

# Model 2816-8R-T & 2816-8R-R

# S.I.TECH

## High Speed TTL to Fiber Optic Transmitter/Receiver - 8 Channel



### TRANSMISSION LINE INTERFACE

Operating distance is dependent upon optical fiber core diameter and the cable's optical attenuation. The table below indicates three cables that may be used at any data rate. These cables are available in connectorized assemblies to meet the exact configuration of your application.

S.I.Tech offers complete links including fiber optic cable, connectors, cable assemblies, and Bit-Drivers .

S.I.Tech #2816-8R-T & R can be used as 8 TTL channels with 8 fibers or using WDM, 4 fibers can be used.

### SYSTEM

**Transmission:** Up to 6500 ft. (2 Km) with suitable graded index fiber optic cable or 10 Km using single mode fiber on each channel

**Typical Bit Error Rate:** Better than  $10^{-9}$

### ELECTRICAL SIGNAL INPUT/OUTPUT FOR TRANSMITTER AND RECEIVER

**Format:** TTL - 8 Channel

**Connector:** BNC

**Data Rate:** 100 Kbps - 50 Mbps

**Input Impedance:** TTL levels 10 K

**Output Impedance:** TTL levels into 50

**Input Power:** 110/230VAC, 12W

### OPTICAL TRANSMITTER

**LED Current:** 30 microwatts (-15 dBm) into 62.5 micron fiber

**Wavelength:** 820 nanometers (1300 nm option)

**Emitter Type:** LED

**Optical Connector:** ST

### OPTICAL RECEIVER

**Wavelength:** 820 nm (1300 & 1550 nm option)

**Minimum Sensitivity:** (BER  $10^{-9}$ ) 3 microwatt (-25 dBm) @ 820 nanometers

**Optical Connector:** ST

**Operating Temperature:** 0 °C to 50 °C (optional extended temp for multimode)

**Size:** 17"W X 3.50"H X 7.5"D  
(43.2 X 8.6 X 19.0 cm)

**Weight:** 4.5 lbs. (2.0KG)

### Operating Distance for Fiber Optic Cable

| Fiber Size (Microns) | Attenuation (dB/Km) |      |      | Distance (Meters) |       |       | Distance (Feet) |       |       |
|----------------------|---------------------|------|------|-------------------|-------|-------|-----------------|-------|-------|
|                      | Wavelength (nm)     |      |      | Wavelength (nm)   |       |       | Wavelength (nm) |       |       |
|                      | 850                 | 1300 | 1550 | 850               | 1300  | 1550  | 850             | 1300  | 1550  |
| 50                   | 3.0                 | 1.0  | -    | 2000              | 6000  | -     | 6600            | 20000 | -     |
| 62.5                 | 4.0                 | 1.0  | -    | 2000              | 6000  | -     | 6600            | 20000 | -     |
| 10 SM*               | -                   | 0.35 | 0.25 | -                 | 10000 | 12000 | -               | 33000 | 40000 |

\* Single mode (1300 and 1550 nm) option

Optical unit connection: Connect the optical transmission line to the T and R receptacles. Note which cable channel goes to T or R by noting cable imprint. On the other end, reverse the connection.

WDMs: S.I.Tech #8513 for Multimode. S.I.Tech #1315 for Single mode.

### Power Consumption/Channel

| 50% Duty Cycle | No TTL Load | 50 TTL Load |
|----------------|-------------|-------------|
| 2816 T         | 60 mA       | X           |
| 2816 R         | 50 mA       | 110 mA      |

### ORDERING INFORMATION - RELATED PRODUCTS

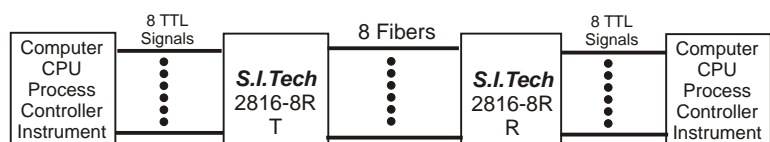
#### Model Numbers

|               |   |
|---------------|---|
| 2816          | TTL to Fiber, Transmitter/Receiver, Multimode, ST Connector   |
| 2816-SM       | TTL to Fiber, Transmitter/Receiver, Single mode, ST Connector |
| 2816-T        | TTL to Fiber, Transmitter, Multimode, ST Connector            |
| 2816-R        | TTL to Fiber, Receiver, Multimode, ST Connector               |
| 2816-T-SM     | TTL to Fiber, Transmitter, Single mode, ST Connector, 1300nm  |
| 2816-R-SM     | TTL to Fiber, Receiver, Single mode, ST Connector, 1300nm     |
| 2816-T-SM(15) | TTL to Fiber, Transmitter, Single Mode 1550 nm                |
| 2816-R-SM(15) | TTL to Fiber, Receiver, Single Mode 1550 nm                   |
| 2820          | TTL to Fiber, 2CH transmitter                                 |
| 2821          | TTL to Fiber, 2CH Receiver                                    |
| 2816-16R-T    | 16 Ch, TTL to Fiber TR, MM                                    |
| 2816-16R-R    | 16 Ch, TTL to Fiber Rec, MM                                   |

#### Notes:

1. Power Supply #2121 (110VAC to 9 VDC) is recommended for all models-USA
2. Optional Power Supply #2164 is for 230VAC applications
3. Optional Power Supply #2166 for 5VDC

### TYPICAL APPLICATION



Meets FCC requirements of Class A, Part 15 Computing Devices Standard.

Specifications subject to change without notice.

