

4E1 to 4 Ethernet Converter with VLAN and professional GUI NMS

➤ Features

- Support GFP-F encapsulation recommendation G.7041;
- Support Virtual concatenation(VCAT) and Link Capacity Adjustment Scheme (LCAS) recommendation G.7042;
- Support Ethernet to n*E1 mapping recommendation G.7043;
- Support Ethernet to single E1 mapping recommendation G.8040;
- Bandwidth is increased without damaging the Ethernet data;
- E1s in the local and remote sides can be arranged arbitrarily, such as: the remote E1 port 1 can communicate with local E1 port;
- 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. Historical & Current alarm databases;
- Single-board design with small dimension, 1U high and low power consumption;
- Support DC48V and AC 220V power supply;
- Support 0-50°C wide operating temperature range;
- Warranty:3years



For 4 E1 interface ports:

- Supports automatic removal and recovery of E1 channels that used for carrying payload. The E1 channels that have urgent alarm, such as LOS and LOF, or the 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 dismisses;
- Supports the embedded E1 BER Tester function, to detect any E1 channel of 4 channels. When the embedded E1 BER Tester is used via CLI command, the particular E1 channel on testing mode can't convey E1 service, while the other E1 channels are not affected by the BER test;
- Jitter tolerance and jitter transfer characteristic compliant to ITU-T G.823;
- The differential delay between any two of the 4 E1 can be up to 220ms; when the factual differential delay exceeds 220ms, alarm is generated and Ethernet is cut off;

For 4-port 10/100 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 setting 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;

For GUI Professional Management Interfaces:

- GUI via serial RS232 port and telnet;
- 4E1-4ETH network management platform based on SNMP;

➤ Introduction

UPCOM's 4E1 to 4-port Ethernet converter is an Ethernet extension device that use PDH, SDH or other microwaves to carry Ethernet data, allowing users to transfer Ethernet data into E1 frame format through the existing TDM (E1) links and then re-convert E1 back to Ethernet data at the remote terminal.

HPC-4E1-4ETH, 4E1 to 4 Ethernet converter support GFP-F, VC (Virtual Concatenation), LCAS (Link Capacity Adjustment Scheme) and professional GUI (Graphical User Interface) NMS (Network Management System).

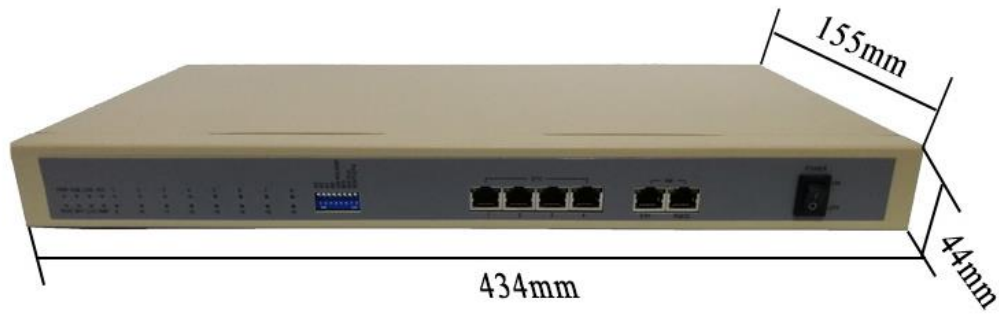
HPC-4E1-4ETH is an IP over TDM converter, which supports the conversion from MAC frames to 1–4 E1 lines. The maximum bit rate is 8 Mbps (4E1 lines). it can meet various requirements and can be customized to meet your network needs. It not only provides alarms and status of the E1 line and Ethernet interface together with advanced management functions, such as throughput statistic of the Ethernet, but also supports the Unification Network Management via SNMP and GUI. It conforms to international standards and can be used with third-party device that follow the same protocol.

4-port 100M Ethernet interfaces operate in full-duplex or half duplex with flow control, the mode can be set or monitored by management software. The device also has multi-port bridging capability to handle up to 5 bridge ports. The Bridge supports two modes of operation: VLAN-Enable and VLAN-Disable modes. In VLAN-Enable mode, it creates sub-groups of bridge ports within the bridge. Each sub-group is associated with a unique VLAN ID (VID). Frames containing a VID can only be forwarded between bridge ports which are members of the specific VLAN, enabling a total separation between different VLAN users within the same bridge; In VLAN-Disable mode, the bridge forward frames ignoring the VID.

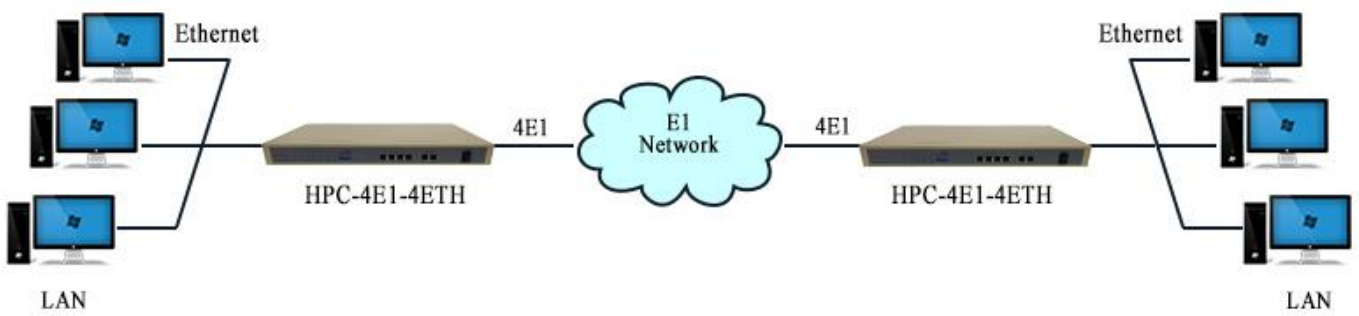
➤ Specification

| E1 interface | |
|------------------------------------|---|
| Bit rate | 2.048Mb/s±50ppm |
| Code format: | HDB3 |
| Line Impedance | 75 Ohm BNC and 120 Ohm RJ45 |
| Standard | Jitter transfer, Jitter tolerance comply with ITU-T G.703、 G.704、 G.823 recommendations |
| Ethernet Interface | |
| Connector | RJ-45 |
| Working mode | Auto-negotiation |
| Standard | Complies with IEEE 802.3 and 10/100 Base-Tx Ethernet Protocol |
| 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 |
| 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) |
| Weight | 5kg |
| Power consumption | 8W |
| Power supply | DC 48V or AC96 -260V or DC&AC dual power |
| Operating temperature | -5-65°C |
| Storage temperature | -40-70°C |
| Humidity | 5%~95% (non-condensing) |

➤ Dimension



➤ Application



➤ Ordering Information

| Model NO. | Description |
|------------------|---|
| HPC-4E1-4ETH | 4E1(75ohm&120ohm) + 4*10/100BASE-Tx , GUI manager,AC96-260,DC48V |
| HPC-8E1-4ETH | 8E1(75ohm&120ohm) + 4*10/100BASE-Tx, GUI manager,AC96-260,DC48V |
| HPC-16E1-4ETH | 16E1(75ohm or 120ohm) + 4*10/100BASE-Tx, GUI manager,AC96-260,DC48V |
| HPC-4E1-3ETH/Fx | 4E1(75ohm&120ohm) + 3*10/100BASE-Tx+1*100M Fx, GUI manager,AC96-260,DC48V |
| HPC-8E1-3ETH/Fx | 8E1(75ohm&120ohm) + 3*10/100BASE-Tx+1*100M Fx, GUI manager,AC96-260,DC48V |
| HPC-16E1-3ETH/Fx | 16E1(75ohm or 120ohm) + 3*10/100BASE-Tx+1*100M Fx, GUI manager,AC96-260,DC48V |

➤ Packing List

- 4E1 to 4 Ethernet Converter *1
- User manual * 1
- Certificate of quality * 1
- Power cord*1
- Two plugs for Coaxial Cable
- Warranty card * 1