

# Combination WDM & Fiber Optic Mode Converter/Repeater

## Model TC3007

- Doubles Existing Fiber Cable Capacity
- Converts Multimode to Single Mode (and vice versa)
- Data Rates up to 200 Mbps
- Local Dry Contact Alarm Relay
- Test Signal Generator & 8 Indicators
- Local & Remote Loopback
- Built-In Audible Alarm Buzzer
- Built-In Redundant Power Supply
- Standalone or Rackmount (Interchangeable)



TC3007 Housed in TCSD7 Standalone Chassis

The TC3007 Multimode-to-Single Mode Fiber Optic Converter converts multimode formats to single mode formats, or vice versa, for data transmission up to 200 Mbps.

The TC3007 functions both as a Fiber Optic Mode Converter/Repeater and a 2-Channel Wave Division Multiplexer. This benefits users by effectively doubling existing fiber cable capacity in addition to its mode conversion/repeater functions.

The TC3007 will convert or repeat all popular wavelengths including 1300nm or 1550nm. It is compatible with most communication technologies including Ethernet, Fast Ethernet, Token Ring, TAXI, OC1/OC3, ATM, FDDI and SONET. It is completely transparent to incoming data and protocols.

The TC3007 provides users with several key features including Local/Remote Loopback, Test Signal Generator, Dry Contact Alarm, Audible Alarm Buzzer, Power Redundancy, and Standalone or Rack Mount modularity.

The Test Signal Generator and Dry Contact Alarm are particularly beneficial. The Signal Generator (160Mbps) helps technicians conduct various installation tests including fiber link verifications. The Dry Contact Alarm, which includes an audible alarm buzzer, identifies Optical Signal Loss on either the multimode or single mode ends.

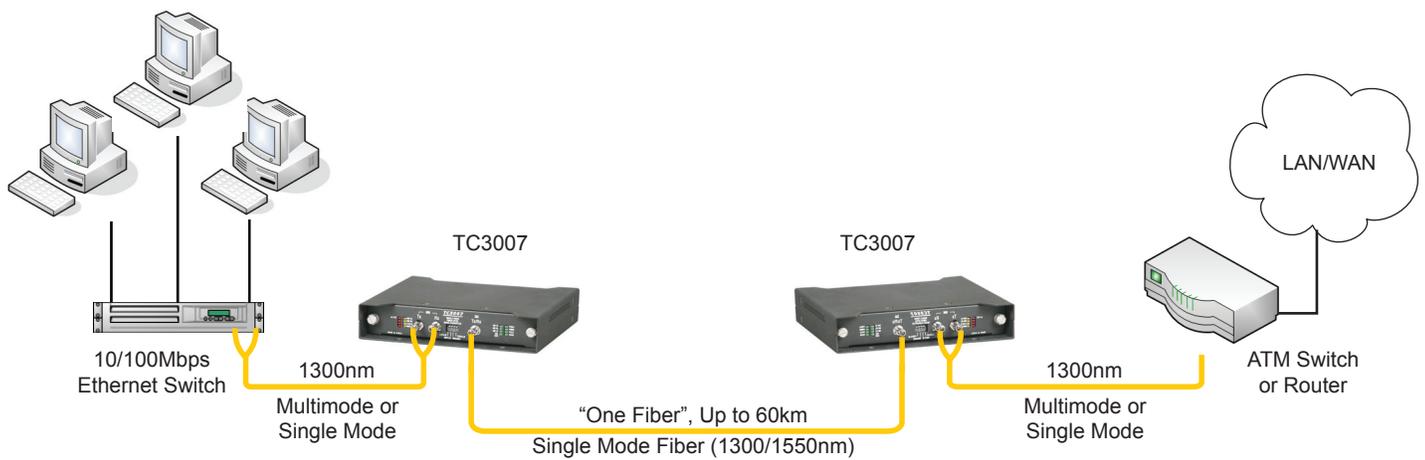
Power redundancy is load sharing and switches over automatically in the event of a failure. Power can be either 12VDC, 24VDC, -48VDC, 125VD or 115/230VAC with an external power cube. TC3007 is available in a TCSD7 Standalone chassis or a TCRM192 or TCRM195 Rackmount card cage. Standard connectors are SC, ST or FC type. A hardened temperature version (-20°C to 70°C), Model TC3007T, is also available.



## Applications

Because of its multiplexing capability, the TC3007 is often used to increase existing fiber optic cable capacity in LAN or Telephony environments that require connecting different fiber types or wavelengths, regenerating optical signals and/or extending transmission distances. Typical environments include PABX, Ethernet, Fast Ethernet, Token Ring, FDDI, ATM and SONET (OC1 & OC3)

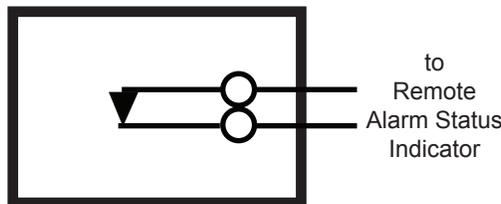
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Typical Application Using TC3007 Fiber Optic Mode Converter/Repeaters.

Reply Switch Specifications:

Maximum Switch Voltage: 100VDC  
 Switch Current: 0.5 Amp  
 Maximum Carry Current: 1.2 Amp  
 Contact Resistance: 0.2 Ohm



A terminal block connector on the TC3007 rear panel provides for the dry contact relay alarm. Normally in the OPEN position, any loss of optical signal will trigger an alarm condition and force the switch to the CLOSED position. This relay can be used in conjunction with an external device to monitor the condition of the link.

Dry Contact Alarm Relay Switch

**Data Rates**

.....up to 200 Mbps

**Optical - Single Fiber Side**

Transmitter .....LASER  
 Receiver.....PIN Diode  
 Wavelength\*

.....1300/1550nm Single Mode

Fiber Optic Connectors .....SC, ST ,FC

Loss Budgets - 1300/1550nm

LASER.....20dB SM @9/125µm

**Optical - Dual Fiber Side**

Transmitter.....LED/ELED

Receiver.....PIN Diode

Wavelength

.....850/1300nm Multimode

.....1300/1550nm Single Mode

Fiber Optic Connectors

.....ST, Optional FC

Loss Budgets - 850/1300/1550nm

Multimode @62.5/125µm.....15dB

Single Mode @9/125µm.....20dB

\*Any two wavelengths are available on each unit

\*\*Contact factory for higher requirements

**System**

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

**Visual Indicators**

.....PWRA, PWRB, VCCA, VCCB,

.....MM RX, MM TX, SM RX, SM TX,

.....LOCLB, RMTLB, SM LB,

.....SIG GEN, LK TST

**Alarm**

Dry Contact.....Normal OPEN

**Power**

Standard.....12VDC @500mA (max)

Optional.....24VDC, -48VDC, 125VDC

.....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

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.....(512 gm) 1.5 lb



ISO 9001  
 QMI-SAI Global  
 #1045959

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