

## IP6716 up to 16 E1 Channels plus Ethernet over IP Networks



ANSI Unit Front View



ETSI Unit Front View

### Description

As the core communications network migrates from TDM to IP, the Loop-IP6716 is a cost effective choice to transport E1/T1 TDM signals over the new IP network. The Loop-IP6716 TDM over Ethernet provides flexible solutions with four hot-swappable slots supporting the 4E1/T1 plug-in cards.

Loop-IP6716 can transport 4, 8, 12, or 16 T1/E1 signals with timing and Ethernet traffic over IP network. Connection to the IP network is through dual WAN ports. The WAN consists of 2 combo Gigabit Ethernet (GbE) with 2 RJ45 and 2 SFP housing. On the user side, the TDM ports can be multiple E1 or T1, each with timing preserved. The Ethernet port is 10/100/1000 BaseT. Extensive choice of power module includes AC/DC hybrid, single AC, and single DC. Management choices include console port, Ethernet port, and SNMP port for communication with remote management centres. For transport of TDM signals E1, T1, Jitter and Wander adheres to G.823 Traffic and G.823 Synchronous to provide excellent clock recovery.

### Features

- 1U height, ETSI shelf (full front access) or ANSI shelf (front and back access)
- Point to point and point to multi-points applications
- Max. 256 pseudo-wires (PW), 64 per E1/T1 card
- Aggregate ports:
  - 2 combo Gigabit Ethernet (GbE) with 2 RJ45 and 2 SFP housing
  - Aggregate Line (1+1) protection
  - 2 WAN ports with link aggregation (port trunking)
- Tributary ports:
- Four general purpose hot-swappable slots for:
  - Quad E1/T1 cards (software-selectable):
  - Up to 16 E1/T1 ports per system
- LAN interface: one 10/100/1000 BaseT Ethernet plus one SNMP port/Ethernet port
- Power Modules
  - Fixed: AC & DC (coexistent), 100 to 240 Vac and -36 to -75 Vdc
  - Hot-swappable Power:
    - -48 Vdc plug-in modules (-36 to -75 Vdc), dual for redundancy
    - AC plug-in module (100 to 240 Vac), dual for redundancy (ANSI only)
- Bridging & Switching
  - Jumble frame up to 10k bytes
  - VLAN
  - Q-in-Q
  - Packet transparency
- QoS
  - User-configurable CoS
  - User-configurable ToS in outgoing IP frame

- Max. 340ms Packet Delay Variation
- Built-in BERT for E1/T1 to line or WAN direction
- Alarm propagation between E1/T1 line and WAN port
- Jitter & Wander
  - PPM: per G.823 Traffic
  - PPB: per G.823 Synchronous
- Jitter buffer size: Max. 512 kB
  - Min. packetization (pseudowire) latency < 1.4 ms
  - Multi-colour LED indicators
- Alarm relay
- Management port and interface
  - LCD and keypad (optional for ANSI shelf only)
  - Console port with VT100 menu
  - SNMP port:
    - Embedded SNMP
    - Telnet
    - LoopView GUI
- Support SNTP
- RoHS compliance

### Power Modules



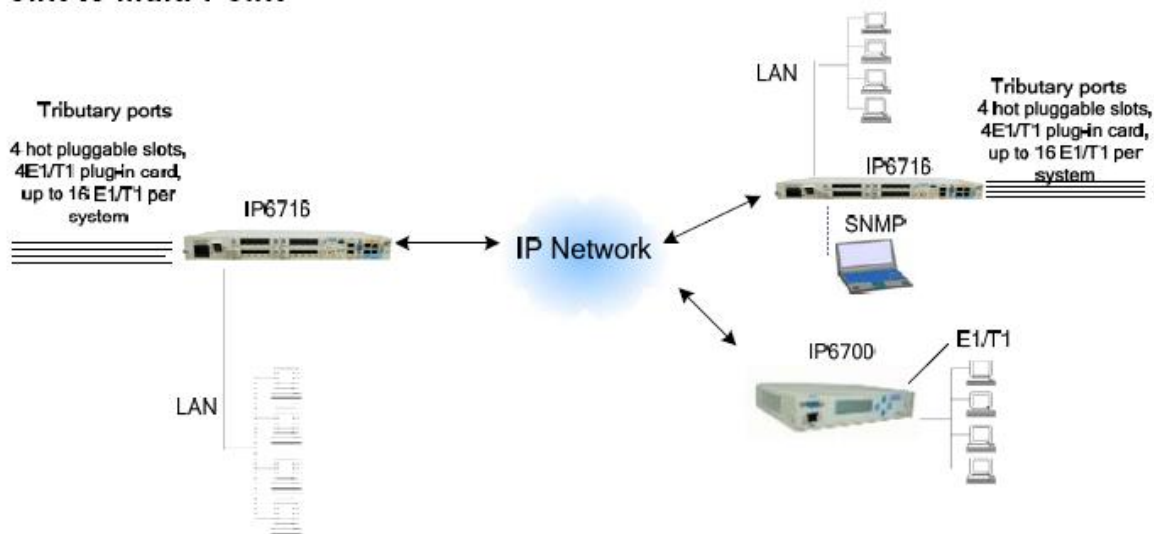
### Application

#### Point to Point



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### Application Point to Multi-Point

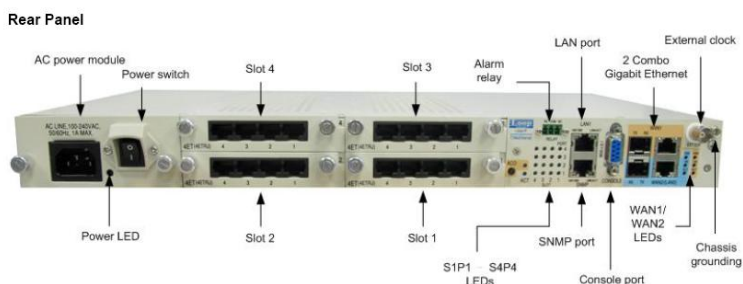
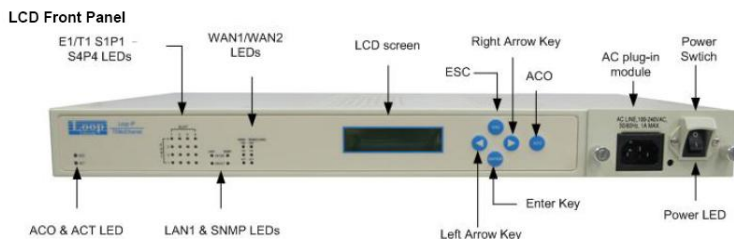


#### E1 Tributary Interface

Line Rate	2.048M bps ± 50 ppm
Line Code	AMI/ HDB3
Framing	ITU G.704 (CRC: on/off, CAS: on/off, unframed)
Output Signal	ITU G.703
Input Signal	ITU G.703
Jitter	ITU G.823
Electrical	75 ohm coax/120 ohm twisted pair
Connector	RJ48C

#### LAN Ethernet Interface

Number of Port	1
Ethernet Functions	10/100/1000 BaseT, IEEE802.3 Auto-negotiation (10/100/1000M) Auto MDI/MDIX Full or half duplex
Connector	RJ45



#### Certification

EMC	EN55022 Class A, EN55024, FCC Part 15 Class A
Safety	EN60950-1, IEC60950-1

#### Standards and Compliance

ITU-T	G.703, G.704, G.823
IEC	61000-4-5 class 3
IEEE	802.3, 802.3u, 802.3z, 802.3X, 802.1q, 802.1ad
IETF	RFC5087 (TDMoIP), RFC4553 (SAToP), RFC5086 (CESoPSN), RFC1213 (SNMPv1), RFC4805 (E1)

For more information please contact Saratota Ltd