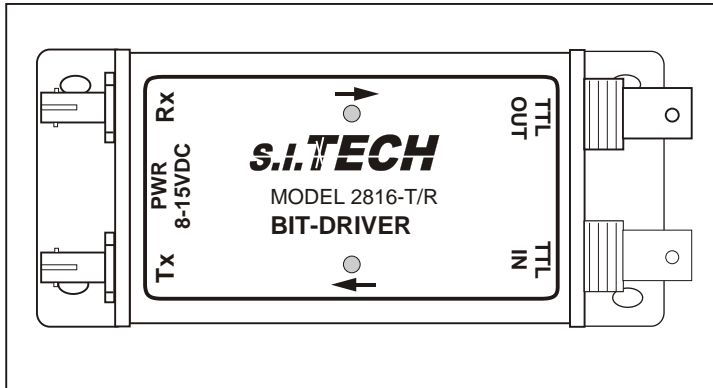


# Model 2816-T/R



## High Speed TTL to Fiber Optic Transmitter/Receiver



### 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 .

### SYSTEM

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

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

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

**Format:** TTL

**Connector:** BNC

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

**Input Impedance:** TTL levels 10 K

**Output Impedance:** TTL levels into 50

**Input Power:** 8 to 14VDC 250mA Max.  
Optional 5VDC@150mA

### 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:** 5.125" X 2.125" X 1.0"  
(13.00 X 5.40 X 2.54 cm)

**Weight:** 6 oz (170 Grams)

### 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.

### Power Consumption

	50% Duty Cycle	No TTL Load	50 TTL Load
2816 TR		100 mA	130 mA
2816 T		60 mA	X
2816 R		50 mA	110 mA

### ORDERING INFORMATION

#### 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

#### 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

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

Specifications subject to change without notice.



### TYPICAL APPLICATION

