

4 x E1 G.703 + 4 x Ethernet fiber multiplexer



Spot-light:

4E1+4Eth PDH mux is state-of-art **4 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:

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

4E1+4Eth PDH mux can provide up to 4 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 **4E1+4Eth PDH mux** is a fiber media transport for 4E1 + 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.

4E1+4Eth PDH mux provides an order-wire for which a standard telephone can be used.

4E1+4Eth PDH mux provides a user RS232 transparent data link with a RJ45 connector.

4E1+4Eth PDH mux 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.

4E1+4Eth PDH mux 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 $n \times 32$ Kbit/s and more.

Features:

- Provides 4 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 **$n \times 32$ 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 25KM, 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 4 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.

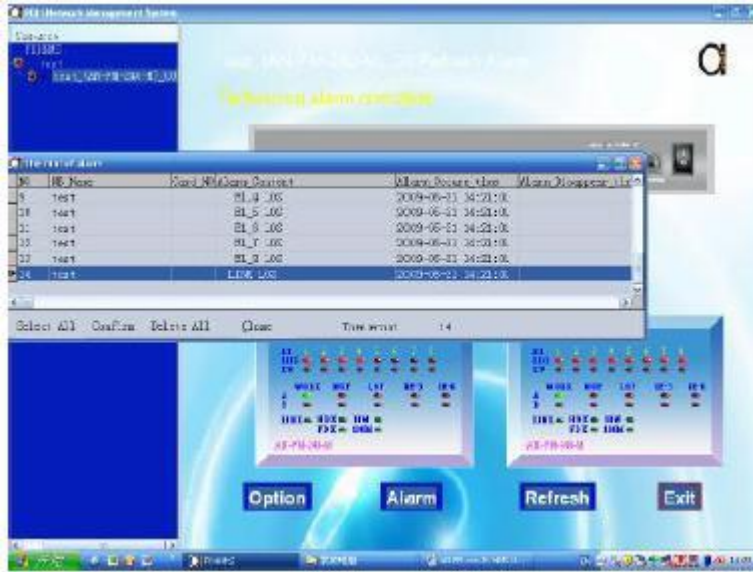


Fig 1 : Alarm history and current alarms via RS232 GUI NMS

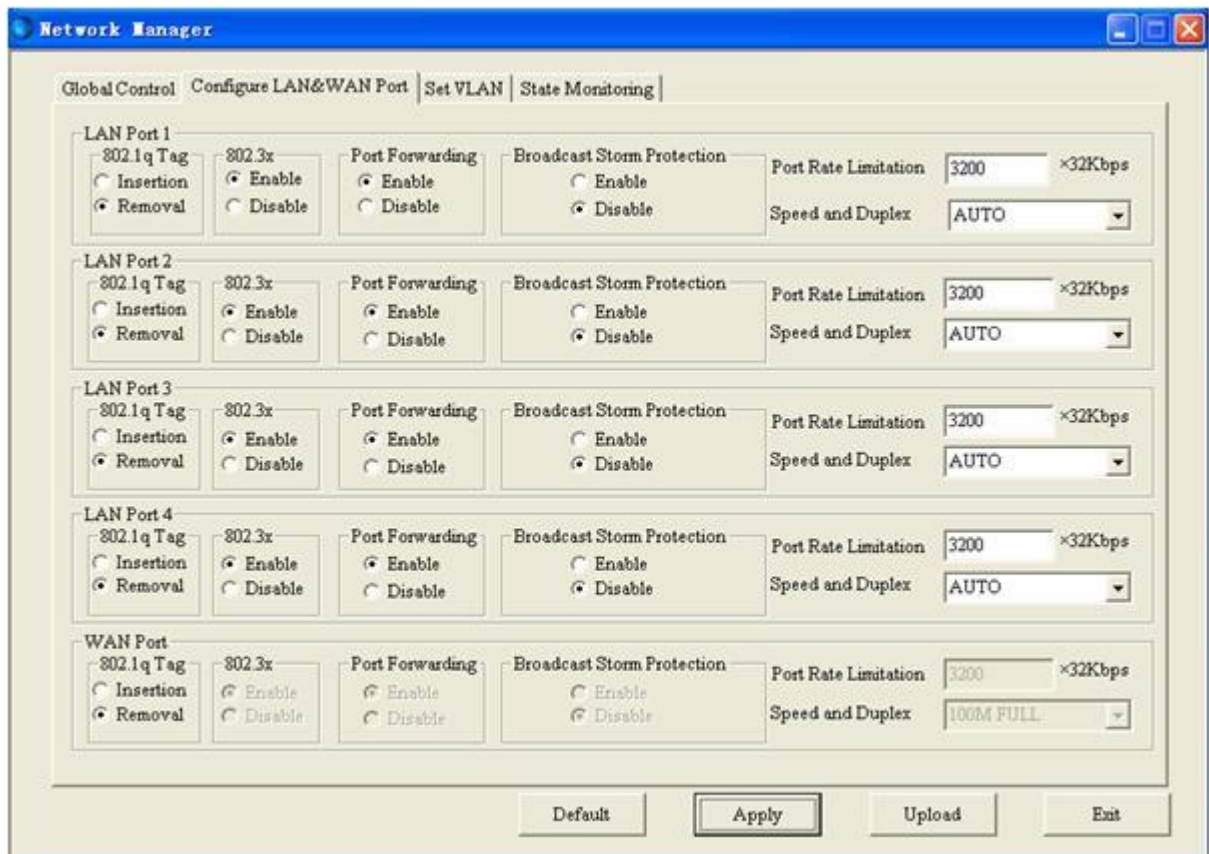


Fig 2 : Port rate limitation setting via NMS

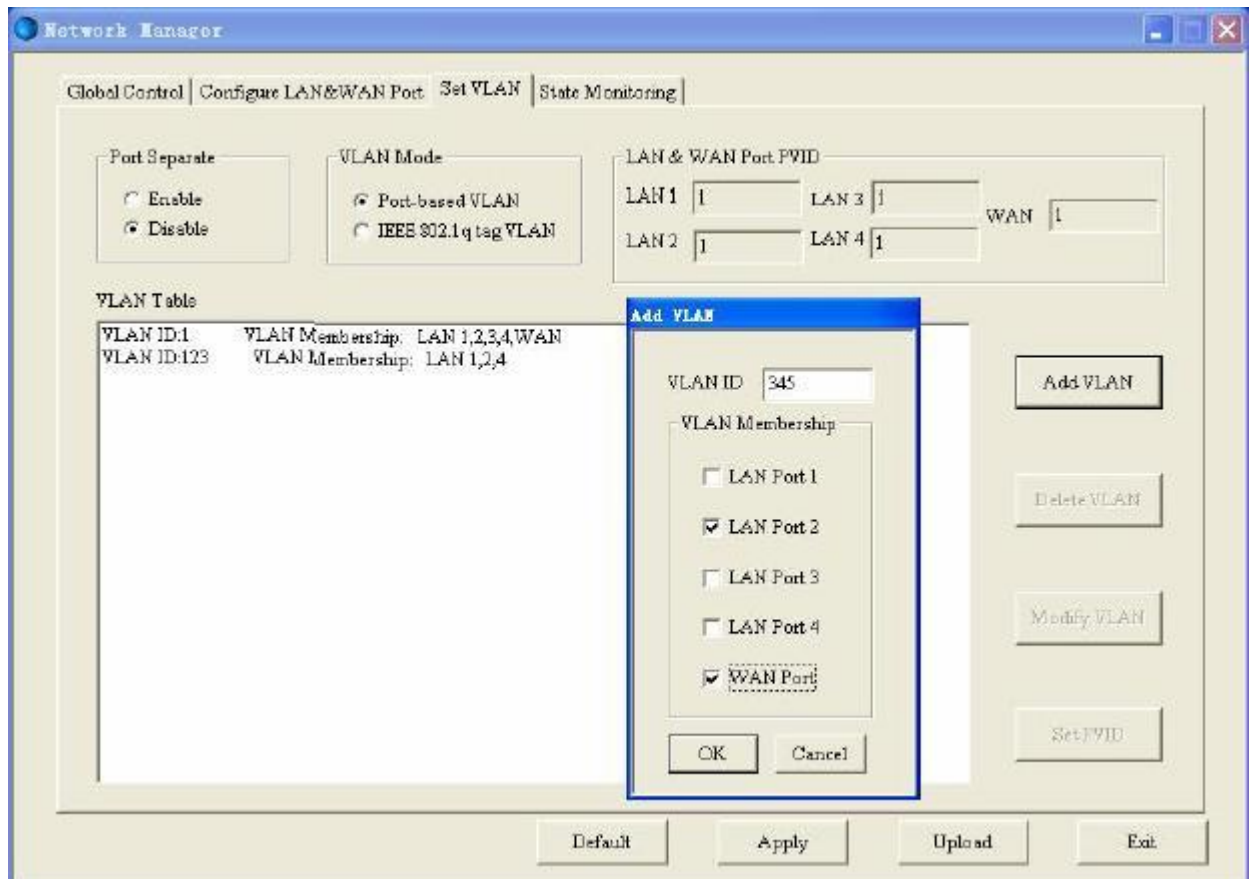


Fig 3 : VLAN ID setting via NMS

Specifications

E1 interface:

Channel capacity: 4 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: ≤ 10W

Other Specification

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

Application:

