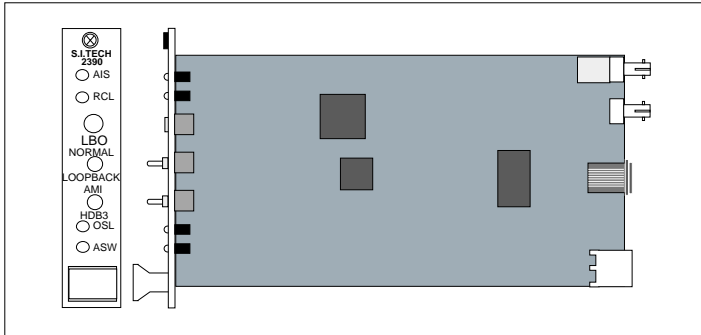


# Model 2390 (T1) / 2391 (E1)



## T1/E1 to Fiber Bit - Driver<sup>®</sup>



### Features:

- T1 AMI or B8ZS, E1 AMI or HDB3
- Status indicators and alarms for ease of use and maintenance
- Twisted pair (T1 and E1) or BNC (E1 only) electrical interface options
- AMI or zero suppression line codes
- Multimode or single mode fiber interface options
- Toggle switches for most control settings and rotary switches for T1 line build out settings
- Up to 10 Km at low cost

**Operation Mode:** Synchronous, half/full duplex  
1.544 Mbps, T1  
2.048 Mbps, E1

**Input/Output Interface:** T1 - RJ48C 100Ω Twisted Pair  
E1 - BNC 75Ω Coax  
E1 - RJ48C 120Ω Twisted Pair

**Transmission Line Interface:** 2 ST fiber optic receptacles

**Connector Options:** ST, SC, and FC

**Transmission Distance:** See distance chart

**Distance Options:** 5 km, 10 km, or 20 km

**Transmitter Output Power:** 30 Microwatts into 50 Micron fiber (820nm & 1300nm options)

**Receiver Wavelength:** 820 nm or 1300 nm

**Minimum Sensitivity:** 3 Microwatts @ 820 nanometers

**Bit Error Rate:** 10<sup>-9</sup>

**Operating Temperature:** 0 °C to 50 °C

**Mean Time Between Failure:** MTBF @ 25 °C = 800,000 Hours  
MTBF @ 50 °C = 300,000 Hours  
[Bellcore test method used]

**Enclosure:** 19" Rack holds 12 cards

**Card Size:** Eurocard 3.9" x 6.8"  
(9.9 x 17.3 cm)  
3001 Rack

**Weight:** 1/2 lb.(200.grams)

**Input Power:** 3 Watts Max

**Related Products:** 2890 (T1)  
2891 (E1)

The S.I.Tech 2390/2391 Bit-Driver<sup>®</sup> is designed to work with T1 or E1 systems. Model 2390/2391 is a T1 or E1 to fiber optic transmitter/receiver full duplex product implementing T1 or E1 protocol. Nominal operating data rate is 1.544 Mbps ±32PPM. (E1 - 2.048 Mbps ±50PPM)

This fiber optic Bit-Driver<sup>®</sup> product eliminates many disadvantages of metallic T1 and E1 signals, especially EMI/RFI, ground loops (electrical isolation with fiber), high attenuation (high signal loss), limiting distance between nodes of system, and potential lightning damage outdoors between buildings.

S.I.Tech Model 2390/2391 is a stand alone or rack mount product allowing easy change from T1 or E1 to fiber. Simply connect T1 or E1 cable to model 2390/2391 input/output port.

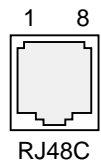
### OPERATING DISTANCE FOR FIBER OPTIC CABLE

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

\* Single mode (1300nm) option  
(High power option available for longer distances)

### FEMALE RJ48 I/O CONNECTIONS

Pin #	Name	Function
1	R	T1/E1 receive ring
2	T	T1/E1 receive tip
4	R1	T1/E1 transmit ring
5	T1	T1/E1 transmit tip
7		Transmit drain wire
8		Receive drain wire



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

### TYPICAL APPLICATION

