



Framed E1 to Ethernet 10/100BaseT interface converter



Spot-light:

FE1-ETH convertor provide conversion from ITU-T G.703 E1 fractional interface to 1 10/100Base-T Ethernet interface. used widely in connecting between WAN and LAN, monitoring, etc.

Description:

FE1-ETH Interface Converter (also as FE1-ETH Ethernet Bridge) is an Ethernet bridge of high performance, which accomplishes the converting between the 10/1000M Ethernet port and the E1 port. As an extended device of the Ethernet, the FE1-ETH Bridge realizes interconnection of two Ethernet by using the E1 channel provided by existing networks with low cost.

10/1000BASE-TX (RJ45) interfaces are provided at the end of Ethernet LAN to accomplish various functions including MAC address self-learning, address filtering, address table maintenance and flow control.

E1 interfaces conforming to ITU-T G.703 and G.704 proposals are provided at the end of WAN, supporting RJ45 and BNC connection modes. The E1 ports support both framing and un-framing architecture. The user can select an operating mode for the E1 interface according to the connected E1 environment. This provides flexibility of network application. In the framing mode, the E1 interface provides a rate of $N \times 64\text{Kbps}$ ($N=1 \sim 31$). In the un-framing mode, the E1 channel provides a rate of 2.048Mbps and accomplishes transparent transmission.

If the FE1-ETH Bridge is used in the framing mode, the transmission clock can be either provided internally, i.e. using the main clocking timing mode (INT), or extracted from the E1 channel, i.e. using slave clock timing mode.

The FE1-ETH Bridge provides plenty of self-test functions, supporting local loop and remote loop. It also provides pseudo random code test function to test error codes in the circuit.

It is proposed to use the products of this series in pairs.

Features:

- Realizes monitoring of remote equipment from local equipment;
- LED indicate local status and remote status, easy to understand easy to use
- Based on self -copyright IC.
- DIP switch management
- Ethernet interface half/full duplex self adapt, support VLAN
- Ethernet interface support auto-mdix.
- Provide 2 clock types: E1 internal clock, E1 external clock.
- Provide 3 loop functions: local loop, to remote loop, order remote loop.
- Have pseudo random code test function, easy the installation and maintenance.
- E1 can support rate $N \times 64k$ ($N=1$ to 32)
- Provide 2 impedances: 75 Ohm unbalance and 120 Ohm balance.
- Have Ethernet monitor self-reset function, equipment will not dead.
- Provide detecting real time Ethernet communication status.

Specifications

E1 interface:

Channel capacity: 1 Channels

Interface Rate: $n \times 64Kbps$ ($n=1 \sim 32$)

Bit Rate: 2.048 Mb/s ± 50 ppm

Line Code: HDB3

Line Impedance: 120 Ohm and 75 Ohm

Connector: BNC and RJ-48

Pulse Shape: ITU-T G.703; G.704

Jitter Performance: ITU-T G.823

Clock mode: internal-clock, external-clock

Ethernet interface (RJ45):

Interface Rate: 10/100BaseTx (1 port)

Duplex: half and full duplex self-adapt.

Interface character: match IEEE802.3U, IEEE802.3x, IEEE802.1Q(VLAN)

Connector: RJ45, support auto-mdix
MAC table: 4096

Architecture:

Stand alone: 140mm(D)*40mm(H)*210mm(W)

Power supply:

DC: -48V (-36 to -72V);

AC: 85 to 264 VAC ; 47 ~ 63Hz

Power Interface: DC power terminal/AC socket

Power Consumption: $\leq 3\text{ W}$

Other Specification

Operation temperature: $0^{\circ}\text{C} \sim 50^{\circ}\text{C}$

Storage temperature: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$

Humidity: 0~90%(no condensation)

Ordering Information:

FE1-ETH / AC	Framed (fractional nx64k bit/s) 2048 Kbps E1 - Ethernet interface convertor, 75/120 impedance universal, 85~264VAC
FE1-ETH / DC	Framed (fractional nx64 kbit/s) 2048 Kbps E1 - Ethernet interface convertor, 75/120 impedance universal, -48 VDC

Application

