ports: up to 360
- Impedance: 200 $\Omega$ +680 $\Omega$ //0.1 $\mu$ F
- Frequency character: 300-3400Hz(-0.6-+3dB)
- Weighted noise:  $\leq -65$ dBmop
- Interface loop resistance:  $\leq 1800\Omega$
- Compliance: ITU G.711 A-Law

### Management Ports

- Console Port  
Interface standard: RS-232  
Connector: RJ-45 to DB9  
Data rate: 9.6 kbps
- Out-of-Band Ethernet Management  
Port Interface: 10/100Base T  
Connector: RJ-45
- SNMP: SNMP(V1/V2/V3)

### Environmental Limits

- Operating Temperature: 0 to 50°C
- Storage Temperature: -40 to 85°C
- Ambient Relative Humidity: 5 to 95% (non-condensing)

### Power Requirements

- Input Voltage:  
AC: 100-240VAC( $\pm 10\%$ ), 50/60Hz  
DC: -48VDC(36-72VDC)

- Power Consumption: <300 watts

### Physical Characteristics

- Housing: Metal
- Weight: 8kg
- Dimensions: 430 x 268 x 271mm (Standard 6U and 19-inch rackmount size)

## Ordering Information

Type	Function Description
OP-4E1*4GE*360VO-AD	4E1, 1000M Ethernt and 360 Voice over Fiber Optical Multiplexer with SNMP; 100~240VAC and 36~72VDC
2OP-4E1*4GE*360VO-AD	4E1, 1000M Ethernt and 360 Voice over Dual Fiber Optical Multiplexer with SNMP; 100~240VAC and 36~72VDC