

# 8 or 16 Channel Multi-Interface Fiber Optic Multiplexer

# TC8116

- Mix or match field-interchangeable interfaces: RS-232, RS-422, RS-485, Dry Contact Relays
- Data rates up to 38.4 Kbps\*
- Built-in power redundancy
- Optional optical redundancy
- Local dry contact relay alarm
- Built-in test signal generator
- Local & remote loopback
- Multimode (850/1300nm) or single mode (1310/1550nm)
- High and Extreme temperature versions (Optional)



TC8116 standalone/wallmount unit



TC8116R PC card unit with 1U high card cage

Note - Front panels/LEDs may differ depending upon electrical interface configuration.

The TC8116 is an 8 or 16 Channel fiber optic multiplexer with interchangeable interfaces and built-in power redundancy. Optic redundancy is optional. It supports data rates up to 38.4 Kbps.\* Distances up to 80 Km are possible.

The TC8116 is available in four configurations:

- 8-Channel Async
- 8-Channel Sync or Async w/Control
- 16-Channel Async
- 16-Channel Sync or Async w/Control

Interfaces include RS-232, RS-422, RS-485 and Dry Contact Relay. Synchronous versions must be RS-232. Electrical interfaces are modular and interchangeable in 4-channel increments at any time-before or after installation.

Diagnostics are extensive and include DIP switches for Local & Remote Loopback, a Test Signal Generator, an Electrical Signal Polarity Inverter, and other application configuration switches. Each unit also provides multiple LEDs for Alarm, Power, Vcc, Optic Signal Status, and Tx & Rx LEDs for each channel.

The built-in test signal generator verifies both device and fiber optic link operation. No other test equipment is required for link and device verification.

The TC8116 is compatible with all types and sizes of multimode (850/1300nm) or single mode (1310/1550nm) fiber optic cable. Fiber optic connectors are ST or FC. Electrical connectors are RJ-11. Power is 12VDC (standard) or 24VDC, -48VDC, or 115/230VAC with an external power cube. A high temperature version (-20°C to 70°C) and extreme temperature version (-40°C to 80°C) is also available.\*

\*Contact factory for higher requirements/availability.

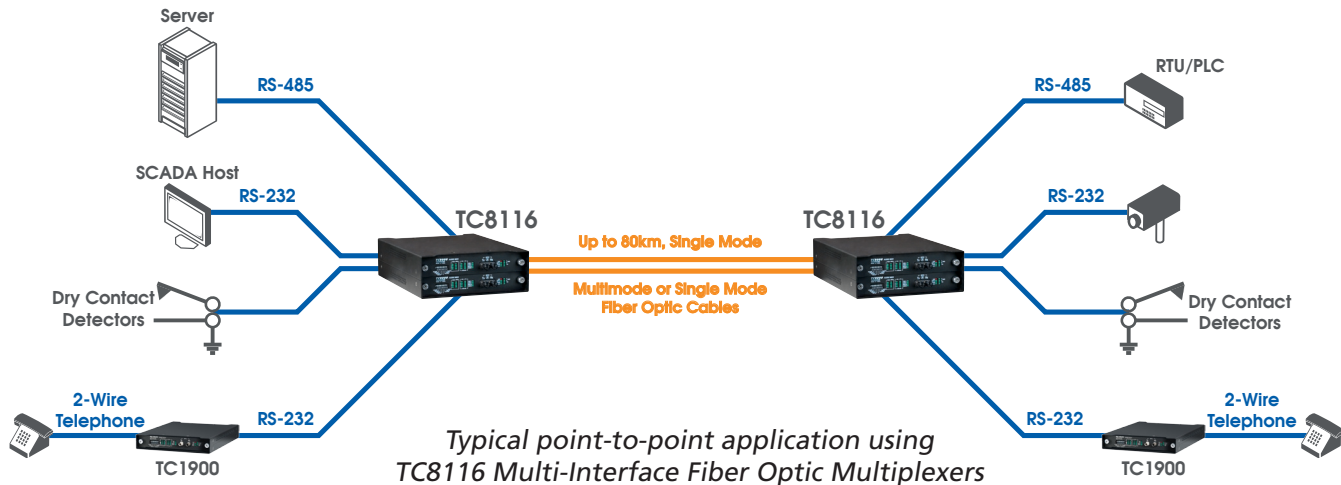


## Applications

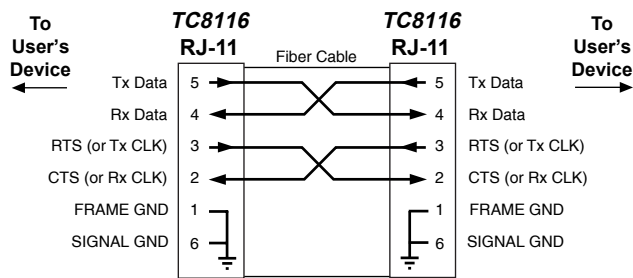
The TC8116 Fiber Optic Multiplexer provides a flexible, inexpensive method for connecting async/sync terminals, printers, and status collecting devices. It is also used in harsh environments where EMI/RFI interference, ground loops and lightning conditions may exist.

TC Communications, Inc.  
17881 Cartwright Rd. Irvine, CA 92614 U.S.A.  
Tel: (949) 852-1972, Fax: (949) 852-1948

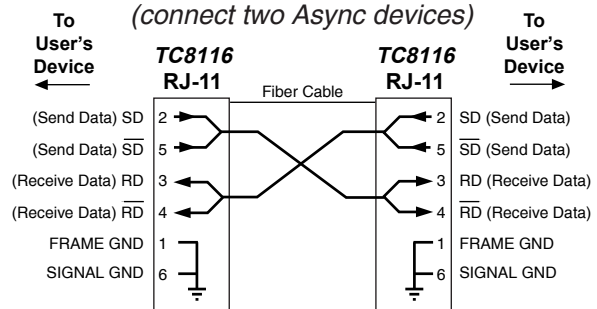
Web Site: [tcomm.com](http://tcomm.com)



### RS-232 Virtual Connection (connect two Async, Async w/Control, or Sync devices)



### RS-422/485 Virtual Connection (connect two Async devices)



#### Data Rates (per channel)

Async..... up to 38.4 Kbps\*  
Sync ..... up to 19.2 Kbps

#### Channel Capacity

Async..... 8 or 16  
Sync (RS-232 only) ..... 8 or 16

#### Optical

Transmitter ..... LED/FP LD  
Receiver..... PIN Diode  
Wavelength ..... 850/1300nm MM  
..... 1310/1550nm SM  
Fiber Optic Connectors  
..... ST, Optional FC

Loss Budget\* - 850/1300/1550nm  
Multimode @62.5/125µm..... 15dB  
Single Mode @9/125µm ..... 20dB

#### Electrical

Connector .....RJ11 Female  
Interface (standard) ..... RS-232  
Interface (optional).....  
.....2 or 4-wire RS-485, RS-422 and  
Dry Contact Relay, or any combination\*

#### System

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

#### Visual Indicators

Channel Status (each ch.).....Tx, Rx  
System .....PWR A, PWR B, VccA,  
.....VccB, ALM  
Optic.....SYNC, RxA, RxB, USE RxA,  
.....USE RxB, OPTIC TxB, OPTIC RxB

#### Alarm

Alarm .....Normal OPEN

#### Power

Standard .....12VDC @400mA  
Optional.....24VDC, -48VDC,  
.....or 115/230VAC w/ power cube

#### Temperature

Operating ..... -10°C to 50°C  
Hi-Temp (optional) ..... -20°C to 70°C  
Extreme (optional) ..... -40°C to 80°C  
Storage..... -40°C to 90°C  
Humidity .....95% non-condensing

#### Physical (Standalone Unit)

Height ..... (6.71 cm) 2.64"  
Width ..... (18.13 cm) 7.14"  
Depth ..... (24.89 cm) 9.80"  
Weight ..... (1.36 kg) 3 lbs

\*Contact factory for higher requirements



SAI GLOBAL  
ISO 9001  
Quality

TC Communications, Inc.  
17881 Cartwright Road  
Irvine, CA 92614 U.S.A.  
Factory Tel: (949) 852-1972  
Fax: (949) 852-1948

Sales Office  
U.S.A. Domestic International:  
(949) 852-1973

Web Site: tccomm.com

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