T1/E1, Data/Voice & Ethernet Fiber Optic Multiplexer

- Multiplexes Up to 24 T1 or 20 E1 and 3 Ethernet Ports Over Fiber
- Optional Voice (up to 8 channels FXS/FXO or 4 channels 2 Wire/4 Wire Analog) or Data (up to 8 channels RS-232/RS-422/RS-485)
- Key Features: Statistics Monitoring (T1/E1, Ethernet, Optics), Ethernet Rate Limiting, Remote Firmware Upgrade, Network Time Server (NTS), Temperature Monitoring and Loop Up/Down Codes
- Management (Web, SNMP, Telnet, Console)
- FXS/FXO Ports Support Modems & Faxes
- High Temp (-20°C to +70°C) and Extreme Temp (-40°C to +80°C) Optional
- Multimode or (1300nm) or Singlemode Optics (1300/1550nm)
- 90-260VAC Hot Swappable Power Standard
- Optional Power: 12VDC, 24VDC, -48VDC, 125VDC
- Power and Optic Redundancy Standard

The TC8518 T1/E1, Data/Voice & Ethernet Fiber Optic Multiplexer multiplexes 4/8/16 channels of T1/E1 and 3 Ethernet ports on single mode (1300/1550nm) or multimode (1300nm) fiber. It can also multiplex additional T1/E1, voice, analog and data channels via an expansion card with any one of the following options:

**Expansion Card (for T1 unit):**
- Telephone: 4/8 - FXS or FXO
- Analog: 4 - 2/4 Wire
- Serial: 4/8 - RS232/422/485
- T1: 8 channels

**Expansion Card (for E1 unit):**
- Telephone: 4/8 - FXS or FXO
- Analog: 4 - 2/4 Wire
- Serial: 4/8 - RS232/422/485
- E1: 4 channels

Each T1 or E1 channel is independent and transparent to the framing format and supports all applicable standards and line codes. The 3-port Ethernet switch supports non-blocking full 100Mbps bandwidth, VLAN, and Rate Limiting. It is IEEE 802.3/802.3u/802.3x compliant and supports Huge Frames (1916 bytes).

The TC8518 supports distances up to 100 km and offers a one fiber, bi-directional WDM option to maximize bandwidth. Setup, diagnostics, and management are accessed via Web, SNMP, Serial Console, and Telnet. Diagnostics include LED indicators, dry contact alarms, and local and remote loopback. Statistics Monitoring keeps a history of activity (optical, T1/E1, and Ethernet).

A 1U high “rack mount” chassis and power/fiber optic redundancy are standard. Fiber redundancy includes automatic switchover for maximum reliability. Standard power is 90-260VAC; power supplies are hot swappable. Optional power supplies include 12VDC, 24VDC, -48VDC, and 125VDC. Fiber optic connectors are SC. A high temperature version (-20°C to +70°C) and extreme temperature version (-40°C to +80°C) are optional.

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Typical Application Using the TC8518 T1/E1, Data/Voice & Ethernet Fiber Optic Multiplexer's.

Data Rates
- T1: 1.544 Mbps
- E1: 2.048 Mbps
- Ethernet: 100 Mbps total
- Async RS-232/422/485: Up to 115K
- Console: 9.6K
- Audio: 300 Hz to 3.4 Khz

Channel Capacity
- T1: 4, 8, 16, 20*, 24*
- E1: 4, 8, 16, 20*
- Ethernet: 3 Port Switch
- 2-Wire/4-Wire Analog: 4
- RS-232/422/485: 4 or 8
- Telephone (FXS or FXO): 4 or 8

Optical
- Transmitter: ELED/LASER**
- Receiver: PIN Diode
- Wavelength: 1300nm Multimode
- 1300/1550nm Single Mode
- Optical Connectors: SC/ST
- Loss Budgets**: LED: 15dB @62.5/125μm
- LASER: -20dB @9/125μm

Electrical
- Interface: T1, E1 (G.703) IEEE 802.3
- Connectors: T1 (100 Ohm), E1 (120 Ohm)
- RJ48C
- E1 (75 Ohm) Connectors: BNC***
- 10/100 Ethernet Connectors: RJ45F
- Telephone/Analog/RS232/422/485: RJ11F
- Console Port: RJ45F

System
- Bit Error Rate: 1 in 10^-10 or Better

Visual Indicators
- System LEDs: PWR (A, B), Alarm
- Channel Status (each port): On/Off
- Optical Status: Sync, RDI, LOC, RMT, RCOM
- Ethernet: Link/Act, Full/Col, 100M

Diagnostic Functions
- Local and Remote Loopback for Optics, T1/E1, and Ethernet

Power
- Standard: 90-260VAC, 50/60Hz
- Optional: 12VDC, 24VDC, -48VDC, 125VDC
- Power Consumption: <30W

Temperature
- Operating: -10°C to 50°C
- High Temp (optn): -20°C to 70°C
- Extreme Temp (optn): -40°C to 80°C
- Storage: -40°C to 90°C
- Humidity: 95% non-condensing

Physical (Standalone Unit)
- Height: 4.22 cm (1.66"
- Width: 48.26 cm (19"
- Depth: 30.5 cm (12"
- Weight: 1.36 kg (3.0 lbs)

*No telephone, analog, serial interface options available
**Contact factory for higher requirements
***With optional RJ48C to BNC adapter

Note: Information contained in this data sheet is subject to change without prior notice.