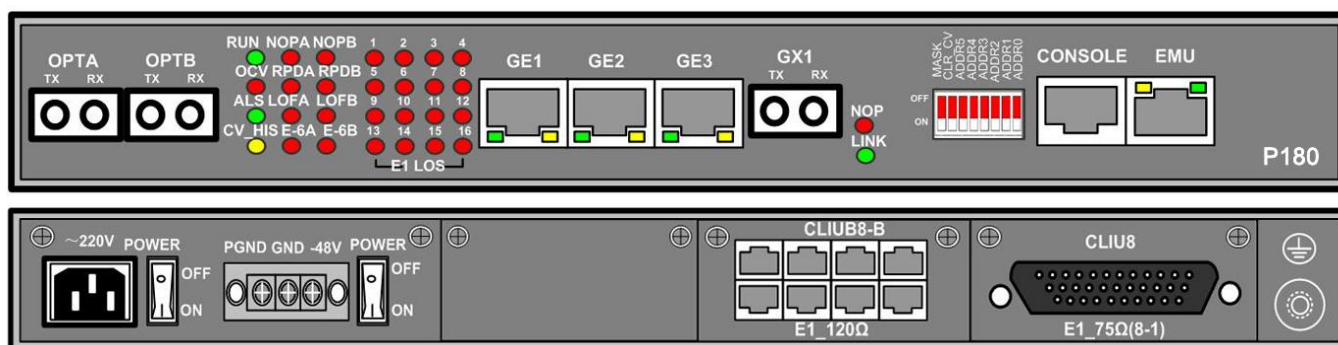


**ZISA**

## Super GE PDH P180

### Gigabit Ethernet and 16E1s to optical fiber multiplexer

#### ZS-P180-(1+1)Dual Fiber-16E1-4GE-R



## Overview

The ZS-P180-(1+1)DUAL FIBER-16E1-4GE-R is optical transmission equipment based on Application Specific Integrated Circuit (ASIC). It integrates the traditional PDH multiplexer and 1000Mbps Ethernet optical transceiver, and can realize the 4/8/16 E1s and four 1000Mbps Ethernet data channel transmission over optical line of 1.25Gb/s, the four 1000Mbps Ethernet data channel share 1000M bandwidth.

In point-to-point mode, the Ethernet transmission bandwidth can be doubled to 2.5G by setting the port-trunking function.

The ZS-P180-(1+1)DUAL FIBER-16E1-4GE-R is designed as a modular system with several optional E1 cards and power cards to meet the various application requirements. It provides one optical Gigabit Ethernet interface (SFP optical module) and three electrical Gigabit Ethernet interfaces (RJ45 connector) compliant with IEEE802.3 serial standard.

It provides dual hot-pluggable optical interfaces to realize 1+1 optical protection, furthermore, it owns many humanize functions, such as Automatic Laser Shutdown (ALS), Remote Power down Detect (RPD), prevent Ethernet frames

It supports the management based on Command Line Interface (CLI). With the supper terminal integrated by PC, user can realize the monitor and configuration of the device. It also supports Simple Network Management Protocol (SNMP).

With low power consumption, high integration and well stability, it is a cost-competitive solution for the application where gigabit Ethernet and E1 are required simultaneously, such as the telecommunication, the electric power and the finance fields.

## Feature

- **Compact design with 1U height, and can be installed on standard rack**
- **Realizes up to 16 E1s and four 1000M Ethernet mixed multiplexing to optical fiber**
- **Optical interface**
  - ✓ Dual optical interfaces, SFP optical module (LC interface), Hot plugging
  - ✓ The line bit rate is 1.25Gb/s, transmission distance is optional (depend on the SFP optical module)
  - ✓ SFP MSA(INF-8074i), ITU-T G.695, FC-PI V2.0 standards compliable

- ✓ Supports 1+1 optical protection and Automatic Protect Switch (APS) with the recovering time less than 50ms
- ✓ Provides optical loopback function, a great convenience for trouble shooting
- ✓ Supports ALS function
- ✓ Supports Remote Power down Detect (RPD) function, which can be used to distinguish the failures of remote power down or fiber broken
- **E1 interface**
  - ✓ Provides 4/8/16 E1 interfaces, compliant to G.703, and balanced/unbalanced selectable
  - ✓ Jitter tolerance, jitter transfer characteristic and jitter generation fully comply with ITU-T G.823 and G.742 recommendations
  - ✓ Local/remote loop-back function supported
  - ✓ Supports device loop and E1 line loop controlled by the local side, which is convenient for E1 line testing
  - ✓ Supports embedded E1 BERT function
- **Ethernet interface**
  - ✓ One optical Gigabit Ethernet interface and three electrical Gigabit Ethernet interfaces compliant with IEEE802.3 serial standard
  - ✓ The electrical gigabit Ethernet interfaces adopt RJ45 connector, support auto-negotiation, which can work in 1000M full-duplex, 100M full/half-duplex, 10M full/half-duplex mode
  - ✓ The optical gigabit Ethernet interface adopts 1000M SFP module, which can work in 1000M full-duplex mode
  - ✓ Proprietary technique (patent pending) adopted to prevent Ethernet frames from looping back in case of unexpected optical loopback
  - ✓ Supports unicast, multicast and broadcast frame
  - ✓ Supports flow control and broadcast storm filtering control
  - ✓ 4K MAC address table
  - ✓ Supports MAC address dynamic learning function
  - ✓ Supports port rate control function
  - ✓ Supports port-based VLAN and IEEE 802.1Q tag-based VLAN
  - ✓ Supports QinQ (Double Tag VLAN)
  - ✓ Supports port trunking/aggregating function
- **Network management interface**
  - ✓ Supports CLI based on RS232 (CONSOLE) management interface
  - ✓ Supports CLI based on Ethernet (EMU) management interface (TELNET)
  - ✓ Supports Simple Network Management Protocol (SNMP, V1 and V2C)
  - ✓ Implements the device alarm and status monitor, port loop configuration, etc
- **Supports one RS232 user channel in point-to-point mode**
- **Perfect alarm indication and performance statistic**
- **Supports hot-spare power, the power consumption is less than 12W**
  - ✓ -48V DC single power access
  - ✓ -48V DC double power access
  - ✓ 220V AC single power access

- ✓ 220V AC double power access
- ✓ -48V DC&220V AC double power access

## Application

ZS-P180-(1+1)DUAL FIBER-16E1-4GE-R supports point-to-point, point-to-dual point, ring and chain network application, refer to Figure 3-1, Figure 3-2, Figure 3-3 and Figure 3-4 shows:

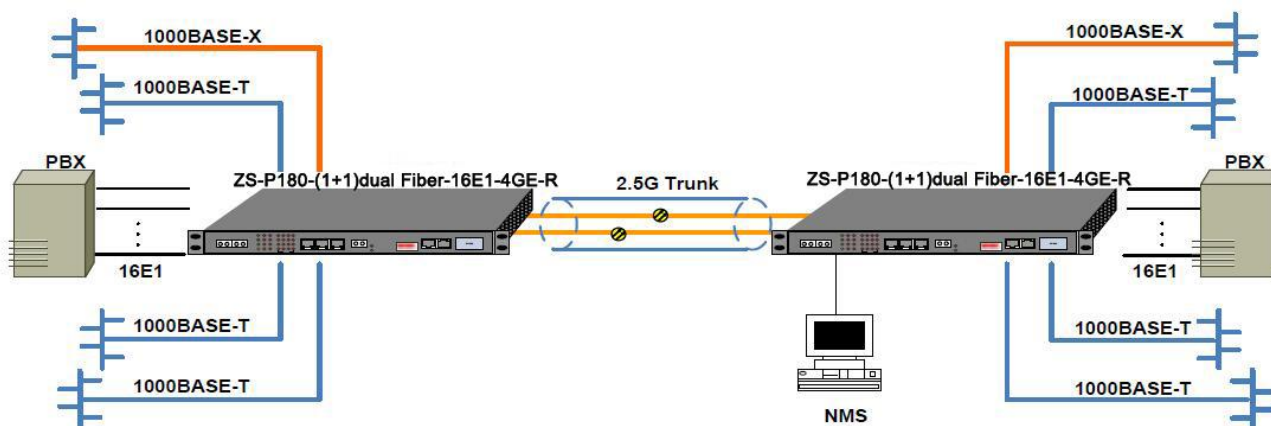


Figure 3-1 Point-to-Point application

In point-to-point mode, the Ethernet transmission bandwidth can be doubled to 2.5G by setting the port-trunking function.

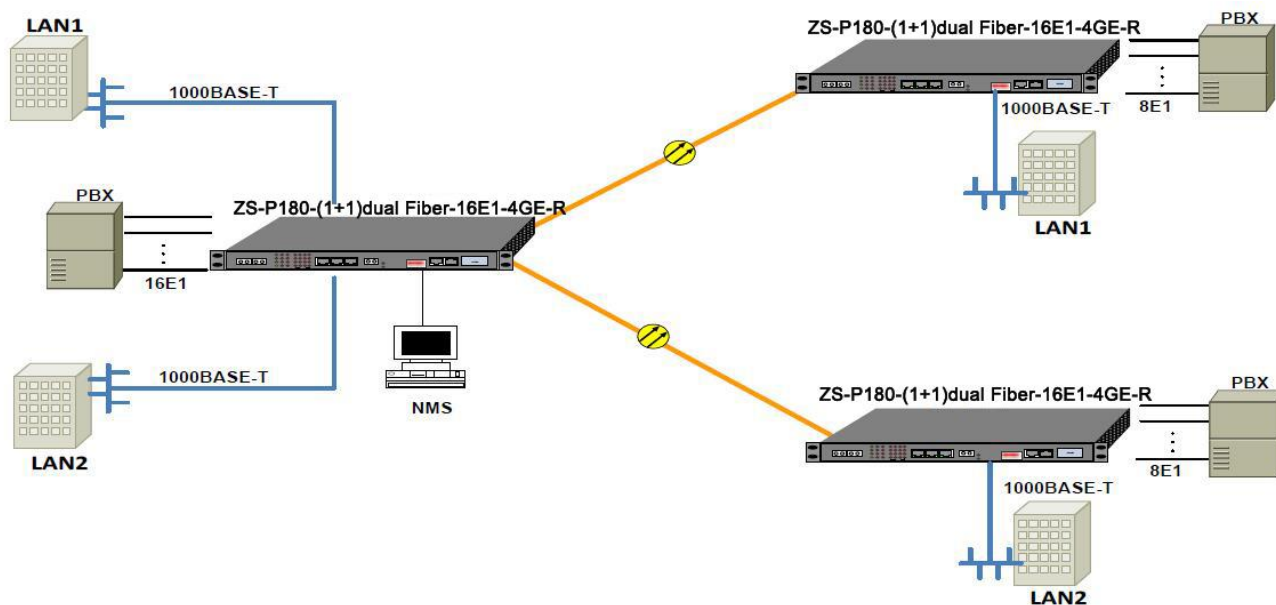


Figure 3-2 Point-to-dual point application

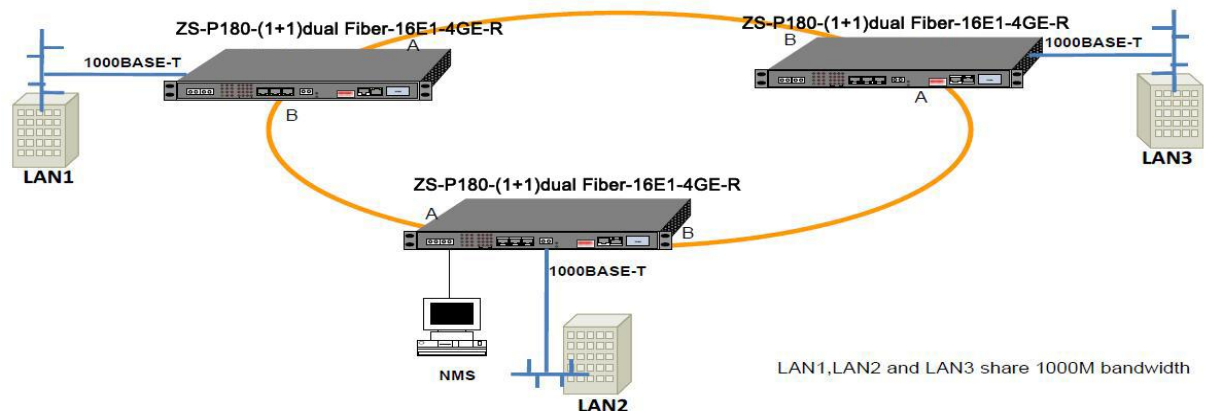


Figure 3-3 Ring network application

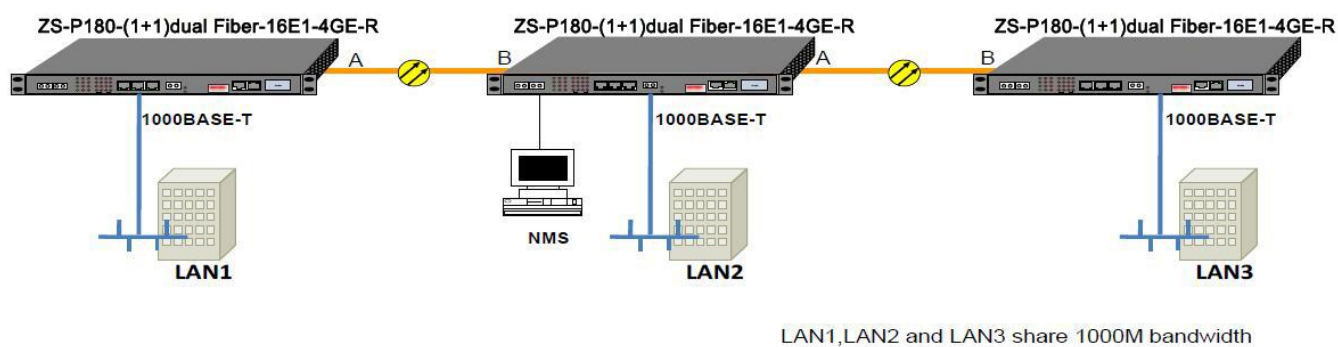


Figure 3-4 Chain network application

Note: The LA->LB connection sequence is required for all elements in the Ring or Chain networks

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