

## AT-CSU-DSU



**PRODUCT OVERVIEW:** - AT-CSU-DSU is an 10/100M Ethernet and FE1 to E1 converter, provides two E1 interfaces and one FE interface. It can extract several consecutive timeslots from the up-E1 ( $N \times 64\text{Kbps}$ ), to transmit Ethernet traffic. The left timeslots of the E1 are used to transmit E1 traffic between the up-E1 and down-E1. The Ethernet traffic and down-E1 traffic are physically isolated.

AT-CSU-DSU is suitable for the applications with small traffic capacity, and different nodes in separated spaces application. It can reduce the number of equipment and simplify the network structure, effectively improve the utilization of E1 resources, and provide a relatively economical digital access solution for part of E1 network.

### FEATURES:-

#### ▪ E1 Interface

- Two E1 interfaces compliant with ITU-T G.703, each supports  $75\Omega$  unbalanced (BNC) and  $120\Omega$  balanced (RJ45) at the same time
- Supports HDB3 coded
- Supports framed PCM31, PCM30 and unframed mode configurable, in unframed mode, it is 2.048Mbps; in framed mode, it is  $N \times 64\text{Kbps}$  ( $N=1\sim31$ ) configurable.
- E1 framed/ unframed mode compliant to ITU-T G.704 recommendation
- Jitter tolerance, jitter transfer characteristic and jitter generation fully comply with ITU-T G.823 and G.742 recommendations

#### ▪ Ethernet interface

- One Fast Ethernet interface compliant with IEEE802.3 serial standard
- RJ45 connector, support auto-negotiation, which can work in 100M full/half-duplex, 10M full/half-duplex mode
- Auto MDI/MDX function.
- Unicast frames, multicast frames and broadcast frames can be transparently transferred
- Accepts frames with length between 64 and 2031 bytes (otherwise filtering);
- Supports PAUSE flow control;

#### ▪ Timing mode

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- Tracing from internal timing source (local timing)
  - Tracing from Up-E1 or Down-E1
- Necessary E1 alarm indications such as LOS, LOF, AIS and CV
  - Supports E1 embedded BERT function
  - Various E1 loopback
    - Up-E1: Up-E1 line loopback, local loopback and remote loopback
    - Down-E1: Down-E1 loopback and local loopback
  - Supports 220V AC single power or -48V DC single power
  - Dimension: 238mm x 125mm x 44mm

## TYPICAL APPLICATION:-

### POINT-TO-POINT APPLICATION

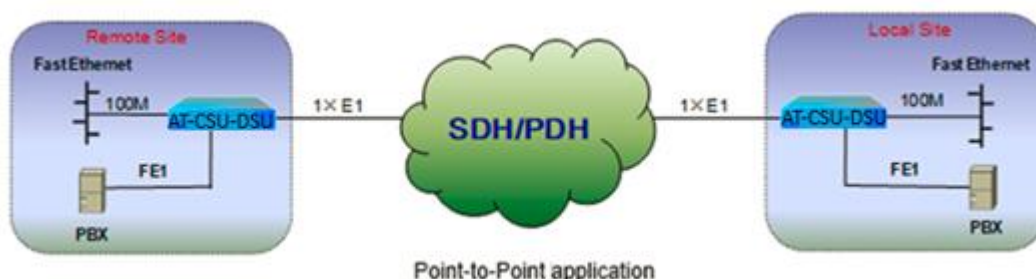
AT-CSU-DSU realizes 10/100M Ethernet transmission over Up-E1 line.

AT-CSU-DSU (1) can be set as local timing, and AT-CSU-DSU (2) can be set as tracing Up-E1 line.

Note: In point-to-point application, E1 can work in Unframed, Framed PCM31 and Framed PCM30 mode.

AT-CSU-DSU supports E1 cascading by Down-E1 interface, below is an example to illustrate the application, as shown in figure 1-3-1. Please note that the assignment of the time slot below is only an example. In practical application, it can be flexibly configured according to actual needs to ensure that the time slot configuration does not conflict. In practical application, it can be flexibly configured according to actual needs.

In this application, set AT-CSU-DSU (1) as local timing, set other three devices as tracing Up-E1 timing. Refer to table 2-1-3 for more



## ORDERING INFORMATION: -

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