

# Ethernet & Data Fiber Optic Multiplexer

## Model TC8530

- Multiplexes 10/100 Ethernet, RS-232, RS-422, TTL, Dry Contact
- Network Management (Web, Telnet)
- One Fiber Bi-Directional Optic Communication Option
- Multimode or Single Mode (1300/1550nm)
- Power Redundancy, Optical Redundancy Optional
- 12VDC, Optional 24VDC, -48VDC, 125VDC or 115/230VAC
- Industrial Hardened (optional)
- Hi-Temp2 Version Exceeds NEMA & Caltrans Traffic Control Specs



TC8530S Standalone/Wallmount Version

The TC8530 Ethernet & Data Fiber Multiplexer multiplexes various combinations 1 Ch. 10/100 Ethernet or Serial Data channels over single mode (1300/1550nm) or multimode fiber (1300/1550nm).

The TC8530 supports distances to more than 100 km and offers one fiber bi-directional optic option to maximize fiber cable usage. Optional redundant power and optics include automatic switchover for maximum reliability.

Setup, diagnostics and control is accessed via Serial Terminal, Telnet management ports. Diagnostics include LED indicators, dry contact alarms and local and remote loopback.

The Ethernet port auto-negotiates at 10/100 with full 10Mbps throughput and rate control in increments of 32Kbps. It is IEEE 802.3/802.3u/802.3x compliant. Serial interface are RS-232, RS-422, TTL, Dry Contact.

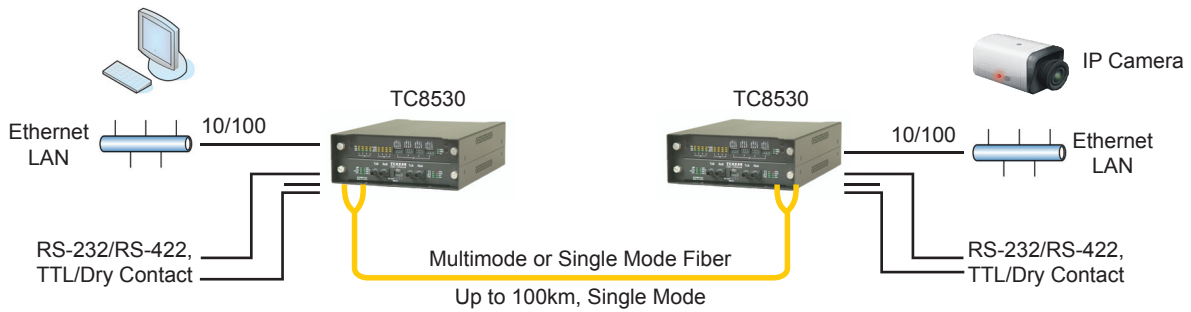
The TC8530 is available as standalone unit or 1U high "pizza box". Fiber optic connectors are ST, FC or SC. Standard power is 12VDC and includes built-in redundancy. Optional power sources include 24VDC, -48VDC, 125VDC or 115/230VAC with an external power cube. High temperature (-20°C to 70°C) and extreme temperature (-40°C to 80°C) versions are also available.



## Applications

Typical applications include extending SDH/SONET backbones and adding Ethernet and Serial service to existing fiber optic links. Service Providers use the TC8530 as an efficient, cost effective method to provide their customers with Ethernet and Serial connections. The one fiber bi-directional optic option can double usage of existing fiber optic cable plants.

TC Communications, Inc.  
17881 Cartwright Rd. Irvine, CA 92614 U.S.A.  
Tel: (949) 852-1972, Fax: (949) 852-1948  
Sales: (800) 569-4736  
Web Site: [www.tccomm.com](http://www.tccomm.com)  
E-mail: [sales@tccomm.com](mailto:sales@tccomm.com)



Typical Application Using TC8530 10/100 Ethernet & Serial Data Fiber Optic Multiplexers.

**Data Rates**

Ethernet .....10/100 Mbps  
 .....(10 Mbps throughput)  
 RS-232 .....Up to 128 Kbps Async  
 .....64 Kbps Sync  
 RS-422, TTL .....Up to 38.4Kbps

**Channel Capacity**

Ethernet.....1  
 RS-232, RS-422, TTL .....12

**Optical**

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

**Electrical**

Interface.....IEEE 802.3 Ethernet  
 .....RS-232, RS-422, TTL  
 Ethernet Connector .....RJ45F  
 RS-232, RS-422, TTL.....RJ11F

**System**

Bit Error Rate .....1 in 10<sup>10</sup> or Better

**Visual Indicators**

System LEDs.....PWR A, PWR B, Vcc  
 Channel Status (each port).....  
 .....Tx, Rx, Alarm  
 Optical Signal Status .....SyncB  
 .....Optic in Use, RXA, RXB, VLIN

**Diagnostic Functions**

Local and Remote Loopback

**Power**

Standard .....12VDC @ 1.2A  
 Optional .....24VDC, -48VDC,  
 .....125VDC, 115/230VAC

**Temperature**

Operating.....-10°C to 50°C  
 Hi-Temp1 (optional) ....-20°C to 70°C  
 Hi-Temp2 (optional) ....-40°C to 80°C  
 Storage.....-40°C to 90°C  
 Humidity.....95% non-condensing

**Physical (Standalone Unit)**

Height.....(6.70 cm) 2.6"  
 Width.....(18.14 cm) 7.1"  
 Depth.....(24.8 cm) 9.8"  
 Weight.....(1.36 kg) 3.0 lbs

\*Contact factory for higher requirements

\*\* Future release



ISO 9001  
 QMI-SAI Global  
 #1045959

TC Communications, Inc.  
 17881 Cartwright Road  
 Irvine, CA 92614 U.S.A.  
 Factory Tel: (949) 852-1972  
 Fax: (949) 852-1948

Sales Office  
 U.S.A. Domestic International  
 (800) 569-4736 (949) 852-1973

Web Site: www.tccomm.com  
 E-mail: sales@tccomm.com