Engage Communication

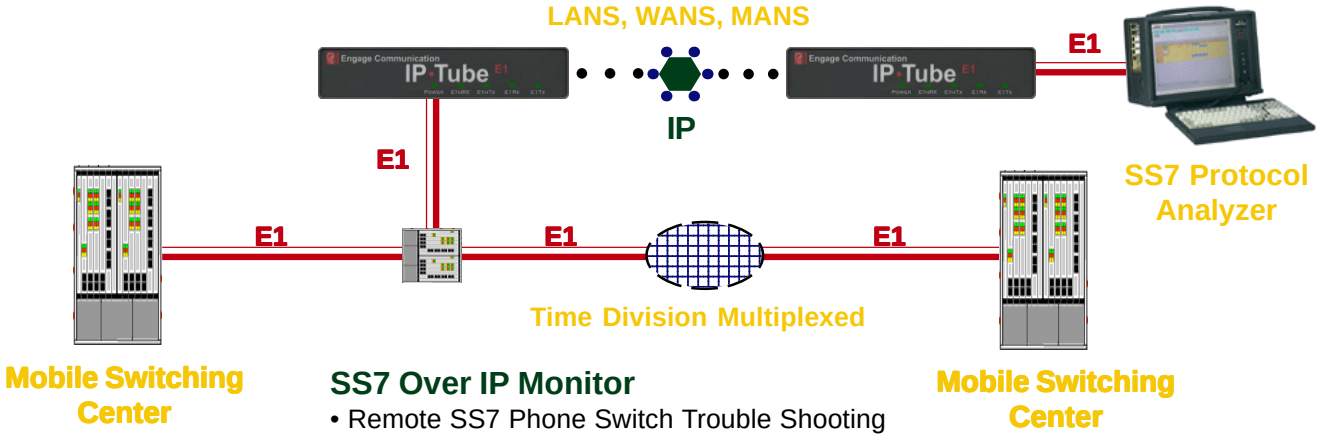
IPTube•SS7•MonM•E1

· SS7 Over IP Monitor with Mux ·

The **IPTube•SS7•MonM•E1** encapsulates SS7 Call Detail Messages from SS7 Signalling nodes into IP packets for delivery to an SS7 Protocol analyzer. The **IPTube•SS7•MonM•E1** provides for remote monitoring of SS7 based Telecom Switches systems via LANs, WANs, MANs, and Wireless Ethernet.

The **IPTube•SS7•MonM•E1's** E1 interface is connected to the E1 monitor interface of the Telecom Switch and is setup to monitor the SS7 traffic. At the Central Support Site an **IPTube•SS7•MonM•E1** receives the SS7 Over IP packets and sends the SS7 Messages out its E1 interface to an SS7 Protocol Analyzer.

The **IPTube•SS7•MonM•E1** connects to a E1 monitor port that has the SS7 communication from each switch on adjacent DS0s. The messages from each SS7 Signalling node are sent within IP Packets to an **IPTube•SS7•MonM•E1** that is connected to the E1 interface of an SS7 protocol analyzer.



SS7 Over IP Monitor

- Remote SS7 Phone Switch Trouble Shooting
- Centralized SS7 Support
- Call Tracing, Summary, Completion Analysis
- Return On Investment measured in weeks
- Exploits Efficiency and Flexibility of IP/Ethernet

Remote SS7 Switch Analysis

Telecommunication Service Providers utilize **IPTube•SS7•MonM•E1s** to facilitate the analysis of remote Telecom Switches over IP networks. A single centralized SS7 Protocol Analyzer is able to analyze a multisite network of Telecom switches that are connected with the **IPTube•SS7•MonM•E1s**.

SS7 protocol analyzer expertise is only required at the Central location. Analysis of an SS7 Telecom switch can be performed simply by enabling its **IPTube•SS7•MonM•E1** to stream the SS7 messages to the IPTubeSS7 connected to the SS7 protocol analyzer.

Low Cost IP Services with minimal Committed Information rates, such as DSL Internet, have sufficient bandwidth to deliver the SS7 Over IP packets. SS7 Over IP network bandwidth utilization is restricted to SS7 message encapsulation.

The Centralized SS7 protocol Analyzer is utilized for: Surveillance, Call Detail Records processing, Real-Time Signaling Network Monitor, Traffic Monitor and Analysis, Alarm management, Fraud Detection, Billing Verification, Revenue Assurance and Protocol Analysis: Call Tracing and Decoding.

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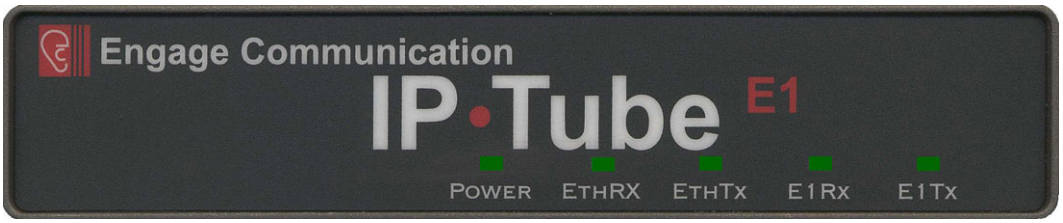
IPTube•SS7•MonM•E1

Industry Standard SS7 Framer

The **IPTube•SS7•MonM•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•MonM•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 encapsuation

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"

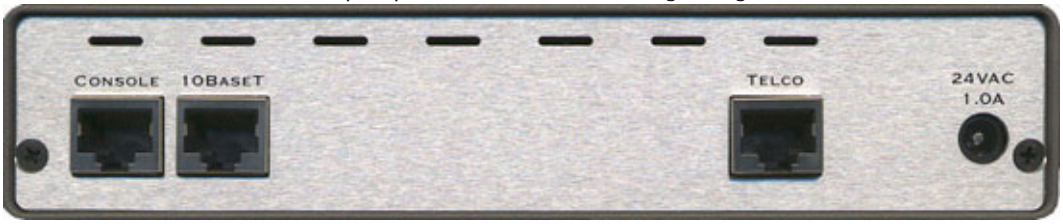
DC Back Panel

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

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