

T3/E3 Fiber Optic Modem

Model TC1680

- Distances up to 100km
- Built-in Self Test & Link Test
- Hardened Temperature Version (optional)
- Multimode or Single Mode (1300/1550nm)
- Two-way Single Fiber Communication (optional)
- Power Redundancy (standard)
- Optical Redundancy (optional)
- Low Power Consumption
- Local & Remote Loopback
- Conforms to Applicable Standards (ANSI T1.102-1993, TR-TSY-000499, CCITT)



TC1680S Standalone Unit (Shown with Optical Redundancy)



2 X TC1680R (Housed in TCRM195 19" Wide, 1U High Rackmount Card Cage)

The TC1680 T3/E3 Fiber Optic Modem provides a high speed point-to-point data link between two DS3 or G.703 conforming devices. User benefits include easy installation and troubleshooting, high reliability, low power consumption (less than 5 Watts), virtually no jitter (because the signal is re-timed at the remote end), and overall small size (1.4" X 7.1" X 9.8").

The TC1680 transmits standard T3 (44.736M) or E3 (34.368M) signals at distances up to 100km. It is compatible with B3ZS (T3) and HDB3 (E3) coded data streams and conforms to applicable standards including ANSI T1.102-1993, TR-TSY-000499 and CCITT G.703.

Diagnostics include built-in self test, link verification test, local and remote loopback, and a dry contact for remote alarm. Sixteen LEDs are provided to help installation and troubleshooting. These LEDs indicate power, alarm status, T3/E3 signal loss and optical status. Four DIP switches, accessible from the front panel, control settings for the built-in signal generator, local & remote loopback, and general alarm.

Power redundancy is standard, optical redundancy is optional. Both power and optical redundancy systems include an automatic switchover feature to insure virtually uninterrupted operation. The TC1680 is available multimode (1300nm) or single mode (1300/1550nm) and in rackmount or stand alone versions.

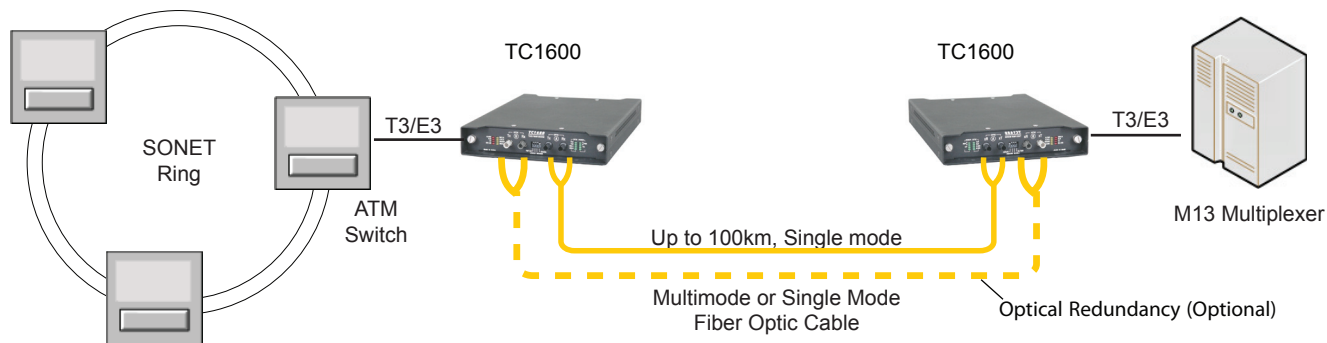
It is compatible with all popular types and sizes of fiber optic cable. Fiber optic connectors are ST or FC. The electrical connector is BNC. Input power is 12VDC, optional 24VDC, -48VDC or 115/230VAC with an external power cube. A hardened temperature version (-20°C to 70°C), Model TC1680T, is also available.



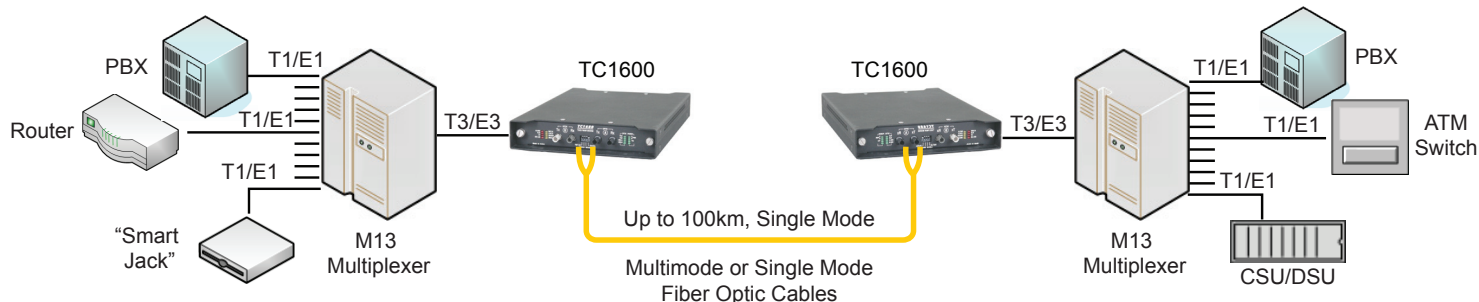
Applications

The TC1680 is ideal for most T3/E3 connectivity applications up to distances of 100km. Typical applications include replacing coaxial cable with fiber, extending the point of presence from Telco demarcation points and ATM nodes, transmitting digitized video or linking T3/E3 multiplexers.

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Typical Application Using TC1680 T3/E3 Fiber Optic Modems To Link a SONET Network



Typical Application Using TC1680S To Link M13 Multiplexers via Fiber Optics

Data Rates

T344.736 Mbps
E334.368 Mbps

Optical

Transmitter.....ELED/LASER*
Receiver.....PIN Diode
Wavelength.....1300nm MM
.....1300nm/1550nm SM
Fiber Optic Connectors
.....ST, Optional FC
Loss Budget* - 1300/1550nm
Multimode @62.5/125µm15dB
Single Mode @9/125µm.....20dB

Electrical

ConnectorBNC Female
Interface.....T3 or E3 (G.703)
T3 Line Code.....B3ZS
E3 Line CodeHDB3
T3 Pulse CodeAMI
Impedance.....75 Ohm

System

Bit Error Rate1 in 10¹⁰ or better

Diagnostic Functions

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

Visual Indicators

System Status.....PWR A, PWR B,
.....Vcc, ALARM
T3/E3 Signal Status.....CV, SIGLOS
Optic Signal Status ..VLIN, RxA, RxB,
.....USE-A, USE-B
Diagnostic StatusRMTLB, LOCLB,
.....SIG GEN, DISALM

Alarm

Dry Contact.....Normal OPEN
Switching Voltage200Vdc, Max
Switching Current0.5A, Max
Switching Power.....10W, Max

Power

Standard12VDC@300mA
Optional24VDC, -48VDC, or
.....115/230VAC with power cube

Temperature

Operating-10°C to 50°C
Hi-Temp (optional).....-20°C to 70°C
Storage-40°C to 90°C
Humidity95% non-condensing

Physical (Standalone Unit)

Height.....(3.53 cm) 1.39"
Width.....(18.13 cm) 7.14"
Depth.....(24.89 cm) 9.80"
Weight.....(907 gm) 2.0 lbs

*Contact factory for higher requirements (LASER)



ISO 9001
QMI-SAI Global
#1045959

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