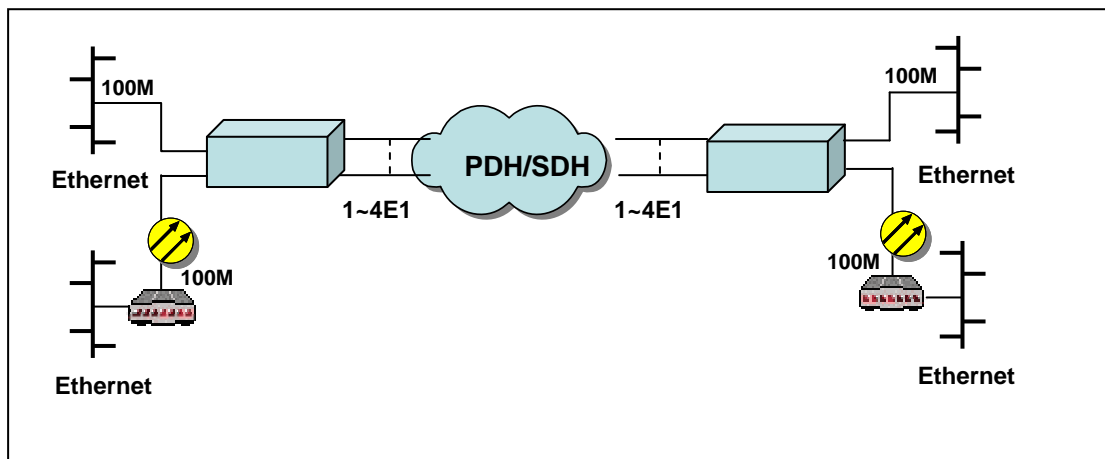


4E1 to 4 Ethernet Converter



PW-4E1-4ETH is the IP over TDM converter, which supports the conversion from MAC frames to 1 ~ 4 E1 lines. The maximum bit rate is 7.936Mbps (4E1 lines). The device shows estate and alarm information of each E1 channel, and also offers a RS232 port, which is used to connect NMS server which has been installed GUI NMS software. Compliant to international standards, the device can communicate with products from other manufacturers adopting the same standards.

Typical Application:



PRODUCT CHARACTER:■ **E1 INTERFACE**

- **Supports Automatic Removal and Recovery of E1 channels which used.**

The E1 channels which have urgent alarm, such as LOS and LOF, or Bit Error Rate (BER) exceeds 1E-6, are removed automatically, and during this period, some Ethernet packets may be lost; It will be resumed when the fault dismiss .

- **Supports embedded E1 BER Tester function to detect E1 channel of 4 channels.**

When the embedded E1 BER Tester is used via CLI command, the particular E1 channel on testing mode can not convey E1 service, while the other E1 channels are not affected by the BER test.

- **The differential delay between any two of 4 E1 can be up to 220ms;** when the factual differential delay exceeds 220ms, alarm is generated and Ethernet is cut off.

- **Jitter tolerance and jitter transfer characteristic compliant to ITU-T G.823.**

■ **ETHERNET INTERFACE**

- Provides up to 4 shared Ethernet interfaces.
- 1024 MAC address table and 5-minute aging time.
- Accepts frames with length between 64 and 1916 bytes (otherwise filtering).
- VLAN function based on tags compliant to IEE 802.1Q.
- Throughout statistic of the Ethernet packets based on port, such as error packets.
- Configurable pause flow control .
- Optional optical Ethernet interface compliant to IEEE 802.3u 100BASE-FX standard (can communicate with remote optical transceiver) and electrical Ethernet interface compliant to IEEE 802.3u 100 BASE-TX standard.

■ **MANAGEMENT INTERFACE** : GUI via serial RS232■ **TIMING MODE**

- Optional local timing mode and tracing E1 line (set by GUI).
- Source of tracing E1 line can be switched according to signal quality. For instance, the system is set as tracing first E1 link, when some malfunction occurs to it (i.e., urgent alarm LOS/AIS/LOF/LOMF or the signal is looped back), the system will automatically change to tracing the second E1 link; when the fault disappear, the system will be re-tracing the first E1 link.

- 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 2E1 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.

TECHNICAL SPECIFICATION:

4xE1 interface:

Interface standard: according to G.703

Interface Rate: 2.048Mbps+-50ppm

Jitter tolerance: according to G.742 and G.823.

Transmission capability: 4*E1

Clock mode: inter-clock, line-clock

Connector: BNC (75Ω)、RJ48 (120Ω)

E1 Impedance: 75Ω(unbalance), 120Ω(balance).

4x10/100 Base-T interface:

Data Rate: 10/100Mbps (auto-negotiation supported)

Standard: Compatible with IEEE802.3

Connector: RJ-45, 4 Ethernet ports

Full/Half duplex with pause frames (flow control)

Working environment:

power supply: AC220/110V 50-60hz, or DC -48V (38-72VDC) both in the same chassis

power consumption: $\leq 5W$

working temperature: $-5^{\circ}C \sim 45^{\circ}C$

storage temperature: $-40^{\circ}C \sim +70^{\circ}C$

humidity: $\leq 95\%$