RS-422/RS-449 Sync Fiber Optic Modem

• 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)

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.
Data Rates
Sync DC (0Hz)........up to 2.048 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
20dB ..........Single Mode @9/125 m

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

System
Bit Error Rate ............1 in $10^9$ or better

Visual Indicators
LEDs...PWR, RxD, TxD, TT, RxT, 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

Note - Information contained in this data sheet is subject to change without prior notice. 010C