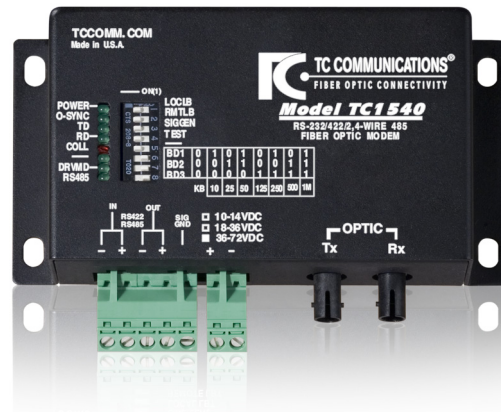


# Multi-Interface (RS-232/422/485) Fiber Optic Modem

## Model TC1540

- Async Data Rates to 500 Kbps\*
- Distances up to 80km
- Multimode or Single Mode (850/1300/1550nm)
- Switch-Selectable RS-485 (2/4 wire) or RS-422
- Mix & Match RS-232/422/485
- Built-In Test Signal Generator
- 7 LEDs & 7 DIP Switches for Diagnostics
- Detachable Terminal Block Connectors
- Local & Remote Loopback
- 12VDC, 24VDC, -48VDC, or 115/230VAC



TC1540 (RS-232/422/485) Fiber Optic Modem

The TC1540 is a highly versatile 2-wire RS-485 fiber optic modem that can mix or match RS-232, RS-422 or RS-485 (2-wire or 4-wire) interfaces, as required. For example, a user could have a 2-wire RS-485 interface on one end and an RS-232, RS-422 or 4-wire RS-485 interface on the other.

The TC1540 supports asynchronous data rates up to 500 Kbps\*, depending on the electrical interface, and is compatible with all popular types and sizes of multimode (850/1300nm) or single mode (1300/1550nm) fiber optic cable. Distances up to 80km are possible.

Diagnostics include a built-in Test Signal Generator that verifies both device and fiber optic link operation. This feature benefits users by helping technicians verify that both local and remote devices and the fiber optic link are operating normally.

Local and Remote Loopback Tests, seven DIP switches, and seven LED indicators are provided to help installation and troubleshooting. A hardened temperature version (-20°C to 70°C), Model TC1540T, is also available.

The TC1540 is compatible with all types and sizes of multimode (850/1300nm) or single mode (1300/1550nm) fiber optic cable. Fiber optic connectors are ST or FC. Electrical connectors are Terminal Blocks. Power is 12VDC at 250mA; optional 24VDC, -48VDC or 115/230VAC with an external power cube.

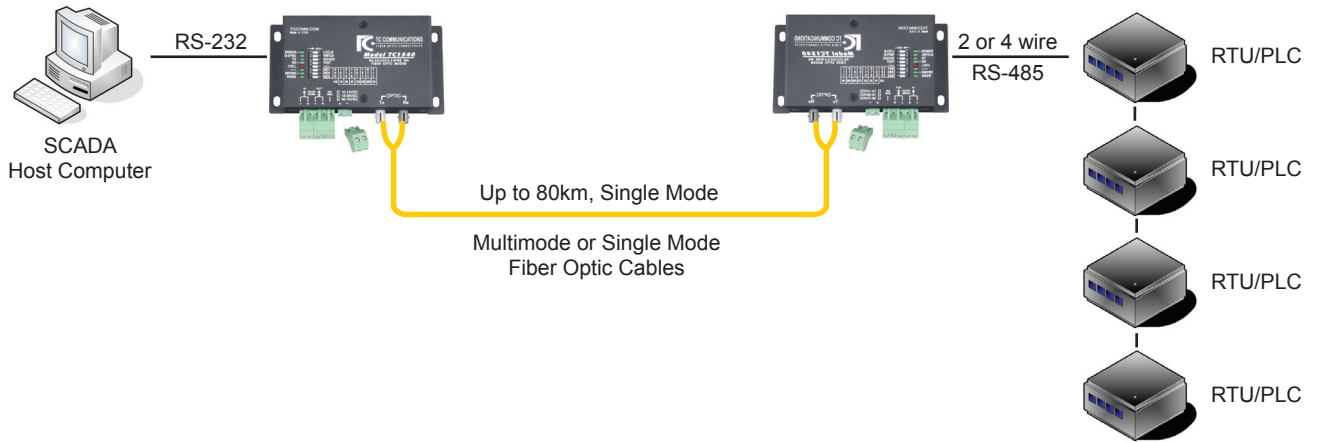
\*Contact factory for higher requirements.



## Applications

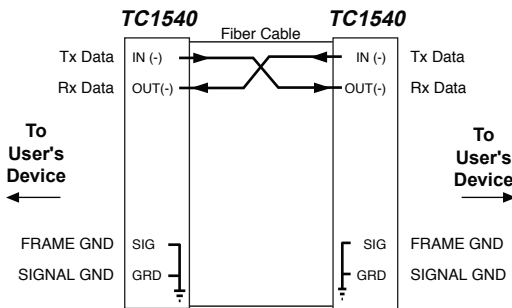
The TC1540 typically interconnects CPUs or Host Controllers with remote terminal units (RTUs). It is frequently used in SCADA, Traffic Control, Manufacturing Process Control and Security applications.

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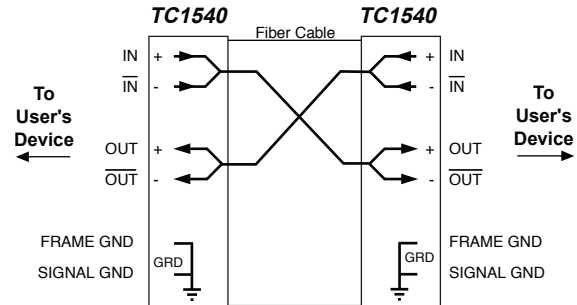


Typical Point-to-Point Application Using TC1540 Multi-Interface Fiber Optic Modems

### RS-232 Virtual Connection



### 4-Wire RS-422/485 Virtual Connection



#### Data Rates

Async .....up to 500 Kbps\*  
 .....(RS-232) up to 120 Kbps

#### Optical

Transmitter.....LED/ELED  
 Receiver.....PIN Diode  
 Wavelength.....850/1300nm MM  
 .....1300/1550nm SM  
 Fiber Optic Connectors  
 .....ST, Optional FC  
 Loss Budget\* - 850/1300/1550nm  
 Multimode @62.5/125µm .....15dB  
 Single Mode @9/125µm.....20dB

#### Electrical

Connector .....Terminal Blocks  
 Interface ....(DCE) RS-232, RS-422, or  
 .....RS-485 (2 or 4-wire)

#### Visual Indicators

LEDs.....TD, RD, O-Sync,  
 .....Coll, DrvMd, RS-485, Power

#### System

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

#### Power

Standard .....12VDC @250mA  
 Optional .....24VDC, -48VDC or  
 115/230VAC (w/ ext. power cube)

#### Temperature

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

#### Physical

Height .....(2.86 cm) 1.13"  
 Width .....(12.70 cm) 5.00"  
 Depth .....(6.60 cm) 2.60"  
 Weight.....(148 gm) 5.22 oz

\*Contact factory for higher requirements



ISO 9001  
 QMI-SAI Global  
 #1045959

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