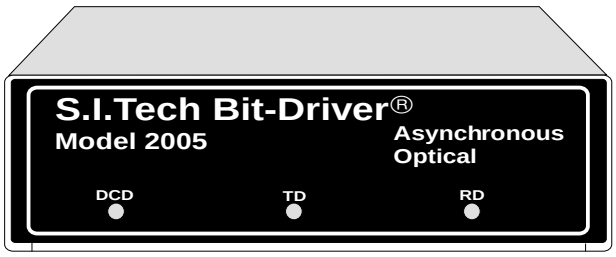
Model 2005

S.I.TECH

Asynchronous Optical Bit - Driver ®



Model 2005 Bit-Driver® is an asynchronous simplex or full duplex system capable of transmitting data at operating speed from 110 bps to 56 Kbps over fiber optic cable. Fiber optic cable offers the advantage of small size, light weight and complete electro-magnetic freedom from the problems of EMI/RFI to its maximum operating range of up to 6600 feet.

Totally dielectric fiber optic cable is immune to high voltage and lightning. This compact asynchronous system can help you transmit data in-house or in other short-haul applications through the noisiest operating environments without losing a bit. (Bit error rate $\leq 10^{-9}$) It's a stand-alone component, complete with RS-232 interface, 120 volt power cord plus input and output transmission connections.

LEDs are used to indicate the presence of carrier and data signaling over the data path. There is a diagnostic logic probe to verify "high" or "low" status of TD, RD, TSR, CTS, DSR and DCD circuits -- without a breakout unit. Includes null modem switch to configure the modem as a DTE device instantly, and a constant or controlled carrier switch.

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®.

Operation Mode: Asynchronous, simplex or full duplex.
Input/Output Interface: RS-232-C, Type D Asynchronous at 110 bps to 56 Kbps. DTE or DCE via null modem switch in modem.
Transmission Line Interface: Two ST fiber optic connector receptacles for interfacing with fiber optic duplex cable. SMA connector is an option.
Transmission Distance: 6600 ft. (2000 m) (5 km option)
Transmitter Enabled by RTS: RTS/CTS delay 15 ms
Constant and Controlled Switch for Carrier: Constant = RTS is always true
Optical Power into a 50 Micron core Optical Fiber: .5 microwatts, 15 dB power budget @ 880 nanometers
Receiver Sensitivity: 15 nanowatts at less than 10^{-9} bit error rate
Diagnostics: Built-in logic probe
Operating Temperature: 0 ^{O}C to 50 ^{O}C
Input Power: 105 to 130 VAC, 50-500 Hz, 10 W Power transformer secondary fused Three wire standard cord for wall outlet
220 Volt Version: Model 2005V.
Metal Enclosure: 7.5" X 7" X 3" (19 X 17.8 X 7.6 cm)
Weight: 3 lb.(1.36 kg)
Rack Mount Version: Model 2305

UL & CSA listed. 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
100	5.0	2000	6600
62.5	4.0	2000	6600
50	3.0	2000	6600
10 SM	1.0 **	7000	23000

** Single Mode Option

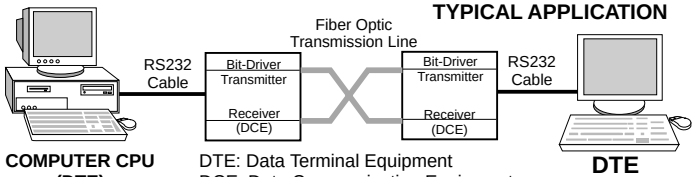
Optical unit connection: Connect the optical transmission line to T and R receptacles. Note which cable channel goes to T or R by noting cable imprint. On the other end, reverse the connection.

RS - 232 CONNECTOR PINS UTILIZED BY 2005 BIT DRIVER®

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	◄

* Optional signal not required for normal operation.
** DSR is true when power is on. Unlisted pins not utilized. RTS/CTS delay 15 mS. Constant or controlled carrier. Built-in null modem.

TYPICAL APPLICATION



For application engineering assistance: 630-761-3640 FAX: 630-761-3644 S.I.Tech, P.O.Box 609, Geneva, Illinois 60134 U.S.A. Web site: http://www.sitech-bitdriver.com.