

# E1 Access Series IPM-1SE

## TDM over IP Access Units



The IPM-1SE provides a type of pseudowire (PW) function where a real-time bit stream (TDM) is transmitted over a packet switched network (PSN). By TDM (Time Division Multiplexing) we mean a T1 or E1 signal, while the PSN is based either on an IP or raw Ethernet network. Unlike other traffic types that can be carried over pseudowires (e.g. ATM, frame relay, and Ethernet), TDM is a real-time bit stream, which traditionally carries voice-grade telephony channels. One critical issue in implementing TDM over IP is clock recovery.

In native TDM networks the physical layer carries highly accurate timing information along with the TDM data, but when emulating TDM over Packet Switched Networks this synchronization is absent. The IPM-1SE is able to accurately regenerate the timing signals to the exacting standards and conformance with ITU-T. As core networks continue their conversion from traditional switched technology to IP based networks, the IPM-1SE provides a solution to continue using legacy TDM equipment, such as PBX, while still using IP based networks for.

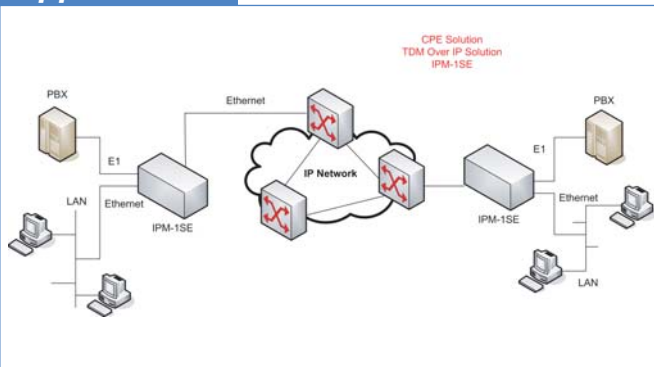
### Features

- Configurable with CLI via: RS-232/V.24 & Telnet via Ethernet (Configuration stored in flash)
- Devices can be cascaded to increase the number of interfaces
- Point-to-point and point-to-multipoint applications
- Provides accurate E1/T1 clock recovery
- Remotely upgradeable
- Supports SNMP management
- Supports synchronous TDM-based and Ethernet services over IP and Ethernet networks
- Supports rack mounting option

### Specifications

Uplink and LAN Ethernet specifications		
Standards	IEE 802.3, 802.3U, 802.1p and 802.1q	
Data Rate	10 or 100 Mbps, Half-Duplex or Full-Duplex	
Range	Up to 120m on UTP category 5	
Connector	RJ45	
E1 Link		
Port	1 port	
Framing	Unframed/ CCS(PCM31)/ CAS(PCM30)	
Bit rate	2.048Mbps	
Line code	HDB3	
Line impedance	75 ohm(BNC)/ 120 ohm(DB-15, RJ-45)	
Pulse amplitude	Nominal 2.37V ±10% for 75ohm Nominal 3.00V ±10% for 120ohm	
Zero amplitude	±0.1V	
Receive Level	Short haul -15dB/ Long haul -43dB	
Connector	RJ-48C for 120 ohms/ BNC for 75 ohms	
Compliance	ITU-T G.703, G.704, G.706, and G.732.	
T1 Link		
Ports	1 port	
Framing	Unframed, D4, ESF	
Data rate	1.544 Mbps	
Line Code	B8ZS / AMI	
Receive Level	Short haul - 15dB/ Long haul - 36dB	
Line impedance	100 ohms	
Pulse amplitude	Nominal 3.0 ±20%	
Zero amplitude	±0.15V	
Connector	RJ48C	
Compliance	ITU-T G.703, G.704, AT&T TR-62411, ANSI T1.403	
Control interface		
Standards	RS-232/V.24 (DCE) (Direct connection to PC)	
Data rate	115200 baud	
Data format	One start bit/ 8 data bits/ No parity/ One stop bit	
Connector	DB-9 Female	
General Specifications		
Connector	AC Model: 3 Pin plug DC Model: Plug in type 3Pin terminal Blocks	
Power	AC	100 — 240 VAC
	DC	18 — 75 VDC
Environment	Temperature	0 — 40°C (Operating); 0 — 70°C (Storage)
		Humidity
Power Consumption	15W	
LEDs	System, TDM, Uplink, LAN	
Dimensions(WxDxH)	196mm x 255mm x 44.4mm	
Weight	1.6kg	

### Application



### Ordering Info

IPM-1SE-AC	Provide one E1 and one ethernet port over IP network, AC Power (90 — 265 VAC, 47 — 63 Hz)
IPM-1SE-DC	Provide one E1 and one ethernet port over IP network, DC Power ( 18 ~ 75 VDC)