SNMP managed 4E1 to 4*Ethernet Converter

(GFP/VCAT/LCAS supported)

GENERAL INFORMATION：

WY-REOP4 4E1 to Ethernet converter (Ethernet over 4E1 converter) allows the user to send Ethernet data, between two points, over E1 links. E1 Interfaces are 120 Ohms (75 Ohms is optional). Ethernet Interface options may be ordered as 10/100 Base-T Electrical Ethernet or 100Base-FX Optical Ethernet over 850nm/1310nm/1550nm single mode optical fiber interfaces.

The equipment be always installed and used in pairs, with one terminal being installed at either end of the E1 link.

The Ethernet over 4E1 Converter is an Ethernet extension device utilizing TDM telecom infrastructure (the telecom network of E1s, or of PDH, SDH and E1/E3/SDH microwave etc. carrying E1s). It converts the Ethernet data into E1 frame format for transmission over the existing TDM (E1) links and then re-converts the E1 back into Ethernet data the far-end terminal, to BRIDGE two Ethernet LANs over the existing E1-based telecom network. The device can effectively utilize the existing TDM network to transport Ethernet data with low investment.

FEATURES:

- Provides 4 E1 interfaces
- Provides 4 Ethernet 10/100Mbps (Electrical) ports for each converter
- The maximum transmission rate of Ethernet data over E1 links is 8.192Mbit/s
- Optionally provides 3 Ethernet 10/100Mbps (Electrical) ports and 1 Ethernet (Optical) port for each converter

- E1 supports three working modes of transmission. Un-Framed/Transparent, Framed, CAS / PCM 30 format
- Supports VCAT (virtual concatenation) and LCAS (link capacity adjustment scheme) protocol, and complies with ITU-T G.7042 specifications
- Mapping to E1 complies with ITU-T G.7043 and G.8040 specifications
- Supports differential delay of up to 120ms on E1 links
- Complies with IEEE 802.3 specifications
- Support VLAN tagging as per 802.1Q
- Supports X.86, LAPS and HDLC transmission protocols
- Supports 100M full-duplex mode
- Configurable frame length up to 1916 bytes (MTU size)
- Supports GFP-F encapsulation complying with ITU-T G.7041
- Provide smooth adjustment of bandwidth
- Provides Loss of Frame alarms
- Provides error frame statistic
- Supports automatic removal and addition of E1 links
- Available with MAC address list filtration, learning, and updating functions
- A large external SDRAM buffering for handling data bursts
- E1 Interfaces support errors count
- Tolerant for drift of E1 signal of up to 512UI.
- Error code correction and automatic protection and recovery of E1 channel.
- Network management function. The main function of network management system is to fulfill the inquiry for local and remote devices and configuration management including inquiry of alarm status on E1 line, Ethernet working status, and loopback control etc.
- Automatic Ethernet negotiation function. Supports 10M/100M and working modes of both full-duplex and semi-duplex.
- Transparently transmits ultra-long frames stipulated in IEEE 802.1Q, and supports Ethernet switches with VLAN function.
- Supports two synchronization clock modes, Internal Clock and Network Clock (Loop-Timed Clock)
- Imbedded, dynamic Ethernet MAC address list (5000 addresses), and filter function for local data frames

Specifications

Electrical Ethernet Interface:

Connector: RJ-45

Working mode: Auto - negotiation is the default setting

Complies with IEEE 802.3 and 10/100 Base-Tx Ethernet Protocol

E1 interface

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

Ethernet related parameters

MAC address table capacity: 1024

MAC aging time: 5 min

Minimum frame-length: 64 bytes

Maximum frame-length: 1916 bytes

Working mode: Support auto-negotiation compliant to IEEE802.3u. Enabled as default

VLAN function: Disabled as default, you can set VLAN's from GUI

Flow control: Enabled as default

Bandwidth: ≈n×E1（n=0～4）Default is 4 ×E1 ≈8Mbps

Physical:

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

Power consumption: 8W±10％

Ordering options for power supply are **DC 48**, or **AC 96 - 260 universal** with all kind of power plugs. Double power supply on request.

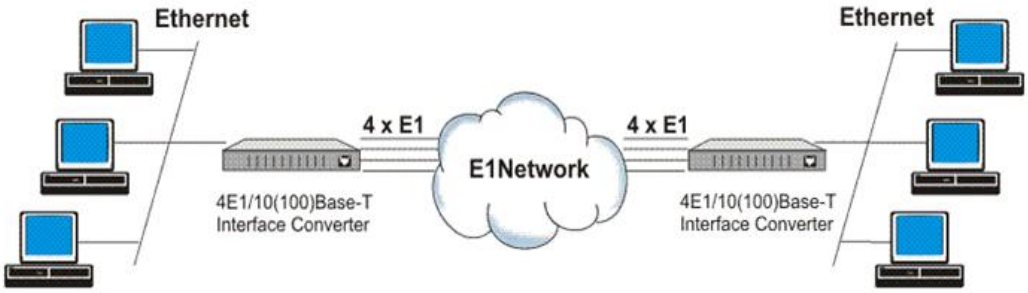
Operating temperature: -5℃～65℃

Storage temperature: -40℃～70℃

Humidity: ≤95％， free from condensing

Typical Application:

- Bridging Ethernet LANs over existing TDM (E1) telecom network.
- Extending Ethernet networks utilizing TDM (E1) landline based telecom infrastructure.
- Interconnecting DSLAMs to Central Routers over PDH/SDH
- Interconnecting IP based GSM base stations
- Interconnecting WiMAX base stations
- Using telecom network of E1s / PDH / SDH microwave etc. carrying E1s to transport Ethernet data.
  In all cases the equipment be always installed and used in pairs, with one terminal being installed at either end of the network.



Application Diagram of 4E1/10(100)Base-T Interface Converter

Ordering Information:

1	4E1-4Eth SNMP	motherboard +4 E1 card + LAN card
2	4E1-OPEth&3EthSNMP	motherboard +4 E1 card + LAN card

Remark: AC or DC or AC+DC or AC+AC or DC+DC optional