

S.I. TECH

TTL to Fiber Optic Modems

01/07/21

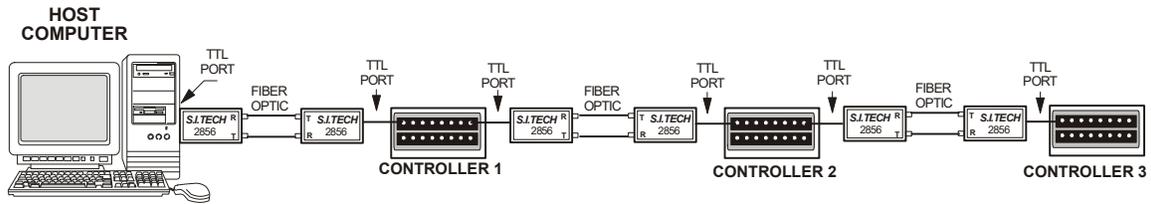


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TTL PRODUCTS

TTL PRODUCTS

1. Point to Point:



2. Multiplexer:

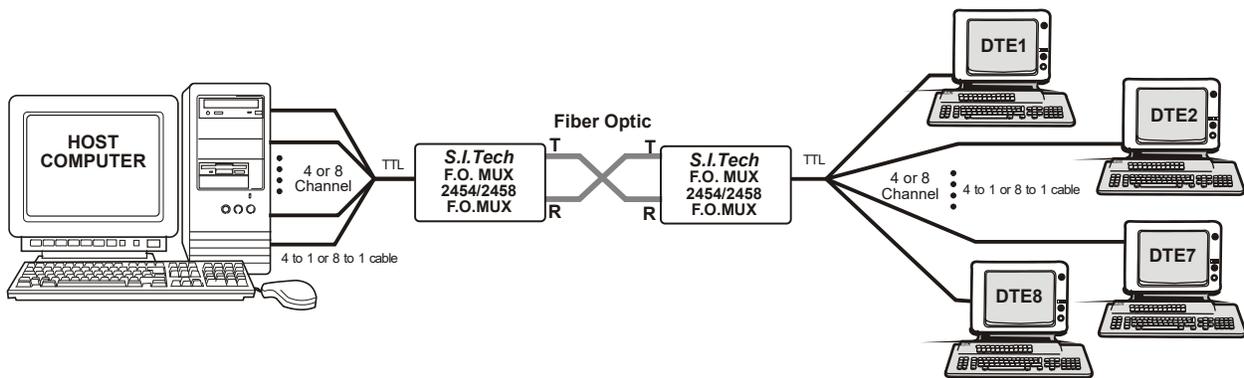


TABLE H
TTL TO FIBER BIT-DRIVERS® (MODEMS)

Model	Package	Data Rate (bps)	Power (option)	TTL Connector	Multimode fiber 850nm 1310nm	Single mode fiber 1310nm 1550nm	Weight lb / Kg	Remarks
2805	module	DC - 20M	5VDC	DIP	SMA n/a	n/a	0.1 / 0.05	DIP package, transmitter
2806	module	DC - 20M	+/-5VDC	DIP	SMA n/a	n/a	0.1 / 0.05	DIP package, receiver
2816	mini	100K - 50M	12VDC (5VDC)	BNC	ST,SMA	ST, FC	0.4 / 0.2	One way or bidirectional TTL
2817	mini	DC - 20M	12VDC (5VDC)	BNC	ST,SMA	ST, FC	0.4 / 0.2	One way or bidirectional TTL
2820	mini	DC - 50M	9-32VDC (5VDC)	BNC	ST,SMA	ST, FC	0.4 / 0.17	Two channels TTL, transmitter
2821	mini	DC - 50M	9-32VDC (5VDC)	BNC	ST,SMA	ST, FC	0.4 / 0.17	Two channels TTL, receiver
2856	stand alone	DC - 20M	110VAC (230VAC)	BNC	ST,SMA	ST, FC	3.0 / 1.36	Single channel TTL, bidirectional
2860	rack	DC - 20M	85-264VAC	BNC	ST,SMA	ST, FC	5.0 / 2.3	Four channels TTL out, RS422 In
2865	PCB	DC - 20M	+/-5VDC	DIP	ST,SMA	ST, FC	0.1 / 0.05	Single channel TTL, bidirectional
2867	rack	DC - 20M	85-264VAC	BNC	ST,SMA	ST, FC	6.0 / 2.8	Three channels, inputs switchable between TTL and RS422, outputs both TTL and RS422
2006A	rack	DC - 20K	110VAC (220VAC)	BNC	ST,SMA	ST, FC	12.0 / 5.45	8 channel TDM multiplexer
2816-16R-T	rack	DC - 50M	85-264VAC	BNC	ST,SMA	ST, FC	6.0 / 2.8	16 channel TTL transmitter
2816-16R-R	rack	100K - 50M	85-264VAC	BNC	ST,SMA	ST, FC	6.0 / 2.8	16 channel TTL receiver
2861	rack	DC - 20M	85-264VAC	D-sub coaxial	ST,SMA	ST, FC	5.0 / 2.3	Five channels TTL out, RS422 in
2317	card	DC - 50M	10-32VDC (5VDC)	BNC	ST,SMA	ST, FC	0.5 / 0.23	3001 rack TTL card
2565	DIN rail	DC - 400K	10-32VDC (5VDC)	DB9-S	ST,SMA	ST, FC	0.75 / 0.34	Single channel configuration
		Two channel configuration						
		Three channel configuration						
		Four channel configuration						
2815-16R-T 2815-16R-R	racks	DC - 50M	85-264VAC	BNC	ST	ST	5.0 / 2.3	8 - two channel WDM multiplexers, transmitters and receivers
2829	stand alone	DC - 150K	110VAC, (220VAC) (10-32VDC)	DB9-S	ST, SC	ST, SC	3.0 / 1.4	One TTL channel multiplexed with video, audio and other serial control channels
2856-R	rack	DC - 20M	85-264VAC	BNC	ST,SMA	ST, FC	5.0 / 2.3	Two or four channels bidirectional
Kit #7	Kit	DC - 20M	12VDC	BNC	ST	ST	5.0 / 2.3	1 - 2817-T, 1 - 2817-R, 2 - 2121, 1 - 5201-003-8255 (3 meter FO cable assembly)

Fiber length	
Standard product:	2Km
High power option:	5Km
Single mode fiber:	10Km

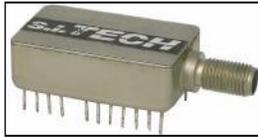
TTL TO FIBER OPTIC BIT-DRIVERS®

2317



- Rack mount card
- Data rate to 50 Mbps
- Multimode or Single mode
- ST connector

DIP MODEL 2805



- Metal 24 pin DIP configuration TTL-to-Optical Bit-Driver® Transmitter
- Data rate is DC to 20 Mbps NRZ
- Connection is by solder pads or DIP socket
- Package size is 1.2x0.75x0.37 inches
- SMA Connector

DIP MODEL 2806



- Metal 40 pin DIP configuration Optical-to-TTL Bit-Driver® Receiver
- Data rate is DC to 20 Mbps NRZ
- Connection is by solder pads or DIP socket
- Package size is 2.0x1.12x0.37 inches
- SMA Connector

2815-8R-T/R-SM



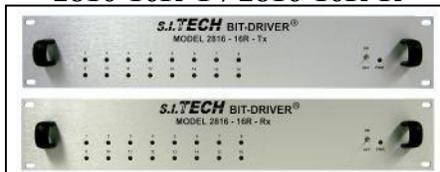
- One way (T & R) or Two way (Full Duplex) High Speed TTL
- Rack Mount Units 19"
- Up to 8 channels with 4 fibers using built in WDM
- Data rate up to 100 Mbps
- Single mode

2816



- One way (T & R) or Two way (Full Duplex) High Speed TTL
- Miniature units
- Flange mounting
- Data rate from 100 Kbps to 50 Mbps
- Multimode or Single mode
- Rack mount option available

2816-16R-T / 2816-16R-R



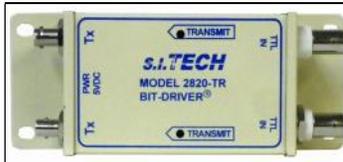
- One way (T & R) High Speed TTL
- Rack mount units 19"
- Up to 16 Channels
- Data rate from 100 Kbps to 50 Mbps
- Multimode or Single mode

2817



- One way (T & R) or Two way (Full Duplex) TTL
- Miniature units
- Flange mounting
- Data rate to 20 Mbps
- Multimode or Single mode
- 5VDC or 12VDC Power

2820



- Consist of two (2) 850nm or 1310nm transmitters, or 850nm and 1310nm TR
- Miniature units
- Flange mounting
- Data rate to 50 Mbps
- Multimode or Single mode

2821



- Consist of two (2) 850nm or 1310nm transmitters, or 850nm and 1310nm REC
- Miniature units
- Flange mounting
- Data rate to 50 Mbps
- Multimode or Single mode

2829



- One channel TTL multiplexed with video, audio, and serial control channels
- CCTV Video/Audio/Data to Fiber Modem
- Full color or Black/White
- AC or DC power

2856



- Asynchronous Simplex or Full Duplex Optical Bit-Driver®
- Max data rate is 20 Mbps
- Supports 50 or 75 ohm coax
- Power, Transmit Data, and Receive Data LED indicators
- Unit available in 1U high 19" width rack

2860



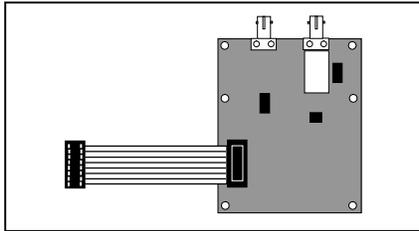
- 4 CH TTL or RS-422
- Data rate to 20 Mbps
- Triax and BNC connectors
- 1U high 19" width rack
- Military Systems, Instrumentation

2861



- 5 CH TTL or RS-422
- Data rate to 20 Mbps
- Coax connectors
- 1U high 19" width rack

2865



- ❑ Unmounted Circuit Card configuration TTL-to-Optical Bit-Driver® Transmitter-Receiver.
- ❑ Data rate is DC to 20Mbps NRZ
- ❑ Connection is to solder pads in 16 pin DIP configuration
- ❑ Card size is 3¾ x 3 inches with 2.4 x 2.55 inch mounting centers.
- ❑ Multimode is standard, Single mode optional

2867



- ❑ 3 Channel RS422 and TTL Switchable Input to Fiber Optic Bit Driver with Continuous RS-422 and TTL Outputs
- ❑ Up to 20 Mbps data rate
- ❑ 1U High Case
- ❑ Multimode or Single mode
- ❑ Uses BNC and Terminal Blocks
- ❑ Used in Military System

Kit #7



- ❑ TTL to Multimode Fiber Kit
- ❑ Consist of:
 - 1 - 2817-T Bit-Driver
 - 1 - 2817-R Bit-Driver
 - 2 - 2121 Power Supplies
 - 1 - 5201-003-8255 9.8' (3M) 1 Fiber Indoor Multimode Cable - ST/ST

TTL TO FIBER OPTIC MULTIPLEXERS

2006 (See RS232 Section)



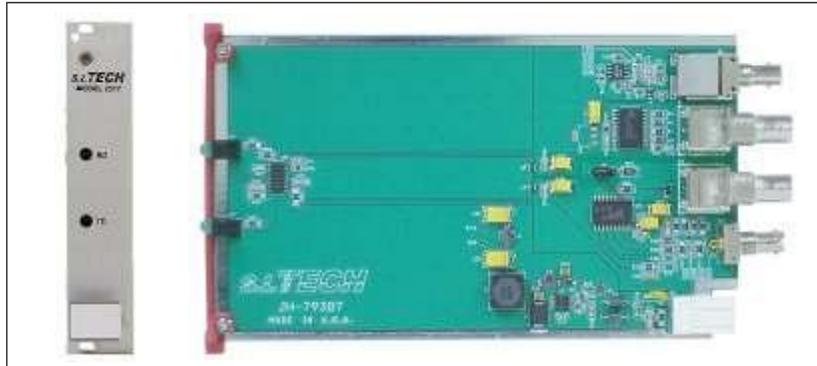
- TTL is an Optional Interface on Model 2006
- 8 channel to fiber mux
- Multimode or Single mode

2565



- Din Rail TTL Bit-Driver
- Up to 4 channel mux
- Multimode or Single mode
- ST connector

TTL to Fiber Optic Transmitter/Receiver



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: Up to 50 Mbps

Input Impedance: TTL levels 10 K or 75 *

Output Impedance: TTL levels into 50

Input Power: 10-32 V 1W Max.

Optional 5VDC 1W

*Jumper J4

Position 1: 75 (Default)

Position 3: 10 K

OPTICAL TRANSMITTER

Power: 30 microwatts (-15 dBm) into 62.5 micron fiber

Wavelength: 820 nanometers (1300nm or 1550nm 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

Maximum Sensitivity: 10 microwatts

Optical Connector: ST

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

Size: 3.9" X 6.8" (9.9 X 17.3cm) Eurocard

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

Specifications subject to change without notice.



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 .

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

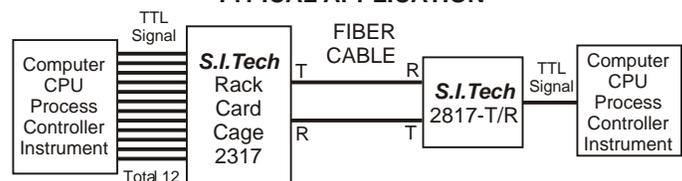
Optical unit connection: Connect the optical transmission line to the T and R receptacles. Note which cable channel goes to T or R by noting cable imprint. On the other end, reverse the connection.

RELATED PRODUCTS

Model Numbers

2317	TTL to Fiber, Transmitter/Receiver, Multimode, ST Connector
2317-SM	TTL to Fiber, Transmitter/Receiver, Single mode, ST Connector
2817	TTL to Fiber, Transmitter/Receiver, Multimode, ST Connector
2817-SM	TTL to Fiber, Transmitter/Receiver, Single mode, ST Connector
2817-T	TTL to Fiber, Transmitter, Multimode, ST Connector
2817-R	TTL to Fiber, Receiver, Multimode, ST Connector
2817-T-SM	TTL to Fiber, Transmitter, Single mode, ST Connector, 1300nm
2817-R-SM	TTL to Fiber, Receiver, Single mode, ST Connector, 1300nm

TYPICAL APPLICATION



Model 2815-8R-T-SM-WDM & 2815-8R-R-SM-WDM **S.I.TECH**

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



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 #2815-8R-T & R can be used as 8 TTL high speed channels with 4 fibers using built in WDM.

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: Up to 100 Mbps

Input Impedance: TTL levels User selectable - 10K , 50 or 75

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 (1310 & 1550nm option)

Emitter Type: LED

Optical Connector: ST, WDM - 4 fibers

OPTICAL RECEIVER

Wavelength: 820 nm (1310 & 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 1.75"H X 7.5"D (43.2 X 4.3 X 19.0 cm)

Weight: 5 lbs. (3KG)

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.

ORDERING INFORMATION - RELATED PRODUCTS

Model Numbers

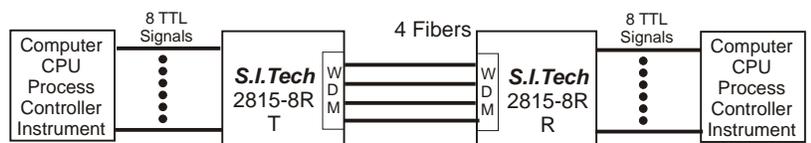
2815-8R-T-SM TTL to Fiber, Transmitter, Single mode, ST Connector, 1300nm

2815-8R-R-SM TTL to Fiber, Receiver, Single mode, ST Connector, 1300nm

2815-8R-T-SM-WDM 8 CH Transmitter with WDM, 4 Fibers, SM

2815-8R-R-SM-WDM 8 CH Receivers with WDM, 4 Fibers, SM

TYPICAL APPLICATION



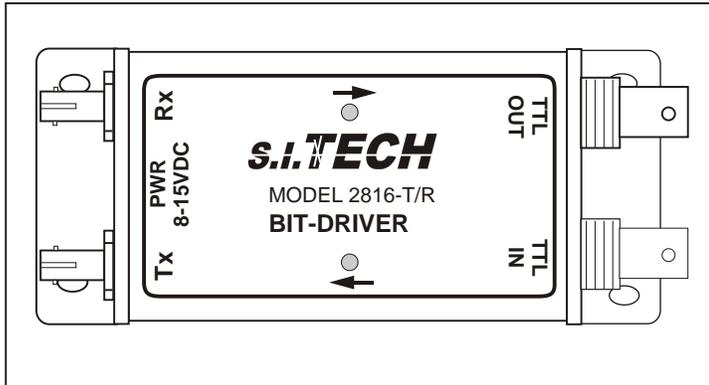
Meets FCC requirements of Class A, Part 15 Computing Devices Standard.
Specifications subject to change without notice.



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:

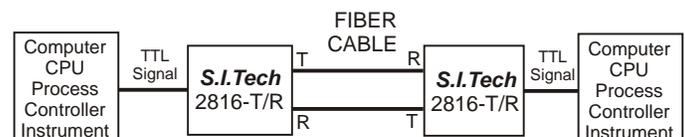
1. Power Supply #2121 (110VAC to 9 VDC) is recommended for all models-USA
2. Optional Power Supply #2164 is for 230VAC applications
3. Optional Power Supply #2166 for 5VDC

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

Specifications subject to change without notice.



TYPICAL APPLICATION



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



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^â.

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 KW

Output Impedance: TTL levels into 50W

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 $\leq 10^{-9}$) 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)

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

Specifications subject to change without notice.



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	50W TTL Load
2816 T	60 mA	X
2816 R	50 mA	110 mA

ORDERING INFORMATION - RELATED PRODUCTS

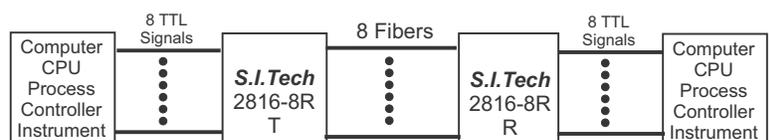
Model Numbers

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, Multimode, Rack Mounted
2816-16R-R	16 Ch, TTL to Fiber Rec, Multimode, Rack Mounted

Notes:

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

TYPICAL APPLICATION



Model 2816-16R-T & 2816-16R-R



High Speed TTL to Fiber Optic Transmitter/Receiver - 16 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^â.

S.I.Tech #2816-16R-T & R can be used as 16 TTL channels with 16 fibers or using WDM, 8 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 - 16 Channel

Connector: BNC

Data Rate: 100 Kbps - 50 Mbps

Input Impedance: TTL levels 75W

Output Impedance: TTL levels into 50W

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 $\leq 10^{-9}$) 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: 6 lbs. (3KG)

Meets FCC requirements of Class A, Part 15 Computing Devices Standard.
Specifications subject to change without notice.



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	50W TTL Load
2816 T	60 mA	X
2816 R	50 mA	110 mA

ORDERING INFORMATION - RELATED PRODUCTS

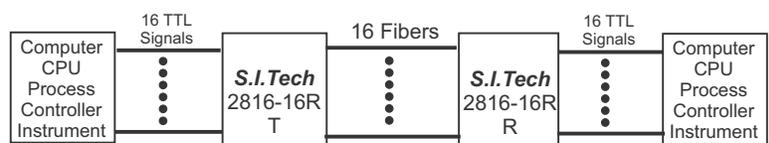
Model Numbers

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

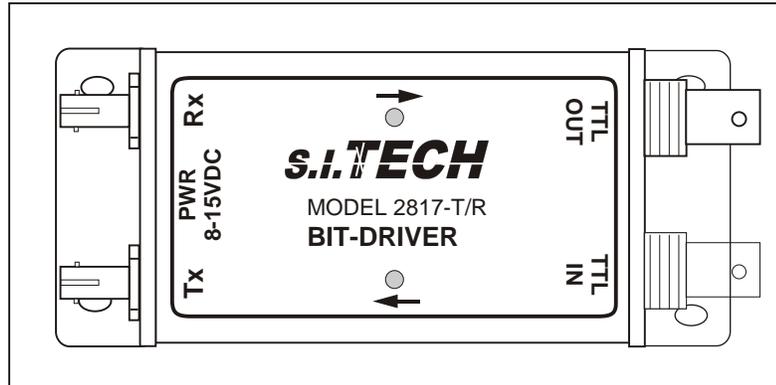
Notes:

- Power Supply #2121 (110VAC to 9 VDC) is recommended for all models except rack mounted units-USA
- Optional Power Supply #2164 is for 230VAC applications
- Optional Power Supply #2166 for 5VDC

TYPICAL APPLICATION



TTL to Fiber Optic Transmitter/Receiver



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: Up to 20Mbps

Input Impedance: TTL levels 10 K

Output Impedance: TTL levels into 50

Input Power: 8 to 15VDC 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

Maximum Sensitivity: 10 microwatts

Optical Connector: ST

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

Storage Temperature: -40 - 80 °C

Relative Humidity: 10 to 95% Non-Condensation

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

Card Version: 2317

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

Specifications subject to change without notice.



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 .

Operating Distance for Fiber Optic Cable

Fiber Size (Microns)	Attenuation (dB/Km)			Distance (Meters)			Distance (Feet)		
	850	1300	1550	Wavelength (nm)			Wavelength (nm)		
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.

ORDERING INFORMATION

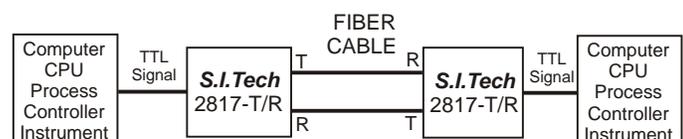
Model Numbers

2817 TTL to Fiber, Transmitter/Receiver, Multimode, ST Connector
 2817-SM TTL to Fiber, Transmitter/Receiver, Single mode, ST Connector
 2817-T TTL to Fiber, Transmitter, Multimode, ST Connector
 2817-R TTL to Fiber, Receiver, Multimode, ST Connector
 2817-T-SM TTL to Fiber, Transmitter, Single mode, ST Connector, 1300nm
 2817-R-SM TTL to Fiber, Receiver, Single mode, ST Connector, 1300nm
 2817-T-SM(15) TTL to Fiber, Transmitter, Single Mode 1550 nm
 2817-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

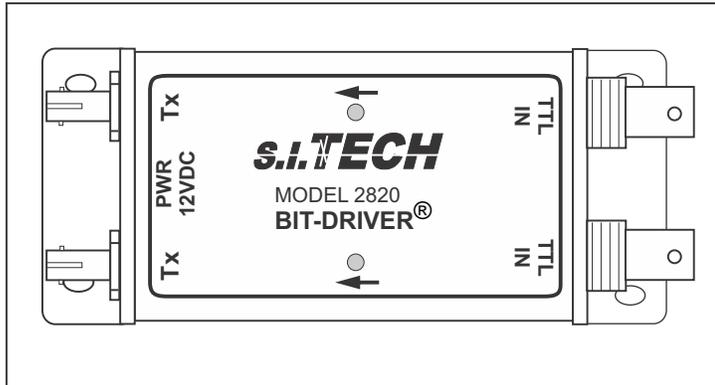
TYPICAL APPLICATION



Model 2820



High Speed 2-Channel TTL to Fiber Optic Transmitters



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®.

Model 2820 consist of 2 TTL Channels 850nm or 1310nm transmitters or 850nm and 1310nm TR.

1. Data Channel.
2. IRIG (Timing) Channel

Power Consumption: 150mA (50% Duty Cycle)

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 FOR TRANSMITTER

Format: TTL, 2 Channels

Connector: BNC

Data Rate: DC - 50 Mbps

Input Impedance: TTL levels 10 KΩ

Input Power: 9-32VDC 1.5W Max.
Optional 5VDC@250mA

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

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)		
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, can also be used with WDM and 1 SM fiber.

ORDERING INFORMATION

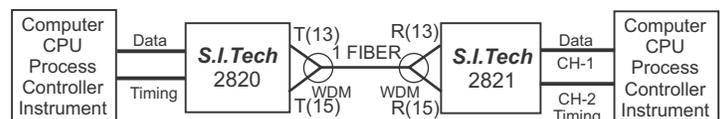
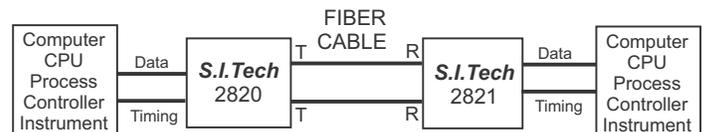
Model Numbers

- 2820 TTL to Multimode Fiber, 2 Transmitters, ST Connector
- 2820-ET TTL to Multimode Fiber, 2 Transmitters, ST, Extended Temp
- 2820-SM TTL to Single mode Fiber, 2 Transmitters, ST Connector, 1300nm
- 2820-MM-SM TTL to Fiber, 2 Transmitters, 1 MM, 1 SM
- 2820-LCK TTL to Multimode Fiber, 2 Transmitters, ST, Locking Power Jack

Notes:

1. Power Supply #2121 (110VAC to 12 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.

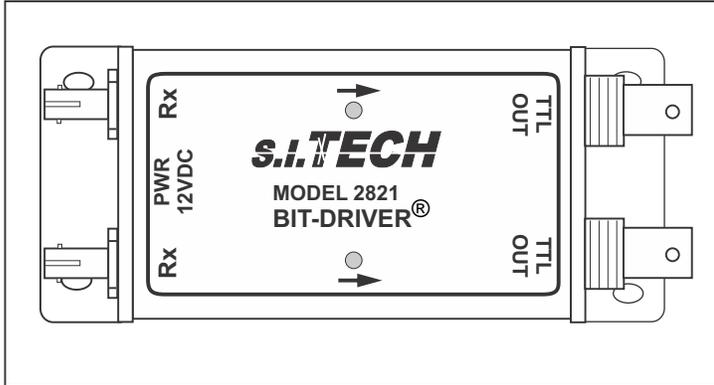
Specifications subject to change without notice.



Model 2821



High Speed 2-Channel TTL to Fiber Optic Receivers



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®.

Model 2821 consist of 2 TTL Channels 850nm or 1310nm Receivers or 850nm and 1310nm receiver.

1. Data Channel
2. IRIG Channel

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}

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, can also be used with WDM and 1 SM fiber.

ELECTRICAL SIGNAL OUTPUT FOR RECEIVER

Format: TTL, 2 Channels

Connector: BNC

Data Rate: DC - 50 Mbps

Output Impedance: TTL levels into 50Ω

Input Power: 9-32VDC 1.5W Max.
Optional 5VDC@250mA

Power Consumption

50% Duty Cycle	No TTL Load	50WTTL Load
2821	150 mA	220 mA

OPTICAL RECEIVER

Wavelength: 820 nm (1300 & 1550 nm option)

Minimum Sensitivity: (BER $\leq 10^{-9}$) 3 microwatt (-25dBm) @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)

ORDERING INFORMATION

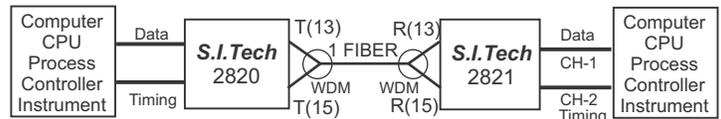
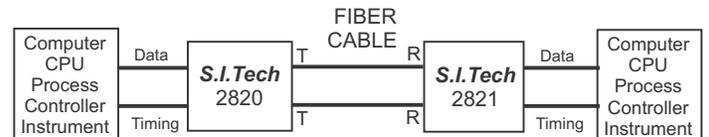
Model Numbers

2821	TTL to Multimode Fiber, 2 Receivers, ST Connector
2821-ET	TTL to Multimode Fiber, 2 Receivers, ST, Extended Temp
2821-SM	TTL to Single mode Fiber, 2 Receivers, ST Connector, 1300nm
2821-MM-SM	TTL to Fiber, 2 Receivers, 1 MM, 1 SM
2821-LCK	TTL to Fiber, 2 Receivers, MM, ST Conn, Locking Power Jack

Notes:

1. Power Supply #2121 (110VAC to 12 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

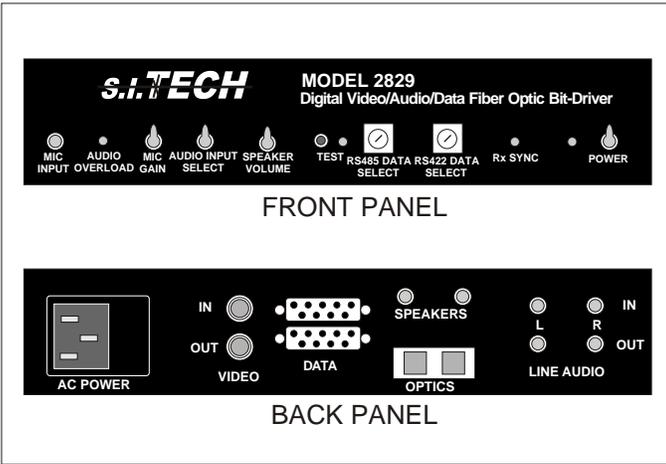


Meets FCC requirements of Class A, Part 15 Computing Devices Standard.

Specifications subject to change without notice.



Digital Video/Audio/Data Fiber Optic Bit-Driver



Features:

- Digitized 8-bit high resolution video
- Mono or stereo audio - digitized audio (24 KHz sampling)
- Digital data links, TTL, RS232, RS422, RS485
- Data rate - TTL: <150KHz, RS232: 0 - 115.2Kbps, RS422, RS485: 1200 - 115.2Kbps
- Options: NTSC, PAL video standards
Video formats: Composite(CVBS), S-Video, Component(YPrPb)
- Full color or black & white
- Plug and play
- Status indicators PWR, Audio Overload, Receiver Sync, Test
- Long distance capability - see table
- Video: SNR > 40dB
- Audio: Mic or line input, line and speaker output
- Bidirectional video, audio and data
- Can be bidirectional on one fiber
- Multimode or Single mode optics

Operation Mode: CCTV Video/Audio/Data

Video Format: NTSC or PAL

Transmitter Input Impedance: 75 ohms bulkhead jack
Composite: BNC
S-Video: Mini-DIN
Component: RCA Style

Input Voltage: 0.5 to 1.6 Vpk-pk

Linearity: 1% Typical

Output Load Impedance: 75 ohms

Operating Wavelength: 820 nanometers (1300 nm option)

Optical Connectors: SC receptacle

Operating Temperature: 0 °C to 50 °C

Metal Enclosure: 7.25" X 7" X 2.0"
(18.4 X 17.8 X 5.1 cm)

Weight: 3lbs. (1.4 kg)

Input Power: 110VAC, 220VAC 50/60 Hz, 10-32VDC

220 Volt Version: Model 2829V

Operating Distance for Fiber Optic Cable

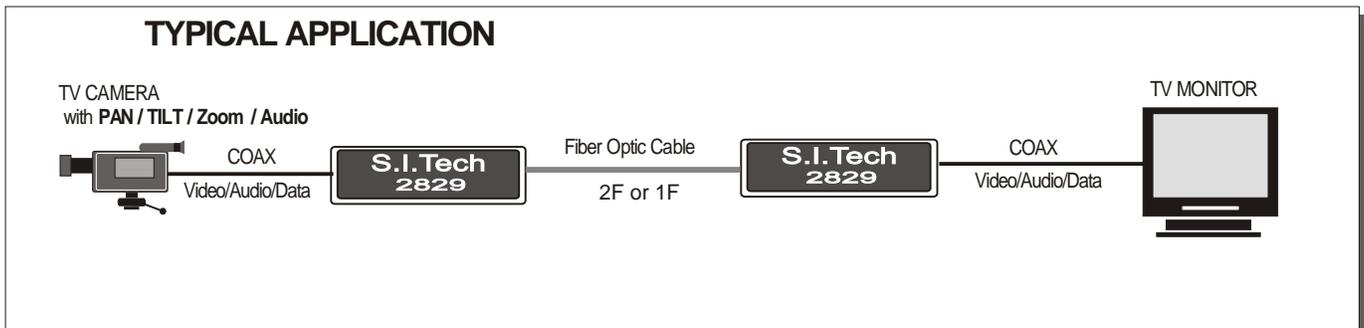
Fiber Size (Micron)	Attenuation dB/Km		Bandwidth MHz/Km		Distance Meters*		Distance Feet*	
	825 nm	1310 nm	825 nm	1310 nm	825 nm	1310 nm	825 nm	1310 nm
50	3.0	1.0	600	1000	1000	2000	3300	6600
62.5	4.0	1.0	200	600	400	1200	1300	4000
10 SM	Unspecified	0.4	Unspecified	Unspecified	----	20000	----	66000

SM - Single mode (1300nm) option

* At high data rate, both attenuation and bandwidth of the fiber are considered to determine distance limit.

Specifications subject to change without notice.

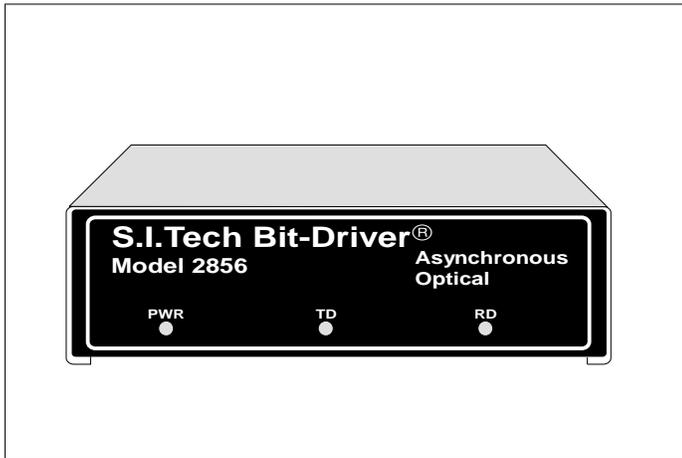
TYPICAL APPLICATION



Model 2856



TTL to Fiber Optic Bit-Driver®



S.I. Tech Model 2856 is designed to convert TTL data to a light signal so that information can be transmitted over fiber optics. At the remote end, another 2856 will convert this data from light to TTL format.

- Operation Mode:** Asynchronous, simplex or full duplex, 20 Mbps
- Input/Output Interface:** TTL, 50 or 75 ohm coax. BNC bulkhead jack
- Transmission Line Interface:** 2 ST fiber optic receptacles (SMA option)
- Transmission Distance:** See distance chart
- Transmitter Output Power:** 30 microwatts into 50 micron fiber
- Wavelength:** 820 nanometers (1300 nm option)
- Receiver Wavelength:** 820 nanometers (1300 nm option)
- Minimum Sensitivity:** 3 microwatts @ 820 nanometers
- Bit Error Rate:** 10^{-9}
- Operating Temperature:** 0 °C to 50 °C
- Input Power:** 110 VAC 50/60 Hz
- Metal Enclosure:** 7.5" x 7" x 3" (19 x 17.8 x 7.6 cm)
- Weight:** 3 lbs. (1.36 kg)
- 230 Volt Version:** 2856V
- Mini Version:** 2817-T/R

Meets FCC Requirements of Class A, Part 15 Computing Device Standard. UL & CSA listed.
Specifications subject to change without notice.

Operating Distance for Fiber Optic Cable

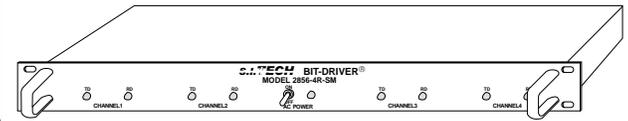
Fiber Size (Microns)	Attenuation (dB/Km)			Distance (Meters)			Distance (Feet)		
	Wavelength (nm)			Wavelength (nm)			Wavelength (nm)		
	850	1300	1550	850	1300	1550	850	1300	1550
50	3.0	1.0	-	2000	6000	-	6600	20000	-
62.5	4.0	1.0	-	2000	6000	-	6600	20000	-
10 SM*	-	0.35	0.25	-	10000	12000	-	33000	40000

* Single mode (1300nm) 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.

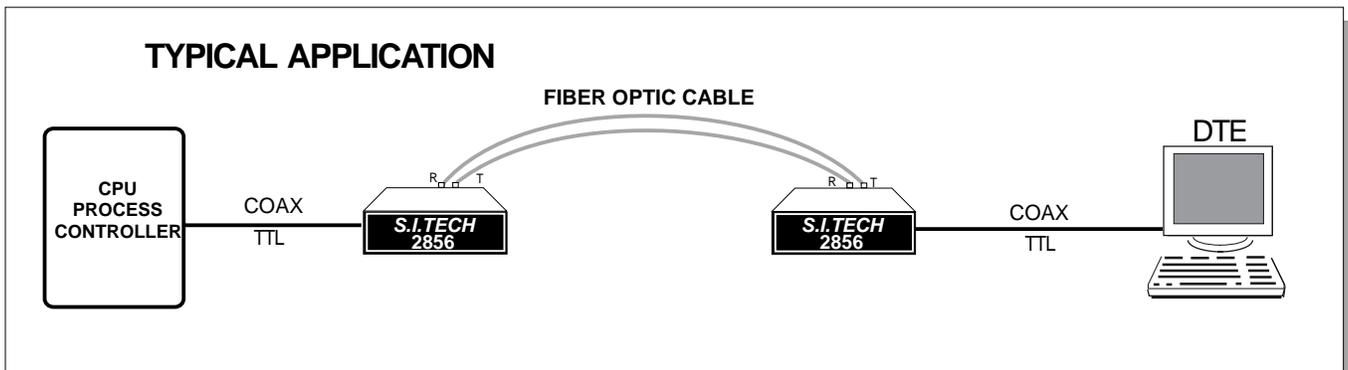
Related Products

Model Numbers

- 2856 TTL to Fiber, Multimode, 110VAC, ST
- 2856-V TTL to Fiber, Multimode, 230VAC, ST
- 2856-SM TTL to Fiber, Single Mode, 110VAC, ST
- 2856-2R TTL to Fiber, 2 Ch Rack Mounted, 110VAC, ST
- 2856-4R TTL to Fiber, 4 Ch Rack Mounted, 110VAC, ST
- 2856-4R-SM TTL to Fiber, 4 Ch Rck Mnt, Single mode, 110VAC, ST



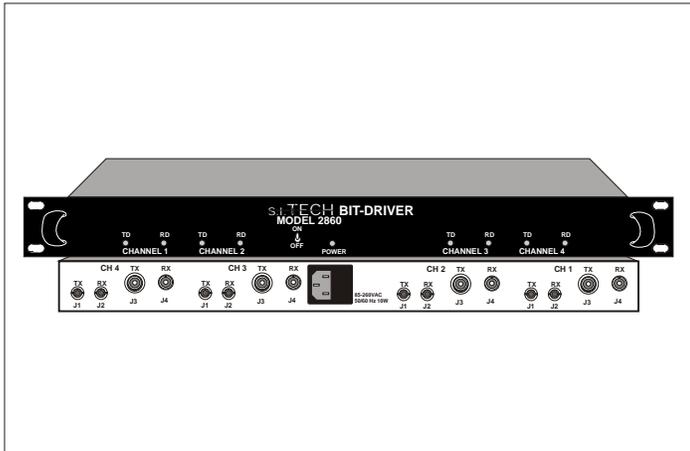
TYPICAL APPLICATION



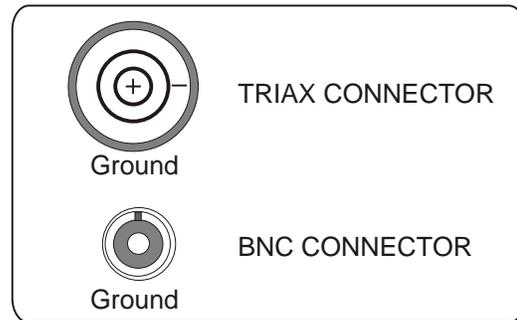
Model 2860



RS-422 and TTL to Fiber Optic Bit-Driver



The S.I.Tech Model 2860 is designed for high speed RS-422 and TTL data communication using fiber. This system uses TRIAX and BNC connectors for interfacing to high speed network. The model 2860 provides 4 independent channels for data, clock, etc.



Operation Mode: Asynchronous, simplex or full duplex, 20 Mbps

Input/Output Interface: RS-422/TTL, 4 channel system, 4 Triax & 4 BNC connectors

Transmission Line Interface: 8 ST connector fiber optic receptacles (SMA option)

Transmission Distance: 2 Km - 6600 ft. (5 Km option)

Transmitter Output Power: 30 microwatts into 50 micron fiber

System Wavelength: 820 nanometers (1300 nm option)

Minimum Sensitivity: 3 microwatts @ 820 nanometers at less than 10^{-9} bit error rate

Operating Temperature: 0 °C to 50 °C

Input Power: 110 VAC 60 Hz

Metal Enclosure: 1U 19" rack
17"W X 1.75"H X 7.5"D
(43.2 X 4.3 X 19.0 CM)

Weight: 5 lbs. (2.3 kg)

230 Volt Version: 2860V

Operating Distance for Fiber Optic Cable

Fiber Size (Microns)	Attenuation dB/Km	Distance Meters	Distance Feet
62.5	4.0	2000	6600
50	3.0	2000	6600
10SM*	1.0	10000	33000

* Single mode (1300nm) option (SC, ST, or FC)

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.

Note:

2860-4R-SM: 4 CH, Single Mode

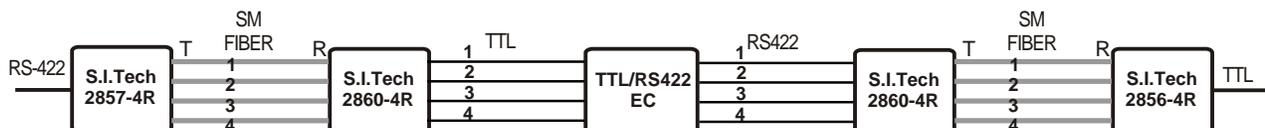
J3: RS422 Input

J4: TTL Output

Meets FCC Requirements of Class A, Part 15 Computing Device Standard. UL listed.

Specifications subject to change without notice.

TYPICAL APPLICATION



Model 2861

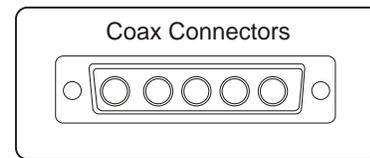


RS-422 and TTL to Fiber Optic Bit-Driver



The S.I.Tech Model 2861 is designed for high speed RS-422 and TTL data communication using fiber. This system uses special 5 coax connectors for interfacing to high speed network. Model 2861 provides 5 independent channels for data, clock, etc.

- Ruggedized for Field Application (Option)
- Conformal Coated (Option)
- Unit has Isolated Filtered Power Supply and Isolated Grounds



Operation Mode: Asynchronous, simplex or full duplex, 20 Mbps

Input/Output Interface: RS-422/TTL, 5 channel system, 5 special coax connectors

Transmission Line Interface: 10 ST connector fiber optic receptacles (SMA option)

Transmission Distance: 2 Km - 6600 ft. (5 Km option)

Transmitter Output Power: 30 microwatts into 50 micron fiber

System Wavelength: 820 nanometers (1300 nm option)

Minimum Sensitivity: 3 microwatts @ 820 nanometers at less than 10^{-9} bit error rate

Operating Temperature: 0 °C to 50 °C (-20 to +60°C for SM)

Input Power: 110 VAC 60 Hz (18 to 36VDC Option)

Metal Enclosure: 1U 19" rack
17"W X 1.75"H X 7.5"D
(43.2 X 4.3 X 19.0 CM)

Weight: 5 lbs. (2.3 kg)

230 Volt Version: 2861V

Operating Distance for Fiber Optic Cable

Fiber Size (Microns)	Attenuation dB/Km	Distance Meters	Distance Feet
62.5	4.0	2000	6600
50	3.0	2000	6600
10SM*	1.0	10000	33000

* Single mode (1300nm) option (SC, ST, or FC)

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.

Note:

2861-5R-SM: 5 CH, Single Mode

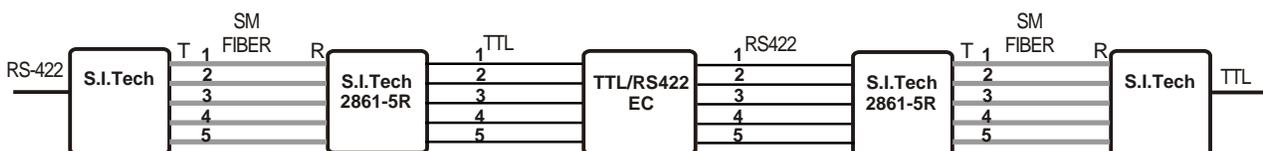
J3: RS422 Input

J4: TTL Output

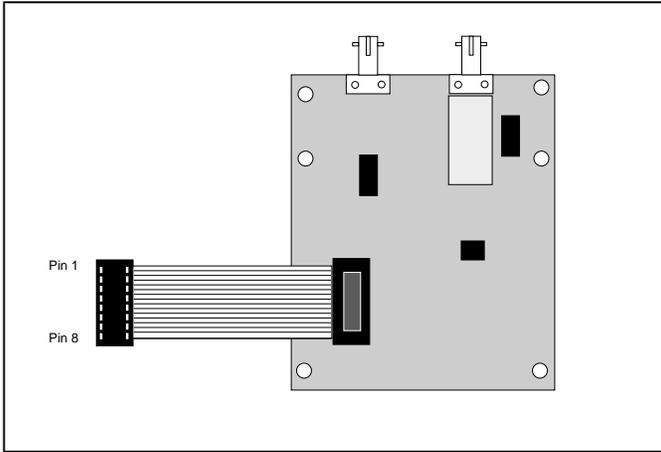
Meets FCC Requirements of Class A, Part 15 Computing Device Standard. UL listed.

Specifications subject to change without notice.

TYPICAL APPLICATION



Fiber Optic Transmitter/Receiver Pair



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®.

OPERATING DISTANCE FOR FIBER OPTIC CABLE

Fiber Size (Microns)	Attenuation dB/km	Distance Meters	Distance Feet
100	5.0	2000	6600
62.5	4.0	2000	6600
50	3.0	2000	6600
10*	1.0	7000	23000

* Single mode, 1300 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.

SYSTEM

Transmission: Up to 6500 ft. (2 Km) with suitable graded index fiber optic cable

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

ELECTRICAL SIGNAL INOUT/OUTOUT FOR TRANSMITTER AND RECEIVER

Format: TTL

Connector: Solder pads or DIP socket

Duty Cycle: 0 to 100%

Minimum Pulse Width: 50 nanoseconds

Data Rate: DC to 20 Mbps NRZ

Input impedance: TTL, optional 75 ohm TTL levels

Output Impedance: Standard TTL logic output (sink 16 milliamps source 400 microamps)

OPTICAL TRANSMITTER

Output Power at 100 mA

LED Current: 10 microwatts (-20 dBm) into 50 micron fiber

Wavelength: 820 nanometers (1300 nm option)

Emitter Type: LED

Optical Connector: ST or SMA compatible metal receptacle

OPTICAL RECEIVER

Wavelength: 670 to 950 nanometers, 820 to 900 nanometers is optimum (1300 nm option)

Minimum Sensitivity: ($BER \leq 10^{-9}$) 1 microwatt (-30 dBm) @ 820 nanometers

Maximum Sensitivity: 10 microwatts

Minimum Optical Risetime

required: 0.25 microseconds

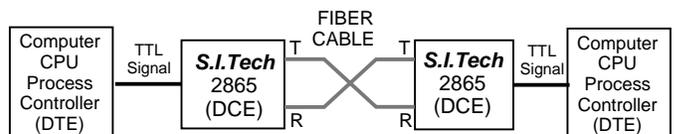
Optical Connector: ST or SMA compatible metal receptacle

Operating Temperature: 0 °C to 50 °C

Size: 2.70 X 2.85 in. (6.86 X 7.24 cm)

Mini Version: 2817-T/R

TYPICAL APPLICATION



DTE: Data Terminal Equipment
DCE: Data Communication Equipment

Pin Assignment - Transmitter/Receiver Board

Pin No. (Dip Conn.)	Description
1 - 8	Ground
9	+ 11 VDC to Receiver
10	- 5 VDC to Receiver
11	Receive Data from Receiver
12,13	+ 5 VDC to Receiver
14,15	+ 5 VDC to Transmitter
16	Transmit Data to Transmitter

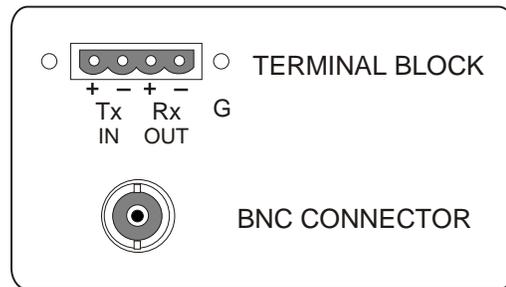
Meets FCC requirements of Class A, Part 15 Computing Devices Standard.

Specifications subject to change without notice.

RS-422 and TTL to Fiber Optic Bit-Driver



The S.I.Tech Model 2867 is designed for high speed RS-422 and TTL data communication using fiber. This system uses Terminal block and BNC connectors for interfacing to high speed network. The model 2867 provides 3 independent channels for data, clock, etc.



- Operation Mode:** Asynchronous, simplex or full duplex, 20 Mbps
- Input/Output Interface:** RS-422/TTL, 3 channel system, 3 terminal blocks & 6 BNC connectors
- Transmission Line Interface:** 6 ST connector fiber optic receptacles (FC Option-SM)
- Transmission Distance:** See table
- Transmitter Output Power:** 30 microwatts into 50 micron fiber
- System Wavelength:** 820 nanometers (1300 nm option)
- Minimum Sensitivity:** 3 microwatts @ 820 nanometers at less than 10^{-9} bit error rate
- Operating Temperature:** 0 °C to 50 °C
- Input Power:** 85-260VAC, 50/60Hz, 10W
- Metal Enclosure:** 1U 19" rack
17"W X 1.75"H X 7.5"D
(43.2 X 4.3 X 19.0 CM)
- Weight:** 5 lbs. (2.3 kg)

Operating Distance for Fiber Optic Cable

Fiber Size (Microns)	Attenuation dB/Km (1300nm)	Distance Meters	Distance Feet
62.5	1.0	5000	16000
50	1.0	5000	16000
10SM*	0.35	20000	65000

* Single mode (1300nm)

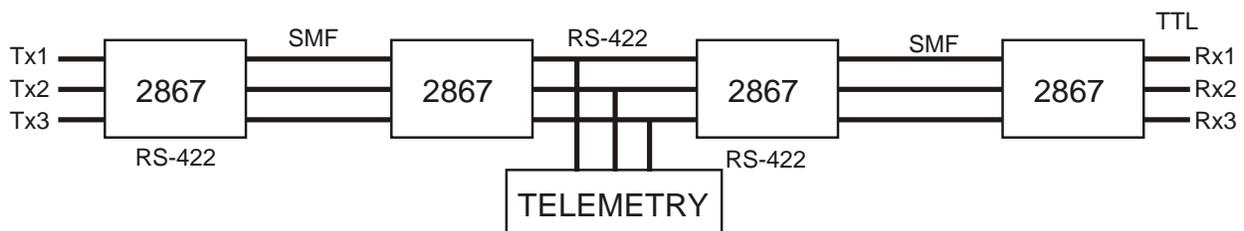
Optical unit connection: Connect the optical transmission line to the T and R receptacles. Note which cable channel goes to T or R by noting cable imprint. On the other end, reverse the connection.

Note:

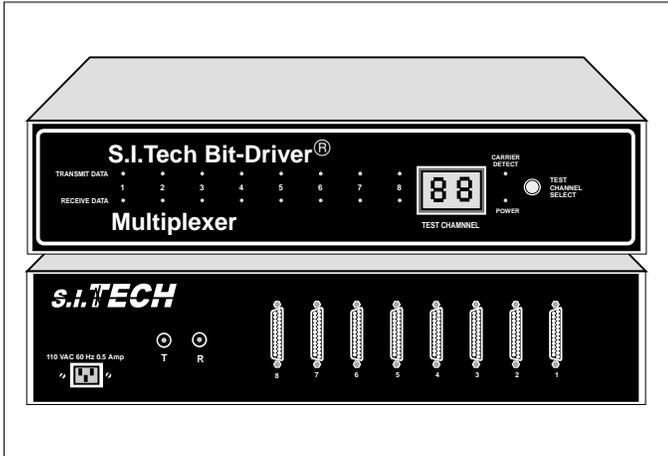
2867-3R-SM: 3 CH, Single Mode
2867 has built in switches for switching channel between TTL and RS-422 inputs.

*Meets FCC Requirements of Class A, Part 15 Computing Device Standard. UL listed. RoHS compliance.
Specifications subject to change without notice.*

TYPICAL APPLICATION



Fiber Optic Bit - Driver[®] Multiplexer



S.I Tech Model 2006 Bit-Driver[®] multiplexer is ideal for in-house data transmission where you have clustered terminal situations. It delivers eight full duplex ports capable of moving up to 19.2 Kbps in either synchronous or asynchronous modes, without using flow control or buffering techniques, resulting in absolute minimum throughput delay. Aggregate speed is 160 Kbps. Each port on the multiplexer is fully independent, allowing mode (synchronous or asynchronous) mixing. There are five switch-selectable, synchronous data rates per channel.

Model 2006 is an eight channel time division multiplexer, providing eight Bit-Driver[®] links using one optical cable interface. Fiber optic cable offers complete immunity to EMI/RFI interference problems for secure data transmission in noisy environments.

Status indicators show the activity of each channel and the integrity of the link. If a problem develops, you can select a digital loopback for any channel at both ends of the link without interrupting the data flow on the other seven channels. If transmission line problems are suspected, an analog loopback can be selected and the cable will be included in the test loop. Operating distance is 6600 feet (2 Km), 5 Km option.

- Operation Mode:** Asynchronous/Synchronous simplex or full duplex.
 - Input/Output Interface:** RS-232-C, Type D at 0 to 19.2 kbps.
 - Phase Distortion:** Less than 12.5%
 - RTS/CTS Delay Time:** 0
 - Number of Channels:** 8
 - Optical Power into a 50 Micron core Optical Fiber:** 10 microwatts
 - Transmission Wavelength:** 820 nanometers (1300 nm option)
 - Receiver Sensitivity:** 1 microwatts at less than 10^{-9} bit error rate
 - Optical Connector:** ST or SMA metal receptacle
 - Operating Temperature:** 0 °C to 50 °C
 - Input Power:** 105 to 130 VAC 60 Hz, 50 W Power transformer secondary fused and operates from 50 to 520 Hz Detachable power supply cord
 - Metal Enclosure:** 17.25" X 10" X 4.125" (43.8 X 25.4 X 10.5 cm) - rack mounting with ears
 - Weight:** 12 lbs. (5.45 Kg)
 - 220 Volt Version:** Model 2006V
- National stock No. 6008-01-365-1380 JZ

Operating Distance for Fiber Optic Cable

Fiber Size (Microns)	Attenuation dB/km	Distance* Meters	Distance* Feet
100	5.0	2000	6600
62.5	4.0	2000	6600
50	3.0	2000	6600
10**	1.0	7000	23000

* Short length of some fiber types can overload the receiver, see installation instructions.
 ** Single Mode Optional

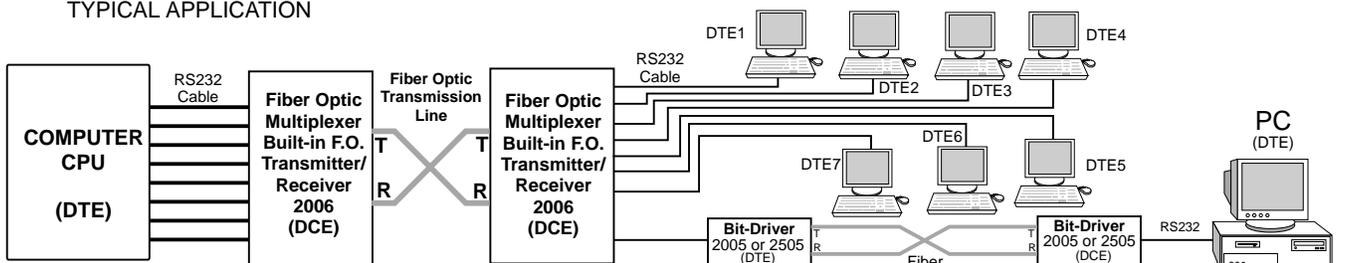
RS - 232 CONNECTOR PINS UTILIZED BY 2006 MULTIPLEXER

Pin No	EIA Designation	Description	Symbol	DTE	DCE
1	AA	Protective Ground	Chassis Ground	←→	
2	BA	Transmitted Data	TXD	→	←
3	BB	Received Data	RXD	←	→
4*	CA	Request to Send	RTS	→	
5	CB	Clear to Send	CTS	←	
6	CC	Data Set Ready	DSR	←	
7	AB	Signal Ground	Sig. Gnd.	←→	
8	CF	Data Carrier Detect	DCD	←	
15**	DB	Transmission Signal Element Timing			
17**	DD	Receiver Signal Element Timing			

* Optional signal not required for normal operation.
 ** Pins 15 and 17 are needed for synchronous terminals only.

UL & CSA listed. Meets FCC requirements of Class A, Part 15 Computing Devices Standard.
 Specifications subject to change without notice.

TYPICAL APPLICATION



To connect 1 to 8 terminals, printers or other DTE equipment. RS232 cables can also connect to S.I.Tech Fiber Optic Bit-Driver to further extend the distance of a particular DTE equipment.

Optical Asynchronous Ruggedized Multiplexer Bit-Driver



Features:

- Up to 115 Kbps/CH asynchronous operation on fiber optic cable, simplex or full duplex operation with 2 channels
- 2 channels RS-232 (See options below)
- -40 °C to + 80 °C operating range (-20 to + 60 °C SM)
- Metal ST connector receptacle (SMA option)
- LED indicators for power, transmit and receive data
- Female DB-9 connector
- See distance chart
- DIN Rail Mounting

2565 DB-9 Pinout: Female Connector

Pin 1 DCD - (Fiber Start)	Pin 6 DSR - (DSR)
Pin 2 RD - (Out)	Pin 7 RTS - (In to CTS)
Pin 3 TD - (In to RD)	Pin 8 CTS - (Out)
Pin 4 DTR - (Not Used)	Pin 9 N/C
Pin 5 Ground	

Note: RTS/CTS can be used as 2nd channel.

OPERATING DISTANCE FOR FIBER OPTIC CABLE

Fiber Size (Microns)	Attenuation dB/Km	Distance* Meters	Distance* Feet
50	3.0	2000	6600
62.5	4.0	2000	6600
10 SM	0.35	10000	33000

* High power option available. SM - Single Mode (1300nm & 1550nm) options.

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.

- Operation Mode:** Asynchronous, simplex or full duplex
- Input/Output Interface:** DB9-S
- Transmission Line Interface:** Metal ST connector is standard for interfacing with fiber optic duplex cable (SMA option, FC option for SM)
- Transmission Distance:** See distance chart
- Optical Power into a 62.5 Micron Core Optical Fiber:** 20 microwatts, 10 dB power budget @ 820 nanometers (1300 nm Option)
- Receiver Sensitivity:** 2 microwatts at better than 10⁻⁹ bit error rate
- Operating Temperature:** -40 °C to 80 °C for multimode
-20 °C to 60 °C for single mode
- Metal Enclosure:** 4.15" X 3.65" X 1.21"
(10.54 X 9.27 X 3 cm)
DIN Rail Mounting
- Weight:** 0.75 lb (340 Grams)
- Input Power:** 10 to 32VDC, 3W

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

Specifications subject to change without notice.



Interface Options: Multiplexer

- RS-232: 1 or 2 Channels (115 Kbps)
- RS-422: 1 or 2 Channels (115 Kbps)
- RS-485: 1 or 2 Channels (115 Kbps)

Related Products

- 2560/2561/2562
- 2360 cards and 3000 rack

