Universal High Speed Sync/Async Fiber Optic Modem

TC1710

- Data Rates up to 10 Mbps
- Distances up to 80km*
- Interchangeable Interfaces
- Multimode (850/1300nm) or Single Mode (1300/1550nm)
- Local & Remote Loopback
- Built-In Power Redundancy
- Optical Redundancy (optional)
- Local Dry Contact Alarm Relay
- Rackmount, Standalone or Wall Mount
- Hardened Temperature Version (optional)

TC1710S Standalone Unit

2 X TC1710R (Housed in TCRM196 19" Rackmount Card Cage)

The TC1710 is the ultimate "configure-it-as-you-need-it" fiber optic modem. Ideal for applications requiring high data rates, it supports asynchronous data rates up to 10Mbps and synchronous rates up to 5Mbps. TC1710 is Profibus compatible with speeds up to 10 Mbps async.

It supports most popular electrical interfaces including RS-422, RS-485 (2-wire or 4-wire), RS-530, V.35 and TTL. Electrical interfaces are modular and can be easily changed before or after installation.

Distances up to 80km* are possible depending on various factors including electrical interface, optical transmitter, number of fiber optic connectors and fiber type and quality. Power redundancy is standard. Optical redundancy is optional.

Diagnostics are extensive and include local & remote loopback tests and LEDs for Power, Alarm, Tx, Rx and all applicable control signals.

Available for multimode (1300nm) or single mode (1300/1550nm), the TC1710 is compatible with all popular sizes and types of fiber optic cable. Fiber optic connectors are ST or FC. Electrical connectors are DB25 female. Power is 12VDC (standard), 24VDC, -48VDC, 125VDC or 115/230VAC with an external power cube.

The TC1710 is available in two versions: TC1710R Rackmount Card for installation in a 19" rack assembly (TCRM192 or TCRM196) or TC1710S Standalone version. Standalone or rackmount versions can be mixed or matched on either end. There are two optional versions (Model TC1710T) for extreme temperature applications (-20°C to 70°C & -40°C to 80°C).
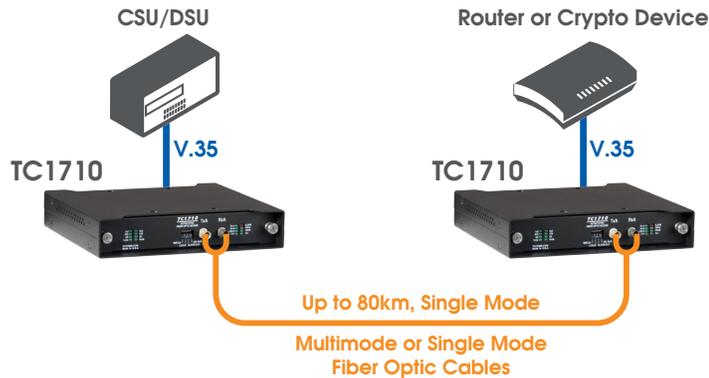
* Contact factory for higher requirements.
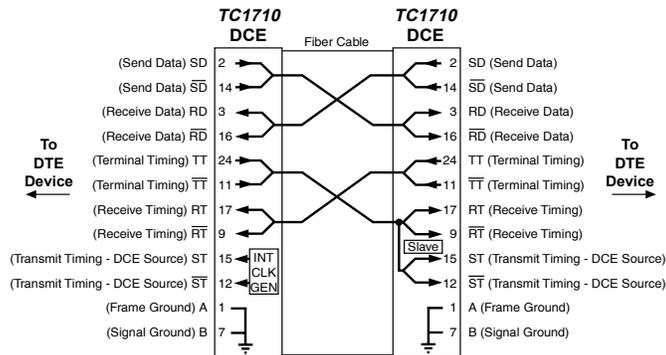
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Applications

Because of its versatility, features and multiple interfaces, the TC1710 is often used to link a wide variety of synchronous or asynchronous devices to a central CPU in a campus or intra-building fiber optic network.

Typical Point-to-Point Application Using TC1710 Multi-Interface Fiber Optic Modems

RS-530/V.35 Virtual Connection
(connect two Sync DTE devices with Slave Clk)

Data Rates

RS-422/485/530,TTL(Async) ....
...................................up to 10 Mbps
RS-530, V.35, TTL (Sync) ....
...................................up to 5 Mbps

Optical

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

Electrical

Interfaces/Connector
TTL, V.35 ....DB25 Female
RS-422/530 ....DB25 Female
RS-485 (2/4 wire) ....DB25 Female

System

Bit Error Rate......... 1 in 10^9 or better
Dry Contact Alarm ......Normal OPEN

Diagnostic Functions

.... Local & Remote Loopback,
.... Disable Alarm

Visual Indicators

System Status .... PWR A, PWR B,
.... Vcc, Alarm
Electrical Signal Status........TxD, RxD
.... DTE, "data & timing LEDs"
Optic Signal Status............Rx-A, Rx-B

Power

Standard ....12VDC @500mA
Optional ..24VDC, −48VDC, 125VDC,
.... or 115/230VAC w/ power cube

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....................... (3.53 cm) 1.39"
Width...................... (18.13 cm) 7.14"
Depth...................... (16.59 cm) 6.53"
Weight..................... (544 gm) 1.2 lbs
Contact factory for higher requirements (LASER)

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