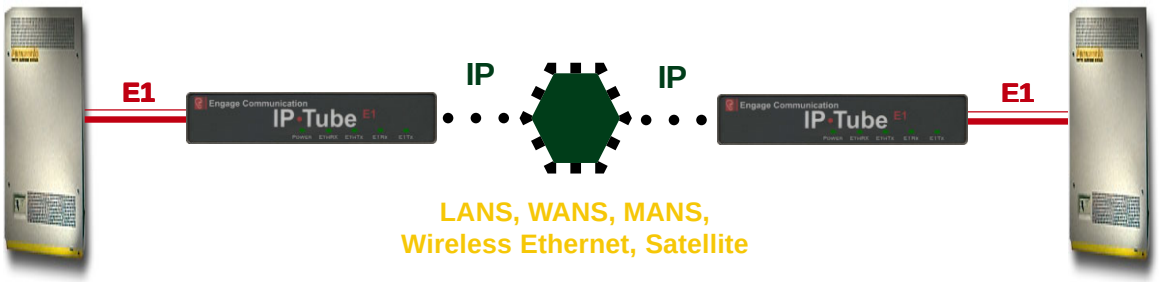
Engage Communication

IPTube•E1

· E1 Over IP Interconnect for Voice and Data ·

The **IPTube-E1** encapsulates full and fractional E1 and TDM circuits, along with their framing and signaling bits, into IP packets. The **IPTube's E1** Over IP, E1 Over Ethernet connection provides for the transparent interconnection of PBXs, Telecom Switches and E1 based communication systems via LANs, WANs, MANs, and Wireless Ethernet. WAN Protocols, such as PPP and Frame Relay, that utilize HDLC framing are able to be encapsulated with HDLC Over IP.



E1 Communication Equipment: PBX, Telecom Switch, Multiplexor

E1 Circuit Extension Over IP

- Return on investment measured in weeks
- Exploits Efficiency and Flexibility of IP/Ethernet
- Supports legacy telephony switches or PBXs
- Straight Forward Configuration

E1 Communication Equipment: PBX, Telecom Switch, Multiplexor

E1 Private Line Services over IP

Businesses incur significant recurring monthly costs for rigid-bandwidth leased lines used purely for the interconnection of PBXs and telecom switches. The **IPTube-E1** provides enterprises with the ability to interconnect their existing phone systems over flexible bandwidth lines that are used to carry data, voice, and video. The Voice Only Leased Line Toll charges assessed by long distance and local carriers are eliminated by transporting voice and fax traffic across the enterprise intranet, LAN, Metropolitan-Area Network, or WAN.

- Corporate Branch Office Interconnect of Phone System over Enterprise WAN
- Education District Networking of Phone Systems

CLEC PBX Back Haul

The **IPTube-E1** provides CLECs with a way to back haul a E1 DS0s from a customer's phone systems over their Internet connection. The back hauled DS0s are connected to the CLECs phone switch for connection to the Public Switched Telephone Networks. Competitive Local Exchange Carriers are able to provide customers with a very economical alternative to the local Phone Company since the Local Loop charges of around $40/line per month for each phone line are consolidated.

International Toll Bypass

The **IPTube-E1's** most dramatic cost savings is when it is used for the international interconnections of TDM based telecommunication equipment. The IPTube-E1 is interoperable with the TDM standard T1.

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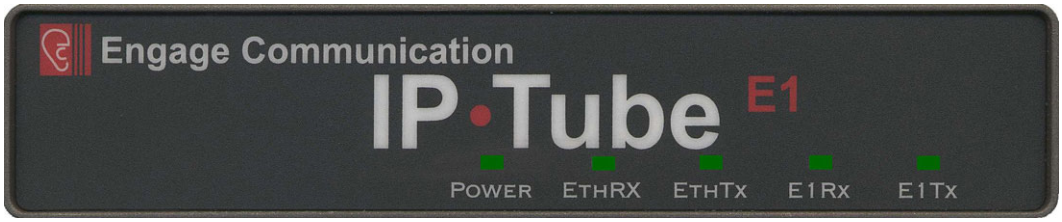
IPTube•E1

Transparent Interconnect

IPTube-E1 transparent operation maintains the proprietary signaling required to support PBX features such as call conferencing, call forwarding, caller ID and SS7. Legacy phone equipment investment is preserved. Transparent support for Modem, Fax, or Data circuits. The **IPTube-E1** has a E1 interface that connects directly to the E1/DS1 interface of Phone Systems or E1 Data Communication Equipment.



Lossless Data Compression

The **IPTube-E1C** detects idle/redundant data within each DS0 resulting in a 40 to 1 bandwidth savings. TDMoIP bandwidth is not consumed by silent or redundant circuits.

Management of the **IPTube-E1** is accomplished with a Command Line Interface that is accessed through a Console or Telnet connection. Templates of the most common configuration provide for an Edit and Paste configuration.

Technical Specifications

LAN Network Interface:
- 10BaseT Ethernet

LAN Network Protocols Supported:
- IP, TCP, UDP, ICMP, BOOTP

E1/Fractional E1 Specifications:
- Framing - CRC4 or FAS or UNFRAMED
- Coding - HDB3 or AMI
- Supports DS0 assignments from 1 to 31

E1 Over IP Protocol:
- TDM Over IP - TDMOIP
- Circuit Extension Services Over IP - CESOIP
- HDLC Over IP - HDLCOIP
- Frames Per Packet Configurable 8 to 40
  - 1 millisecond 8 E1 frames
  - 5 millisecond 40 E1 frames

Regulatory:
- Safety -IEC60950
- EMC - CFR 47 Part 15 Sub Part B:2002
  EN55022:1994+A1&A2
  EN55024, ICES-003 1997
  CISPR 22 Level A
- Telecom - TBR12, TBR13
- CE

Quality of Service Support:
- IP Type of Service (TOS) CLI configurable
- IANA Registered UDP Port 3175

TFTP Online Upgrade Capable (FLASH ROMs)
- IPTube is fully operational during upgrade

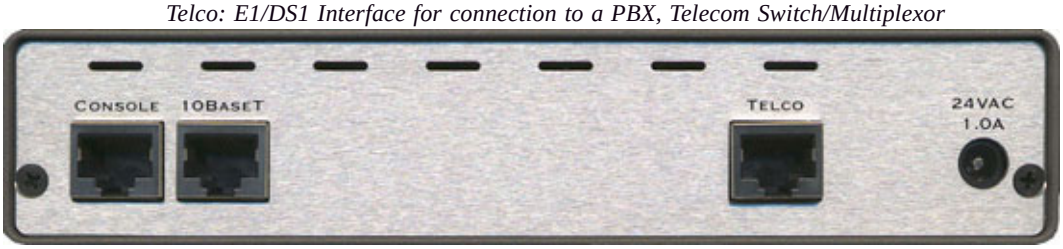
Management:
- Telnet support with Edit and Paste Template Files
- Console Port for Out of Band Management
- SNMP support (MIB I, MIB II)
- Remote configuration, monitoring, & reset

Power:
- 24VAC, 1.0A
- Optional 12-36 VDC 1.0A
- Optional -48V 0.25 Amp
  International Adapters Available

Dimensions:
- 9" (L) x 7.3" (W) x 1.50" (H)

Back Panel AC

Telco: E1/DS1 Interface for connection to a PBX, Telecom Switch/Multiplexor



Console Port Connector
• RJ 45 to DB 9 Male Adapter provided

Standard 10BaseT Ethernet interface

15-30 Volts AC - DC Models Available

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