

# RS-422/RS-449 Sync Fiber Optic Modem

# Model TC1504

- Sync Data Rates up to 2.048 Mbps
- Distances up to 80km
- Multimode or Single Mode (850/1300/1550nm)
- DTE/DCE Selectable
- Six Diagnostic LEDs
- Slave Clock
- Local & Remote Loopback Functions
- Hardened Temperature Version (optional)



TC1504 RS-422/RS449 Sync Fiber Optic Modem

Compact and reliable, the TC1504 Fiber Optic Modem links synchronous data communication equipment requiring RS-422/RS-449 interfaces. It supports synchronous data rates up to 2.048 Mbps with an external clock.

Transparent to the data, the TC1504 combines external clocking and data into an optical composite signal for transmission between local and remote units. It is DCE/DTE switchable.

Diagnostics include local and remote loopback and visual indicators for Power, Receive Timing, Receive Data, Transmit Timing, Transmit Data, and Optic Sync. DIP switches are provided for the Local & Remote Loopback functions, Slave Clock, and DCE/DTE configuration.

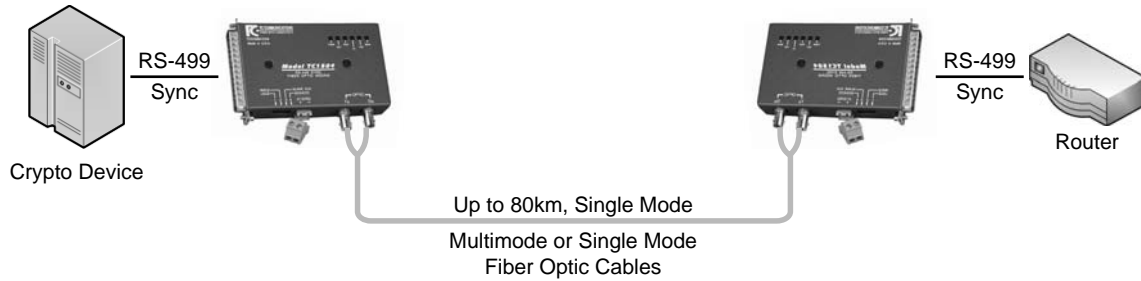
The TC1504 will work with all popular types and sizes of multimode (850nm/1300nm) or single mode (1300/1550nm) fiber optic cable. Fiber optic connectors are ST or FC. The electrical connector is a male DB37. Power is 12VDC or 115/230VAC with an external power cube. A hardened temperature version (-20°C to 70°C), Model TC1504T, is also available.



## Applications

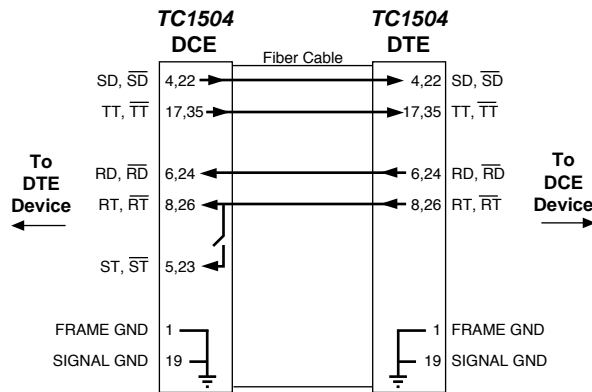
The TC1504 is typically used to link high speed synchronous data devices. It is frequently used in harsh environments because of its fiber optic benefits. This makes it an efficient, low cost solution to electrical/radio frequency interference, ground loops and lightning problems.

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Typical RS-422/449 Synchronous Application Using TC1504s

**Virtual Connection**  
(connect DCE to DTE devices)



**Data Rates**

Sync DC (0Hz).....up to 5 Mbps\*

**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  
 15dB.....Multimode @62.5/125 m  
 15dB .....Single Mode @9/125 m

**Electrical**

Connector.....DB37 Male  
 Interface  
 (DCE/DTE Switchable) RS-422/449

**System**

Bit Error Rate .....1 in 10<sup>9</sup> or better

**Visual Indicators**

LEDs...PWR, RxT, RxD, TT, TxD, Sync

**Power**

Standard .....12VDC @200mA  
 Optional.....115/230VAC  
 (with external 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 .....(2.0 cm) 0.72"  
 Width .....(10.4 cm) 3.89"  
 Depth .....(7.5 cm) 2.36"  
 Weight.....(170 gm) 5.46 oz

\*Contact factory for higher requirements



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