



Managed 4E1+4Eth Optical Multiplexer

Features

- Provides 4 x E1 G.703 transparent transmission over the fiber.
- Provide 1 or 1+1 optical protection optional
- Provide one hotline channel for option (order wire);
- Speed of optical port is 155Mbps, transmission range can reach 20, 40, 60, 80,100,120Km;
- E1 interface code is HDB3; E1 vibration characteristic conforms to ITU-T G.703, G.823
- Ethernet port supports full/half duplex, 10M/100M auto-adaptable, throughput is full duplex 100 Mbit/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 separately, jumbo frames are supported;
- Two STM-1 interfaces, LC type SFP module , hot pluggable Complies with GB/T15941-1995 and ITU-T G.825.
- SDH equipment timing mode ITU-T G.825 internal oscillator.
- The combination AC220V and DC-48V for redundant Power (1+1)
- Current alarm and alarm history database
- GUI based RS232 NMS manager for easy and convenient monitoring and management.



Introduction

HPOM-4E1-4ETH-XX multiplexer 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

HPOM-4E1-4ETH-XX 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.

HPOM-4E1-4ETH-XX is a fiber media transport for 4 E1 + 4 x 10/100BaseT transmission. while the RJ-48C model provides balanced 120 Ohm connections over twisted pair wiring,it provides an order-wire for which a standard telephone can be used.

HPOM-4E1-4ETH-XX provides a user RS232 transparent data link with a RJ45 connector which 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.

HPOM-4E1-4ETH-XX 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.

Specification

Optical interface	
Line mode type	CMI
Bit rate	155Mb/s±5ppm
Wavelength	multi-mode: 850/1310nm, single-mode fiber: 1310/1550nm
Transmission distance	multi-mode: 2 Km (Option) single-mode :20/40/60/80/120 Km (Option)
Optical output power	-2~-11dBm
Sensitivity	> -36dBm
Dynamic Range	34dB
Connector	LC/FC/SC
E1 interface	
Channel capacity	4 or 8 Channels (Option)
Bit rate	2.048Mb/s±50ppm
Code format:	HDB3
Impedance	75 Ohm BNC and 120 Ohm RJ45
Pulse Shape	ITU-T G.703
Jitter Performance	ITU-T G.823
Clock mode	internal-clock, external-clock
Ethernet interface	
Interface Rate	4 port 10/100BaseTx
Duplex	half / full duplex
Interface character	IEEE802.3U, IEEE802.3x, IEEE802.1Q, ITU-T X.86.
Mapping	Each WAN port employs a VCG; the total bandwidth of 4VCGs is 63 VC12 bandwidth VCG is nx VC12, VC3, VC4 up to 48VC-12(100Mbps)
Connector	RJ45 (120 Ohm)
Weight	5Kg
Power supply	48-54V DC Double power access (1+1); or 220V AC Double power access (1+1); or 48V DC & 220V AC power access;
Power consumption	The power consumption is less than 15W /25W
Operating temperature	-5°C~65°C
Storage temperature	-20°C~80°C
Humidity	≤95%, free from condensing

Ordering Information:

Model No:	Description
HPOM-4E1-4ETH-LVLV	4E1 + 4*100M T(x) , STM1 Optical, LC (FC/SC Opt), Power Input Dual DC48-54V (1+1).
HPOM-4E1-4ETH-HVHV	4E1 + 4*100M T(x) , STM1 Optical, LC (FC/SC Opt), Power Input Dual 96-256VAC (1+1).
HPOM-4E1-4ETH-LVHV	4E1 + 4*100M T(x) , STM1 Optical, LC (FC/SC Opt), Power Input DC48-54V & 96-256VAC.
HPOM-8E1-4ETH- LVLV	8E1 + 4*100M T(x) , STM1Optical, LC (FC/SC Opt), Power Input Dual DC48-54V V (1+1).
HPOM-8E1-4ETH- HVHV	8E1 + 4*100M T(x) , STM1Optical, LC (FC/SC Opt), Power Input Dual 96-256VAC (1+1)
HPOM-8E1-4ETH- LVHV	4E1 + 4*100M T(x) , STM1 Optical, LC (FC/SC Opt), Power Input DC 48-54V & 96-256VAC.
SFP-MWS-01-13-2	STM1 1300nm 2Km SX LC MM SFP module.
SFP-MWS-01-13-10	STM1 1310nm SX 10km LC MM SFP module.
SFP-MWS-01-13-40	STM1 1310nm LX 40km LC SM SFP Module.
SFP-MWS-01-55-80	STM1 1310nm LX 80km LC SM SFP Module.

Application

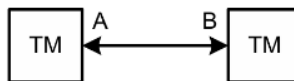


Figure 4-1 Point to point network



Figure 4-2 Chain network

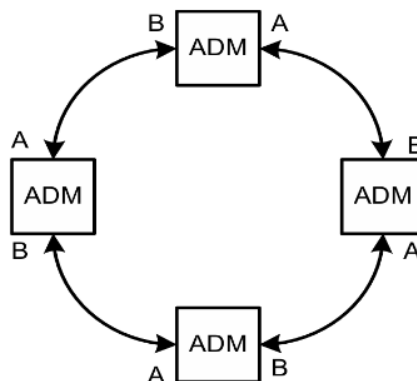
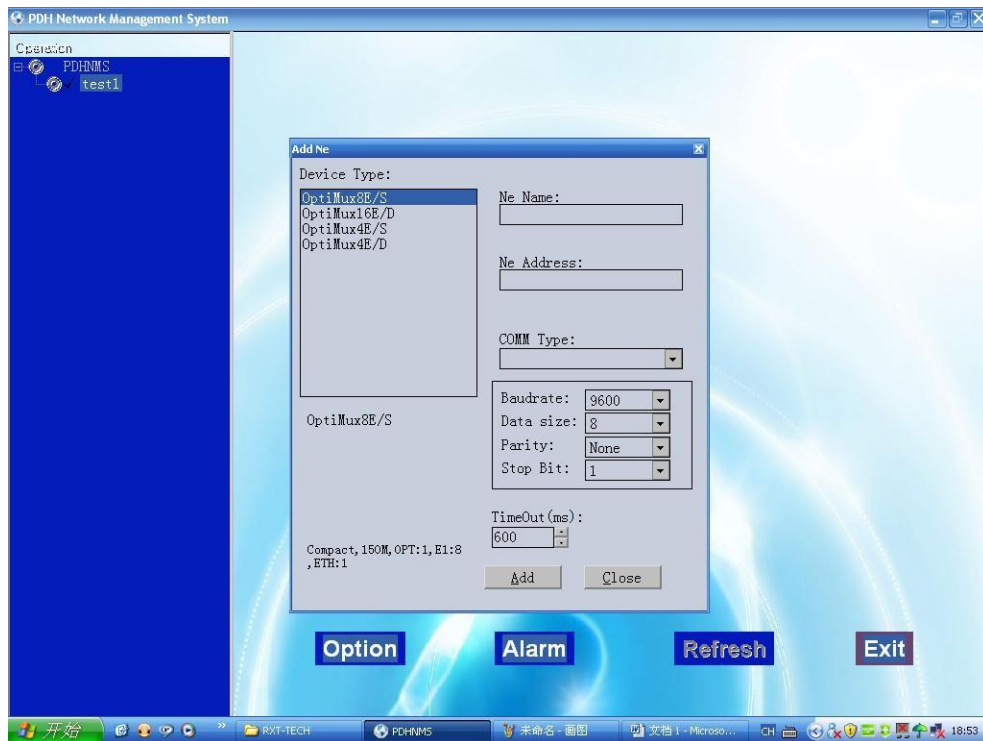


Figure 4-3 Ring network



Network Management



Alarm management

