



SS7 Over IP Protocol Probe



- Monitor SS7 CDRs from Tandem Switches
- ROI Measured in Weeks

SS7 Protocol Analyzer E1 Probe

The **IP•Tube GE1 SS7 MON** encapsulates the SS7 Message Signal Units (MSUs), Link Status Signal Units (LSSUs), and optionally Fill-In Signal Units (FISUs) from the E1 monitor interfaces of Telecom Switches into IP packets.

These SS7 Over IP packets are sent to a Central Support Site, with the SS7 Protocol Expertise, where an **IP•Tube GE1 SS7 MON** receives the SS7 Over IP packets and sends the SS7 Signaling units out four separate E1 interfaces or multiplexed onto a single E1 interface to an SS7 Protocol Analyzer.

The **IP•Tube GE1 SS7 MON** has from 1 to 4 E1 interfaces that have the sensitivity, -36dB, to be connected to high impedance E1 Monitor jacks. The 4 E1 interface configuration provides for the simultaneous monitoring of the SS7 Signaling Units from Tandem Telco Switches.



Remote SS7 Switch Analysis

Telecommunication Service Providers utilize **IP•Tube GE1 SS7 MONs** 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 whose SS7 communications are being probed with the **IP•Tube GE1 SS7 MON**.

SS7 protocol analyzer expertise is only required at the Central location. Analysis of an SS7 Telecom switch can be performed simply by enabling its **IP•Tube GE1 SS7 MON** to stream the SS7 messages to the **IP•Tube GE1 SS7 MON** connected to the SS7 protocol analyzer.

Low Cost IP Services, such as DSL Internet, have sufficient bandwidth to deliver the SS7 Over IP packets. SS7 Over IP network bandwidth utilization is limited to SS7 MSUs and LSSU.

IPTube GE1 SS7 Mon

Pay-As-You-Grow Field Upgrades

The IP•Tube GE1 SS7 MON has configurations with 1 to 4 integrated E1 interfaces each of which supports 1 to 31 SS7 Communication links.

Designed for Pay-As-You-Grow expansion. Economize initial installation by purchasing a single active E1 port, and then enabling an additional SS7 DS0s or E1 ports via an option license key.

Industry Standard SS7 Framer

The IP•Tube GE1 SS7 MON 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

An IP Ethernet interface, with SNMP, enables ease of management, configuration, and upgradeability.

IPTube GE1 SS7 Mon Optional Features

E1 Multiplexor OPTION -MUX

The IP•Tube GE1 SS7 MON with the MUX option has the ability to support remote SS7 messaging taps from 31 remote SS7 timeslots. A single SS7 Analyzer with 31 DS0s is able to simultaneously analyze 15 links.

SS7 Sniffer OPTION -SNIF

SS7 Packets are enveloped in a SIGTRAN header so that an Ethernet Protocol Analyzer with an SS7 protocol decoder can be utilized to capture and analyze the IPTubes' SS7 Over IP traffic.

Technical Specifications

E1/Fractional E1 Specifications:

- 1-4 Integrated E1 DSuUCSUs with -36dB sensitivity
- Connects to E1 Monitor Jack
- Framing - CRC4 or FAS
- Coding - HDB3 or AMI
- Supports DS0 assignments from 1 to 31
- Mux Mode - Non Contiguous Configuration x-y,z Supported

SS7 Over IP Protocol:

- SS7 Frame UDP encapsulation with Assured Delivery

LAN Network Interface:

- Two 10/100BaseT Full/Half Ethernet
- Auto negotiation or Configured Speed and Duplex

LAN Network Protocols Supported:

- IP, TCP, UDP, ICMP
- Telnet

TFTP Online Upgrade Capable (FLASH ROMs)

- IP•Tube is fully operational during upgrade

Dimensions:

- Dimensions: 9" (L) x 7.3" (W) x 1.50" (H) 1/2 19" Rack Wide 1U High

Environmental:

- 0° to 132° F (-10° to 50°C) operating temperature
- Up to 90% operating humidity (non-condensing)
- Optional Extended Temperature Range available

Regulatory:

- CE • 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

Management:

- Telnet support with Edit and Paste Template Files
- Console Port for Out of Band Management
- SNMP support (MIB I, MIB II) with configured traps
- Remote config., monitoring, & reset
- Telco Diagnostics: Local Loop, Remote Loop

Power:

- 12-30 VDC, 1.0A. Locking Connector
- Optional -48V 0.25 Amp

How To Order - IPTube GE1 SS7 Mon

Part No.	Description	Notes
SS7-2048-0x; ppy	IP•Tube GE1 SS7 MON	Models with 1-4 E1 Ports 0x; 1-24 SS7 DS0 ppy
-MUX	Multiplexor Option	Support for 31 SS7 DS0s to 1 E1
-SNIF	SIGTRAN Packet Formatter	Supports Ethernet Protocol Analyzer Format
Power Options		Specify as suffix - Combine 2 for Hot Standby
-DCMOD	Power Module 12/26 VDC/AC ADAPTER	Ships with Universal Adapter 100/240 50/60
-WIRED	Power Supply Module 12/26 VDC Screw Term	
-N48VDC	Power Supply Module Negative 48 Volt DC	Isolated Negative 48 Volt Power
-RACKMNT	19/23" Wide Rack Mount Brackets	Enclosure Nut Serts Installed