



## Troposcatter 8E1/IP Multiplexer

### Troposcatter 8E1/IP Multiplexer | Model CSM8100

The **CSM8100** 22 Mbps Multiplexer is the world's first E1 and IP multiplexer designed specifically for operation over terrestrial troposcatter communications links. The **CSM8100** multiplexer provides unparalleled performance when measured against other commercially available TDM multiplexers or router-based circuit emulation hardware. Robust framing protection, using redundant bit stuffing control bits with time diversity, protects the bit count integrity (BCI) of each of the eight E1 PDH data streams. In addition, the multiplexer framing structure and receive correlator supports continuous operation in the deepest of Rayleigh fading environments.

In addition, the multiplexer serves as a 10/100 base-T Ethernet bridge in support of IP-based data, voice and video traffic. SMSC's LAN8700 PHY and a Comtech Systems proprietary MAC interface with MDIO control support the transparent data packet bridging. The **CSM8100** supports up to 20 Mbps of WAN/LAN based traffic.

### Key Features

- Fully compatible with CSI's family of troposcatter modems
- Aggregate data rates to 22 Mbps
- Full duplex operation
- Mitigates against multi-path distortion
- Programmable from 0 to 8 E1 PDH data streams
  - (ITU) G.703, 2.048 Mbps, HDB3 encoding/decoding, 120 ohm
  - Transformer coupled, balanced interfaces
- 10/100 base-T IP WAN/LAN Bridge
  - Up to 22 Mbps data rate supported
  - Any aggregate rate supported
- HSSI or RS530/422 aggregate Interface (programmable)
- ±48 VDC operation
- RS422 Remote Terminal status port
- Front panel control and status LED's
- Major alarm indication -Form-C contacts
- 1 - R/U 19 in. rack mount configuration
- 6.5 lb AGW
- 10 W (maximum power consumption)
- -20 °C to 55 °C operating temperature range

# CSM8100 | Troposcatter 8E1/IP Multiplexer

## Technical Specifications

Aggregate Interface		Size	
HSSI or RS530 (User Selectable)		Height	1.75 in. (4.45 cm) (1 RU)
Aggregate Rates		Width	19 in. (48.2cm) rack mount configuration (slide mounting holes)
E1 modes	20 Mbps (manual mode), 2 Mbps to 22 Mbps (auto mode)	Depth	18 in. (45.7 cm)
IP only mode	Up to 22 Mbps		
User Interfaces			
E1 Interfaces	Front panel selectable for 4, 6 and 8 E1 interfaces (ITU) G.703, 2.048 Mb/s, HDB3, 120 ohm Transformer coupled, balanced interfaces		
	RJ45 rear panel connectors		
	IP 10/100bT WAN/LAN Ethernet Bridge		
IP Interface	SMSC 8700 PHYB		
	Built-in Packet Traffic Cop throttles link data rate		
	Data rates from 4 Mb/s to 22 Mb/s (user selectable)		
All aggregate rates possible in IP only mode			
RJ45 rear panel connectors			
Monitor and Control			
Front Panel Control			
IP Only	All bandwidth allocated to IP data traffic		
Auto	0 to 8 E1s slaved to CS67200 Modem, provides maximum number of E1's for selected modem data rate		
Manual	Defaults to E1 select switch		
E1Select	E 1 selection of 4, 6, or 8 E1s		
Status LEDs			
Power	48 VDC power indicators		
Data activity	DCE input timing detection		
Auto mode	Indicates CS67200 Modem (slaved) mode of operation		
Alarm	Indicates major alarm is present		
Features			
Remote status	RS422 Remote Terminal Port for configuration and status		
Major alarm indication	LED and rear panel Form-C contacts		
Power	±48 VDC, 100 W maximum		

