Model 2160-10/100/1000

S.I. TECH

Ethernet to Fiber Bit-Driver[a]

Tx
Rx
ETHERNET
PWR 5-60VDC 10W MAX

s.i.TECH
ETHERNET BIT-DRIVER[a]
MODEL 2160 - 10/100/1000

POWER
ACTIVITY
10Mbps
100Mbps
1000Mbps
BUFFER ERROR
OPT SIG
OPT SYNC

Operation Mode: 10/100/1000Base-T to Fiber
Ethernet Interface: Shielded RJ-45
Fiber Interface: LC Connector Std.
Transmission Distance: See distance chart
System Wavelength: 850, 1310 nm or 1550 nm
Data Rate: 10/100/1000 Mbps
Bit Error Rate: 10^{-12}
Operating Temperature: 0 to 70 °C
Input Power: 5-60 VDC, 10W. External with power supply-S.I.Tech #2164-100/240VAC 50/60Hz to 12VDC UL, CSA, CE, & TUVGS Listed
Metal Enclosure: 5.75"L X 3.8'W X 1.0"H (14.60 X 9.60 X 2.54 cm)
Weight: 0.8 lb. (365 grams)

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

(UL) CE

Features:

· Supports IEEE 802.3x 10/100/1000Base-T/1Gbps twisted pair link
· Meets IEEE 803.3x clock jitter and frequency variation specifications
· Automatic speed detection and adjustment 10/100/1000
· Full duplex operation
· Auto MDI/MDI-X (Automatic detection of straight or crossover twisted pair cables)
· Automatic master/slave determination
· LC optical connectors standard
· Wide range input power: 5 to 60 VDC, 10W
· LED Indicators:
  Optical Power Detect
  Optical Receiver Signal Lock
  Ethernet Link Established
  10/100/1000 Operation
  Activity and Collision
· Available with 850nm multimode or 1310nm or 1550nm single mode optics
· Multiple optical power configurations to support 5, 10, 20 to 80 Km fiber runs (single mode only)
· POE option

The S.I.Tech 2160 Bit-Driver is intended to extend the length of Ethernet links to up to 80Km for long haul backbone applications. Once installed the 2160's are completely transparent to the system. Units must be installed in pairs. Network timing limitations, fiber attenuation, and bandwidth may limit maximum transmission distance to less than maximum.
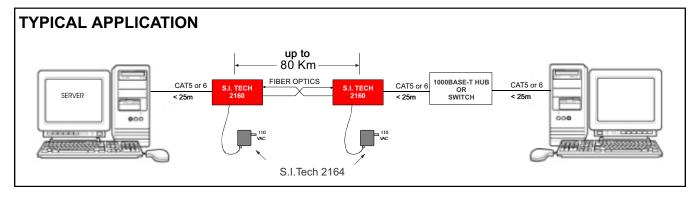
Optical Unit Connection: Connect the optical transmission line to the T and R receptacles. Note which cable channel goes to T or R by noting cable imprint. On the other end, reverse the connections.

OPERATING DISTANCE FOR OPTIC CABLE

FIBER SIZE (Microns)	ATTENUATION dB/Km		BANDWIDTH MHz/Km		DISTANCE Meters*		DISTANCE Feet*	
	850 nm	1310 nm	850 nm	1310 nm	850 nm	1310 nm	850 nm	1310 nm
50	3.0	1.0	600	600	500	600	1600	1800
62.5	3.5	1.0	200	600	200	600	660	1800
10 SM	Unspecified	0.4	Unspecified	Unspecified		20000		66000

SM - Single mode (High power - long distance option)
* At gigabit data rate, both attenuation and bandwidth of the fiber should be considered to determine distance limit.

TYPICAL APPLICATION

SERVER

CAT5 or 6 < 25m

S.I. TECH 2160

up to 80 Km

FIBER OPTICS

S.I. TECH 2160

CAT5 or 6 < 25m

1000BASE-T HUB OR SWITCH

CAT5 or 6 < 25m

110 VAC

110 VAC

S.I.Tech 2164