16 E1 G.703 + 5 x 10/100/1000 GE over fiber multiplexer with smart GUI NMS and dot1Q, QoS and shaping

SPOTLIGHT:

The Optimux-16E1+GE fiber optical multiplexer realizes up to 16 E1s and 4*10/100/1000M Ethernet + 1 *10/100/1000M optical Ethernet (SFP type) mixed multiplexing to optical fiber.

DESCRIPTION:

The Optimux-16E1+GE optical multiplexer is designed as point to point optical transmission system based on Application Specific Integrated Circuit (ASIC). It integrates the traditional PDH multiplexer and 1000Mbps Ethernet optical transceiver, and can realize the 16 E1s and 1000Mbps wire-speed Ethernet transmission over fiber.

It not only provides dual hot-pluggable optical interfaces to realize 1+1 optical protection, but also integrates one RS232 auxiliary channel and one Engineering Order Wire (EOW) channel. Furthermore, it owns many humanize functions, such as Automatic Laser Shutdown (ALS), Remote Power down Detect (RPD) and so on.

It supports the management based on GUI NMS. With the supper terminal integrated by PC, user can realize the monitor and configuration of the device.

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.

FEATURES:

Realizes up to 16 E1s and 4*10/100/1000M Ethernet + 1 *10/100/1000M optical (SFP type) Ethernet mixed multiplexing to optical fiber

Provides dual optical interfaces

SFP MSA (INF-8074i), ITU-T G.695, FC-PI V2.0 standards compliable, therefore hot pluggable is supported

Support 1+1 protection and Automatic Protect Switch (APS) with the switching time less than 50ms

The line bit rate is 1.25Gb/s

The transmission distance is optional (dependent on the SFP optical module)

Provides optical loop-back function, a great convenience for trouble shooting

ALS function supportable

Supports Remote Power down Detect (RPD) function, which can be used to distinguish the failures of remote power down or fiber broken

Provides up to 16 E1 interfaces, compliant to ITU-T 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

Provides an Ethernet channel with up to 1000Mb/s bandwidth

Complies to IEEE 802.3, IEEE 802.3u, IEEE 802.ab, IEEE 802.3x recommendations

Supports auto-negotiation function, and can works in 10M full/half duplex, 100M full/half duplex, 1000M full duplex mode (1000M half duplex is not supported)

Proprietary technique (patent pending) adopted to prevent Ethernet frames from looping back in case of unexpected optical loop-back

The transmission media is category 5 UTP RJ45 connector

EOW - Standard telephone set can be used

Supports tones of ringing, ringing back, engaged and howling

RS232 auxiliary channel bit rate can be up to 38.4Kb/s

Network management interface

Supports GUI NMS based on RS232 (UART)

Implements the device alarm and status monitor, E1 and optical loop back configuration, etc.

No optical signal (NOP), Loss Of Frame (LOF), 10-3 error, 10-6 error for optical lines

Loss Of Signal (LOS), Code Violation (CV) for E1 tributaries

Remote/local alarm are selectable to be displayed by LED

The alarms of unused E1 tributaries can be shielded

Audio alarm supported and can be mute

Single-board design with small dimension, 1 U high and can be installed on standard rack

Single 220V AC or -48V DC

Simultaneous 220V AC & -48V DC

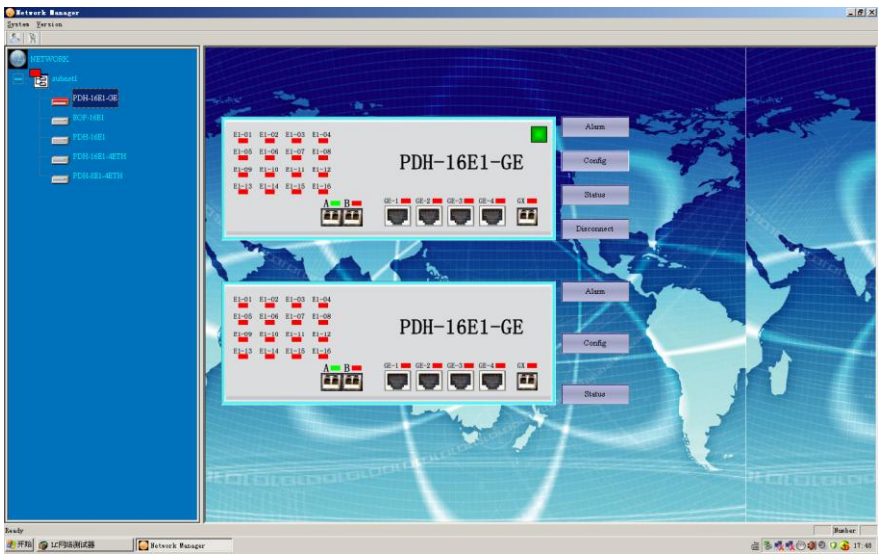
Simultaneous two 220V AC

Simultaneous two -48V DC

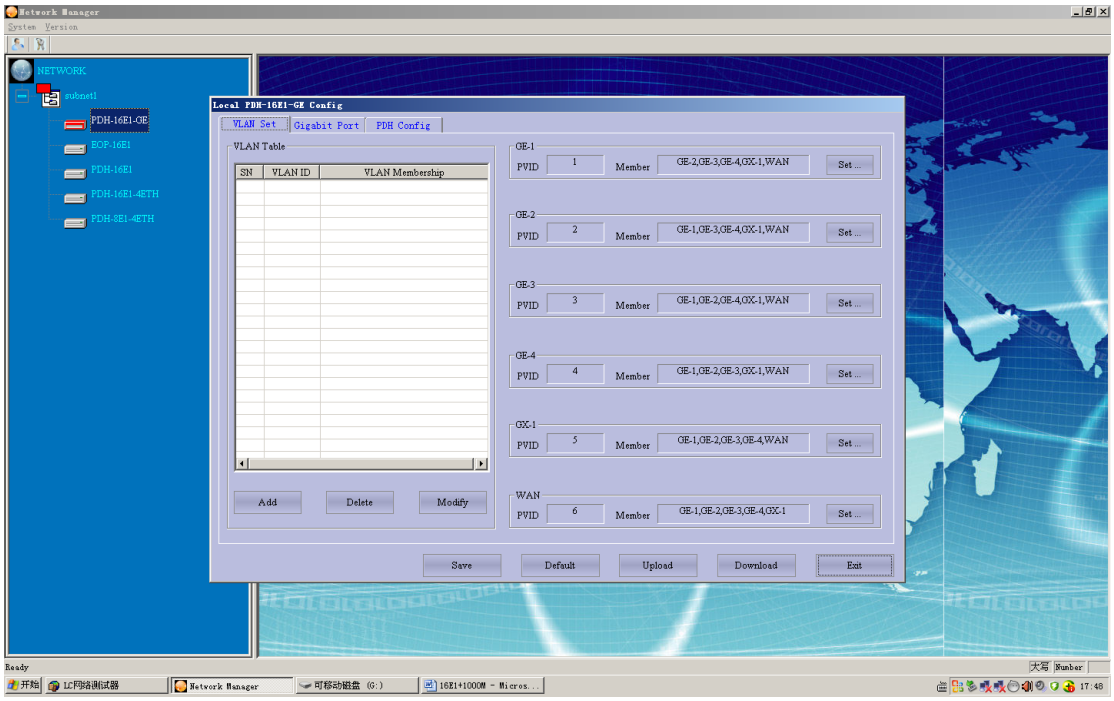
Power consumption Less than 11W

You can use also CDWM standard 1.25 G modules for uplink!

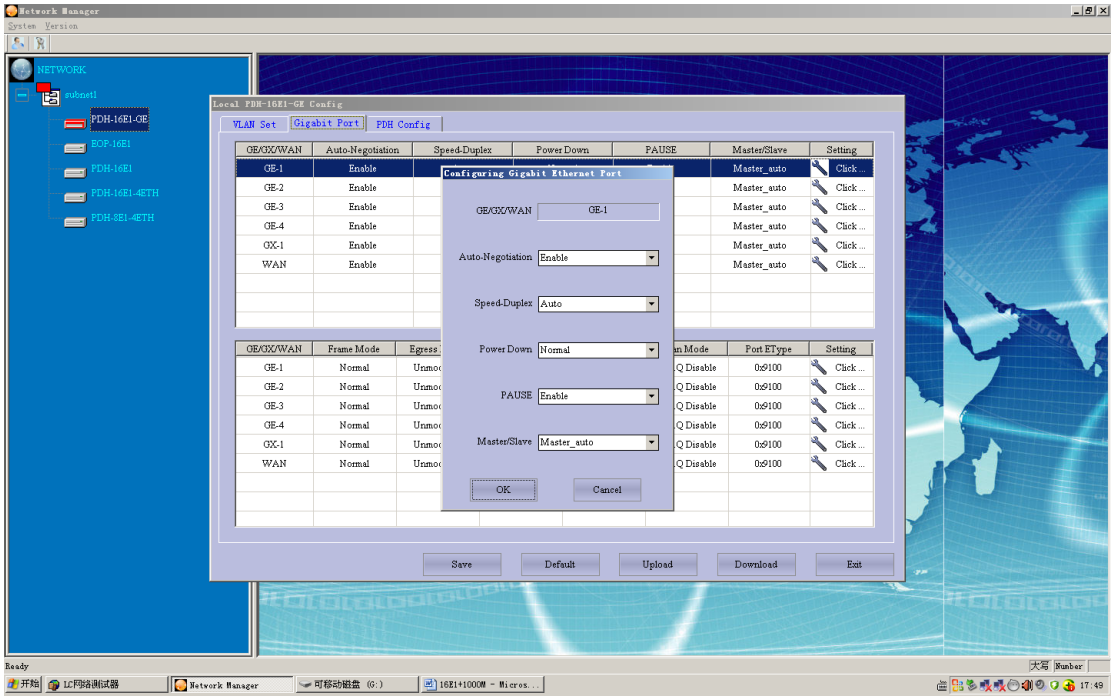
GUI based RS232 NMS manager for easy and convenient monitoring and management.



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 ±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

Gigabit Ethernet parameters:

Connector: RJ-45

Auto-negotiate: Enable

Speed: 10M/100M/1000M

Duplex: Full/half duplex

Bandwidth: 1000Mbps

Standard: IEEE 802.3, IEEE 802.3u, IEEE 802.ab, IEEE 802.3x

Environment requirement

Working temperature: -10℃～50℃

Storage temperature: -40℃～70℃

Relative Humidity: ≤95％, no condensation

Device dimension, weight and power consumption

Dimension: 434mm×44mm×155mm (width ×height ×depth)

Weight: 3.0 kg

Power consumption: Less than 11W

Optical Parameters

Any standard SFP module 1.25G can be used. In case our SFP modules are used, then example specs are below

Optical parameters (dual fiber, 30Km)

Wavelength: 1310nm

Bit rate: 1.25Gb/s

Optical power: -3～-8dBm

Overload input optical power: -3dBm

Receiving sensitivity: Better than -22dBm

Dynamic range: Larger than 14dB

Transmission distance: 30Km

Standard: SFP MSA(INF-8074i)、ITU-T G.695、FC-PI V2.0

Or any other distance and fiber type you choose!

Typical Application: