

- SS7 Over IP Signalling -

The **IPTube•SS7•SIG•E1** transports SS7 messages over IP networks. SS7 signaling network elements such as local and tandem switches, Mobile Switching Centers, Signal Transfer Points and Home Location Registers that are interconnected to remote network elements by **IPTube•SS7•SIG•E1s** are able to transmit their signaling messages over cost effective and flexible IP networks.

The **IPTube•SS7•SIG•E1** has an integrated E1 interfaces to connect to the SS7 equipment's communication link. The T1 and E1 Models are also available with 2nd T1 or E1 Drop and Insert interface for direct inline connection to the SS7 DS0.



Reduced Transport Costs

Carriers significantly reduce SS7 transport costs by replacing expensive long-haul dedicated signaling links with very competitively priced IP connectivity between network elements. Service providers cut costs with SS7 Over IP by offloading data traffic from SS7 networks onto IP networks.

New Revenue Opportunities

The demand for data-centric services such as Short Message Service and Unified Messaging has created an opportunity for carriers to capitalize on new revenue generating opportunities. Cost-effective IP transport technology and service-rich SS7 applications enables carriers to quickly integrate enhanced services and capture new revenue.

Legacy Investment Protection

Establishing an SS7 network with **IPTube•SS7•SIGs** does not require expensive forklift replacements or costly software upgrades for existing end nodes.

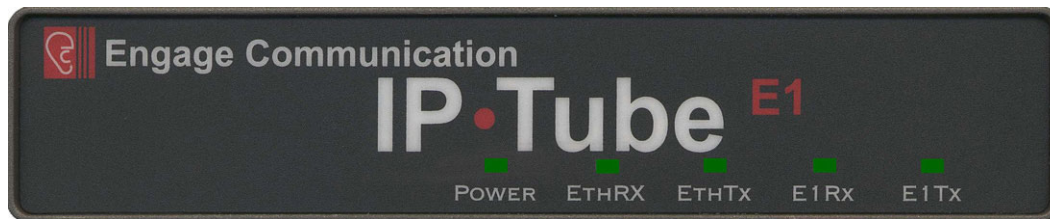
Deployment Flexibility

Widely available commercial and private IP networks provides the SS7 network designer with competitive options for interconnecting the signaling points.

IPTube•SS7•SIG•E1

Industry Standard SS7 Framer

The **IPTube•SS7•SIG•E1** uses an industry standard SS7 Framer to receive and transmit SS7 messages. Minimal IP bandwidth is required to deliver SS7 since only the message data is encapsulated into IP packets.



Management of the **IPTube•SS7•SIG•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

SS7 Over IP Protocol:

- SS7 Frame UDP encapsulation

E1/Fractional E1 Specifications:

- Framing - CRC4 or FAS or UNFRAMED
- Coding - HDB3 or AMI
- Supports DS0 assignments from 1 to 31

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 - Part68
- 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)

DC Back Panel

Telco: E1 Interface for connection to an SS7 Signalling Node



AC Back Panel

*24 to 36 Volts DC Model
-36 to -72 Volts DC Model*

Telco: E1 Interface for connection to an SS7 Signalling Node



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

Standard 10BaseT Ethernet interface

15-30 Volts AC