

## 16 x E1 G.703 + 4 x Ethernet optical multiplexer



### Spot-light:

**16E1+4Eth Optical multiplexer** is state-of-art **16 x E1 G.703 + Ethernet 10/100BaseT fiber multiplexer with logical bandwidth control, QoS, and dot1Q VLAN's** which allows effective transmission of those protocols over fiber optical cable over distances more than 120 km. Single mode, dual mode and WDM (BiDi) versions

### Description:

**16E1+4Eth Optical multiplexer** series of Multi E1 & Fast Ethernet Optical Terminal is a product combining of a PDH optical transport system and an Ethernet transceiver.

**16E1+4Eth Optical multiplexer** can provide up to 16 E1 interfaces and 4 Fast Ethernet interface. The Ethernet interface can be operated in 10M/100M, half duplex or full duplex mode by either auto-negotiation or manual setting.

The **16E1+4Eth Optical multiplexer** is a fiber media transport for 16E1 + 4 x 10/100BaseT transmission. The BNC model provides unbalanced 75 Ohm coaxial connections while the RJ-48C model provides balanced 120 Ohm connections over twisted pair wiring.

All media converters are available with either multi-mode or single-mode optical transceivers and with connectors for SC, or FC. In single mode they are available in up to 120 km versions reach, which will provide the ability to transmit and receive data using only a single optical fiber pair.

**16E1+4Eth Optical multiplexer** provides an order-wire for which a standard telephone can be used.

**16E1+4Eth Optical multiplexer** provides a user RS232 transparent data link with a RJ45 connector.

**16E1+4Eth Optical multiplexer** possesses complete operation monitoring function. Those indicators include Loss of optical signal, LOF,  $10^{-3}$ ,  $10^{-6}$  bit error rate, Loss of each E1 tributary signal and Ethernet status. Since some overhead bytes are taken as monitoring channel, all alarm and status of Remote can be display locally.

**16E1+4Eth Optical multiplexer** provides RS232 interface for Network Management. Supported by GUI NMS utility, users can observe the status of Local and Remote, as well as other alarm information unable to be displayed by LEDs in the front panel. Also, with NMS software, user can make certain E1 loop back for testing purpose.

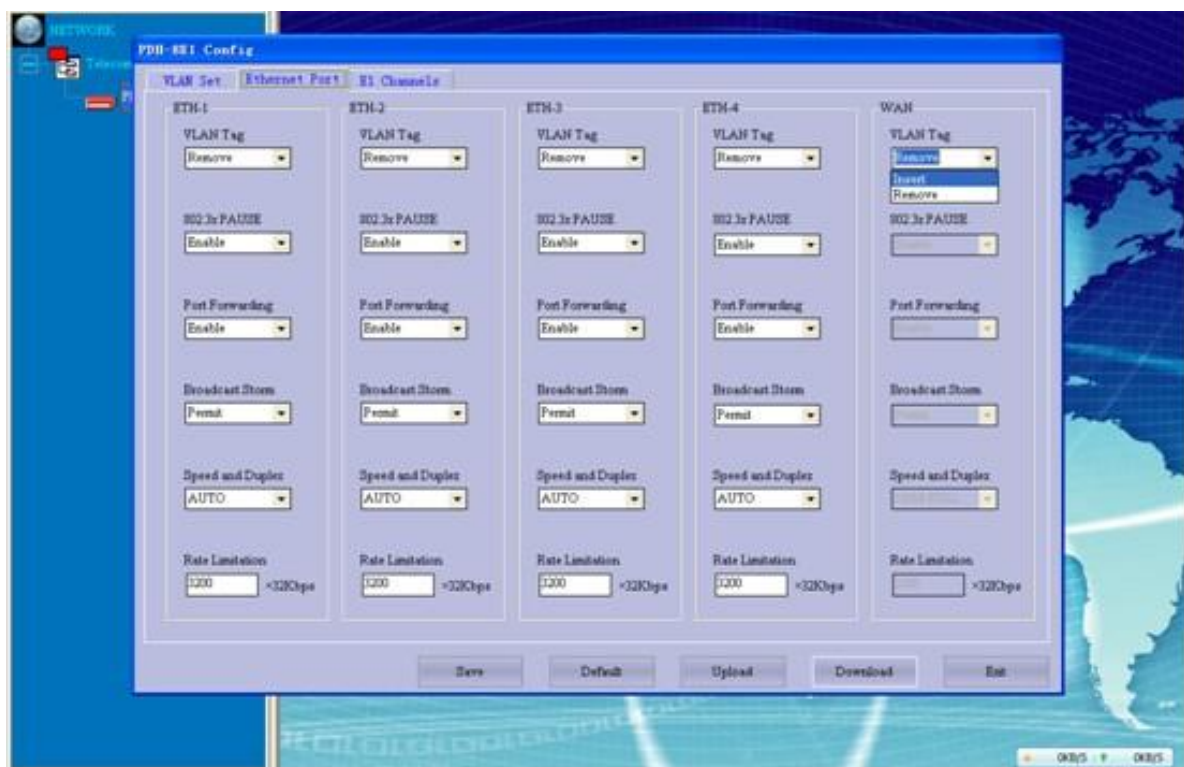
4 x 10/100 Ethernet ports support intelligent Layer 2 switch features, such as QoS, dot1Q and port based VLAN's, flow control per port with steps n x 32 Kbit/s and more.

### Features:

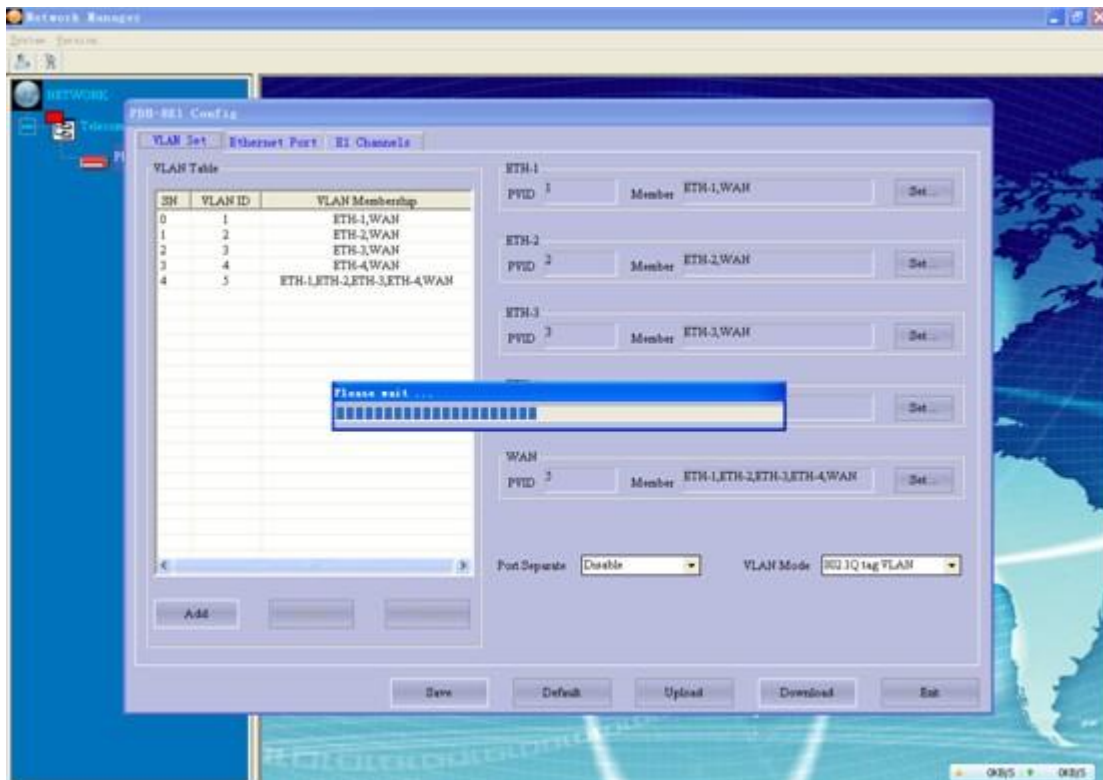
- Provides 16 x E1 G.703 transparent transmission over the fiber;
- Provide 4 x 100 Mbit/s Ethernet channels, Ethernet **speed** can be set for each port on based on any multiples of **n x 32 Kbit/s**;
- Provides one RS232 channel for option;
- Provide one hotline channel for option (order wire);
- Speed of optical port is 155Mbps, transmission range can reach 20KM, 40KM, 60KM, 80KM or 100km,120KM;
- E1 interface code is HDB3; E1 vibration characteristic conforms to ITU-T G.703、G.823 and G.742;
- Ethernet port supports full/half duplex, 10M/100M auto-adaptable, **throughput is full duplex 100 Mubit/s**;
- Ethernet port supports **dot1Q VLAN** setting possibility and port based VLAN's.
- **Layer2 intelligent switch** possibilities for 4 x Ethernet ports
- Ethernet packet size supports 1916 byte and 4 Ethernet port could be set seperately, jumbo frames are supported;
- Simultaneous 16 E1 & 100 Mbit/s full duplex operation;
- LED indicators for alarm function and can monitor remote device status;
- Rich DIP switch settings
- Supports E1 local and remote loopback for installation
- The combination AC220V and DC-48V for redundant options;
- Broadcast Storm Protection, Port monitoring.
- Current alarm and alarm history database
- GUI based RS232 NMS manager for easy and convenient monitoring and management.



Alarm history and current alarms via RS232 GUI NMS



Port rate limitation setting via NMS



VLAN ID setting via NMS

## Specifications

### E1 interface:

Channel capacity: 16 Channels

Bit Rate: 2.048 Mb/s  $\pm$ 50 ppm

Line Code: HDB3

Line Impedance: 120 Ohm / 75 Ohm

Connector: RJ-48 / BNC

Pulse Shape: ITU-T G.703

Jitter Performance: ITU-T G.823

Clock mode: internal-clock, external-clock

### Ethernet interface:

Interface Rate: 10/100BaseTx

Duplex: half / full duplex.

Interface character: match IEEE802.3U, IEEE802.3x, IEEE802.1Q

Connector: RJ45

### Optical interface:

Line mode type: CMI

Optical wavelength: 850/1310nm for multi-mode fiber, 1310/1550nm for single-mode fiber.

Optical interface: SC/FC(Optional)

Transceiver module: > -8dBm (for 1310nm single mode 40km optical module)  
Optical receiver sensitivity: <-36(BER<10) (for 1310nm single mode 40km optical module)  
Transmission distance: multi-mode 2 Km, single-mode 20/40 /60/ 80 / 120 Km,  
**WDM** available for different distances

**Architecture:**

19'', 1U, rack mountable

**Power supply:**

DC: -48V (-36 to -72V);  
AC: 85 to 264 VAC ; 47 ~ 63Hz  
Power Interface: DC power terminal/AC socket  
Power Consumption: ≤ 10 W

**Other Specification**

Operation temperature:0°C ~ 50°C  
Storage temperature:-20°C ~ 80°C  
Humidity: 0~90%(no condensation)

**Application:**

