

CuteLink N*E1 To ETH Protocol Converter

CL-EOP4/8/16

Product Overview

CL-EOP Ethernet to N*E1 protocol converter is the IP over TDM converter, which supports the conversion from MAC frames



to 1 – 16 E1 lines. The maximum bit rate is 31.68Mbps (16E1 lines). With different LAN card, 4*Ethernet port support Vlan, E1 card and power card, it can meet various requirements. It not only provides alarms and status of the E1 line and Ethernet interface together with advanced management functions, such as, throughput statistic of the Ethernet, but also supports the Unification Network Management via SNMP and GUI .Compliant to international standards, the device can communicate with products from other manufacturers adopting the same standards.



CL-EOP8 8E1-4Eth



CL-EOP16 16E1-4Eth

- Compliant to ITU-T standards
 - GFP-F encapsulation recommendation G.7041.
 - Virtual concatenation(VCAT) and Link Capacity Adjustment Scheme (LCAS) recommendation G.7042.
 - Ethernet to nxE1 mapping recommendation G.7043.
 - Ethernet to single E1 mapping recommendation G.8040.
- Bandwidth is increased without damaging the Ethernet data, and can be decreased no injury through management.
- The E1s in the local and remote sides can be arranged arbitrarily, such as, the remote E1 port 1 can communicate with local E1 port 3.
- Supports bandwidth unbalanced usage – when some E1s cannot work properly (i.e. the bandwidth of the sending and receiving can be 5E1 and 3E1 respectively).
- Provides the E1 connection-ship between local and remote system (accessed via GUI).
- E1 tributary signal loopback automatic detect and cut off; when some E1 signal is detected as looped back, it will be not employed for carrying payload temporarily, and when the loopback is broken, this E1 will resume to be used.
- Remote/local E1 loopback function will be convenient for E1 line(transmission system included) testing .
- Complete alarm which is selectable to be shown between local and remote.
- Single-board design with small dimension, 1 U high and low power consumption.

Device Feature

Protocol: G.703, G.704, G.736, G.823, I.431 IEEE802.3

Electrical Ethernet Interface

Subject	Description
Connector	RJ-45
Working mode	Auto - negotiation is the default setting
Complies with IEEE 802.3 and 10/100 Base-Tx Ethernet Protocol	

Ethernet parameters

Subject	Description	Remark
MAC address table capacity	1K	
MAC aging time	five minutes	
Minimum frame-length	64 bytes	
Maximum frame-length	1916 bytes	
Working mode	Support auto-negotiation compliant to IEEE802.3u. Enabled as default	Configured via GUI network management software
VLAN function	Disabled as default	
Flow control	Enabled as default	
Bandwidth	≈n×E1 (n=0~16) Default is 16×E1 ≈31.68Mbps	

E1 interface

Subject	Description
Bit rate	2.048Mb/s±50ppm
Code format	HDB3
Impedance	75 Ohm is default, Optional 120 Ohm
Jitter transfer, Jitter tolerance comply with ITU-T G.703、G.704、G.823 recommendations	

Optical Ethernet interface

Subject	Description
Wavelength	1310nm/1550nm
Bit rate	125Mb/s
Optical power	-4~-12dBm
Receiving sensitivity	Prior to -36dBm
Dynamic range	32dB
Connector	FC/SC
Transmission Distance	40Km is the default configuration
Compliant to IEEE 100Base-Fx Standard	

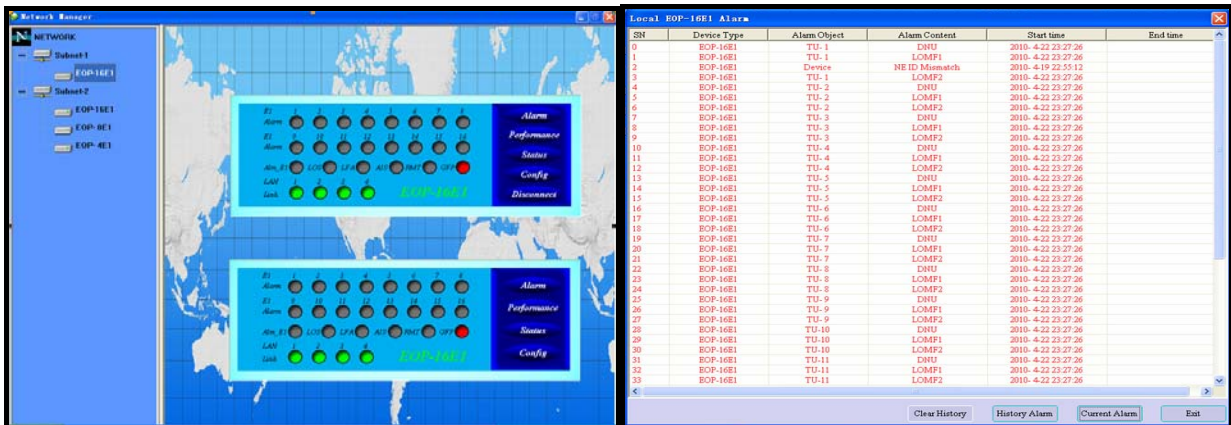
Dimension, weight and power consumption

Subject	Description
Dimension	434mm×44mm×155mm (width× height× depth)
Weight	3.5kg
Power consumption	8W±10%

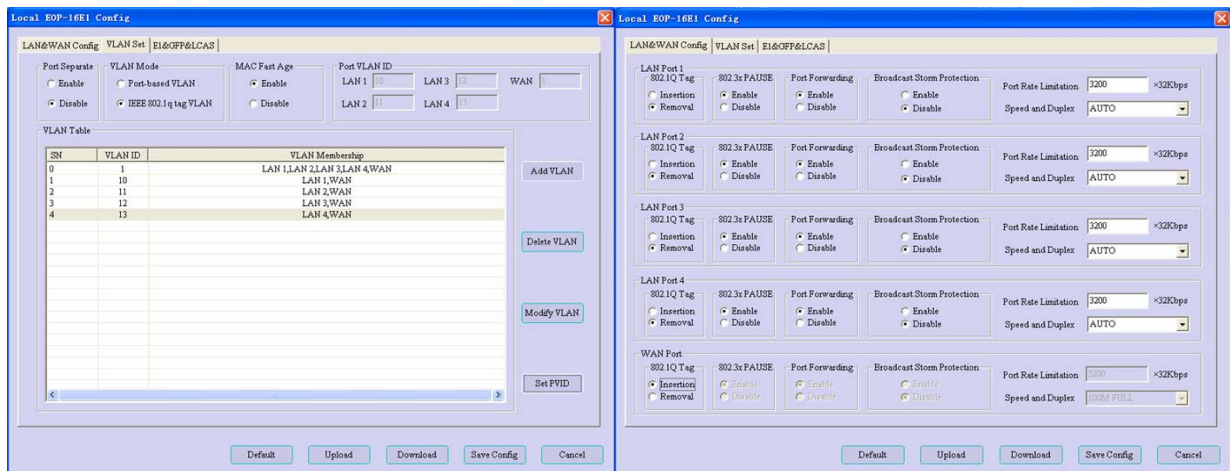
Environmental requirements

Subject	Description
Operating temperature	-5℃~45℃
Storage temperature	-40℃~70℃
Humidity	≤95%, free from condensing

CL-EOPNMS EasyETH SNMP Network Management System GUI Interface

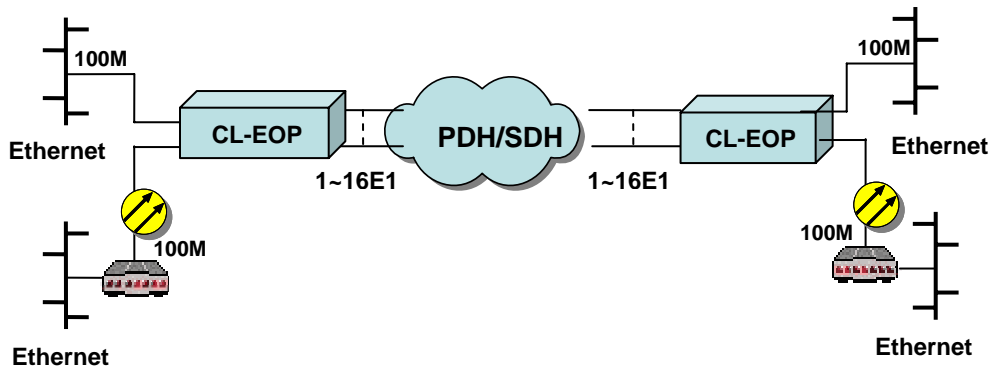


CL-EOPNMS main interface



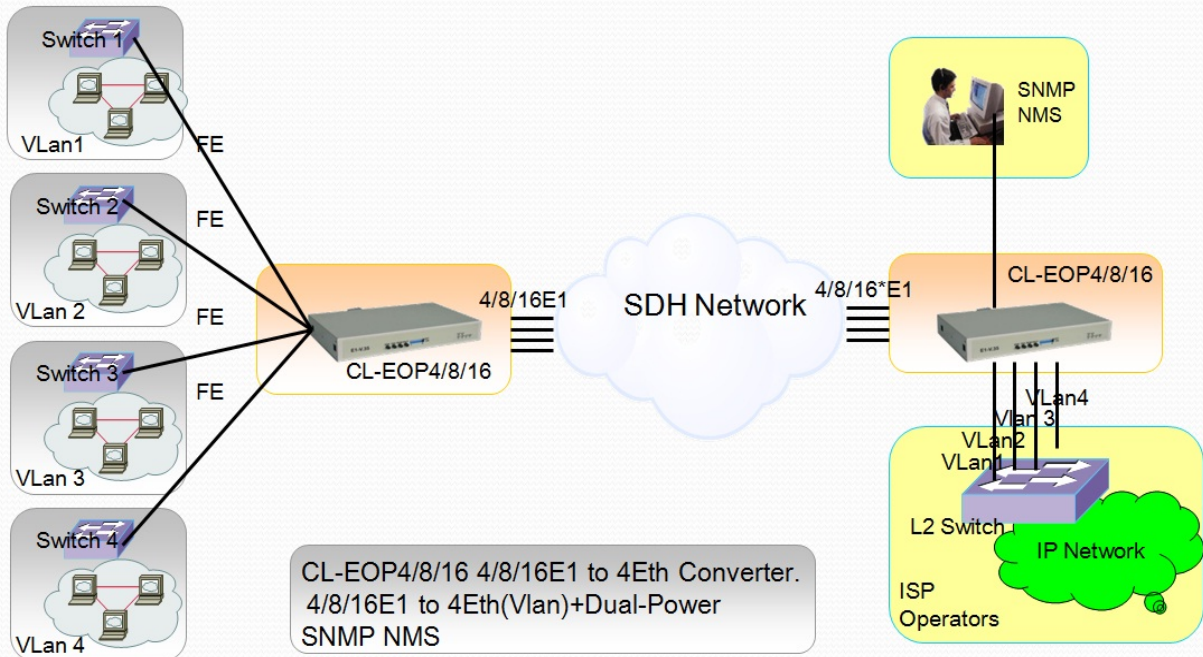
CL-EOPNMS VLAN Ethernet interface configuration

Application



CL-EOP4/8/16 n*E1 to 4Ethernet Vlan SNMP Converter Application

CuteLink CL-EOP 4/8/16E1-4Eth SNMP Converter Solution



Model

Model	Description
CL-EOP4	CL-EOP4, Ethernet to 4E1 converter with components of 'EOP4 motherboard +4 E1 card +4Ethernet port LAN cards
CL-EOP8	Ethernet to 8E1 converter with components of 'EOP8 motherboard +8 E1 card + 4Ethernet port LAN cards
CL-EOP16	Ethernet to 16E1 converter with components of 'EOP16 motherboard +8 E1 card +8E1 card+4Ethernet port LAN cards
CL-EOPNMS	EasyETH SNMP card for EOP(with software)
CL-EOPETH4	4Ethernet port LAN cards
CL-EOPETHO	Optical Ethernet port LAN cards