

### Digital Bi-Directional Mini Modem

The DS-150/XXX mini modem series is designed to link data communication equipment through fiber optic multimode or singlemode cables.

The DS-150/XXX series utilizes digital "Square Wave" techniques which provide trouble free and adjustment free operation. These units are able to transmit data over any dedicated multimode or singlemode duplex fiber. This design allows for excellent long term performance, including a wide dynamic range with output levels unaffected by fiber attenuation variation.

The series is powered by 12V<sub>DC</sub> (+24V<sub>DC</sub>, -48V<sub>DC</sub> optional). The DS-150/XXX (IC) Insert Card 19" rack mount units are powered by a single or a redundant 110/220 V<sub>AC</sub> power supply in the 5000 system.



Products	Stnd	Data Rate	Interface
DS-150/T1	T1	1.544 Mbps	Terminal block
DS-150/E1	E1	2.048 Mbps	Terminal block
DS-150/422	422A	2.048 Mbps	Male DB37 pin
DS-150/232	232C	38.4 kbps/1C 19.2 kbps/2C	Female DB25 pin Female DB25 pin
DS-150/TTL	TTL	3.5 Mbps	Female DB9 pin
DS-150/485	485A	200-700 kbps	DB25 pin
DS-150/449	449A	100 Kbps	DB37 pin
DS-150/530	422A	2.048	Male DB25 pin

### Features

- 3-25 km range over duplex fiber
- Choice of T1/E1, RS-232, RS-422, TTL, RS-530, RS-449 and RS-485 EIA Interfaces
- Utilizes digital techniques for low noise
- Available in multimode and singlemode
- >20 dB dynamic range
- MTBF ≥12-year life span
- Available in Stand Alone or Rack Mount
- Mini size with a low consumption power supply transformer

865	1310	1550	Type	Mode	Wavelength Suffix	Fiber Type	Output Power	Receiver Sensitivity	Optical Loss Budget	Range*	Conn Type
•			LED	MM	L0	50/125μ	-19 dBm	-34 dBm	15 dB	3 km	ST
•						62.5/125μ					
	•		LED	MM	L1	50/125μ	-19 dBm	-34 dBm	15 dB	12 km	ST
	•					62.5/125μ					
	•		ELED	SM	L2E	09/125μ	-10 dBm	-25 dBm	15 dB	23 km	FC
	•		Laser	SM	L2	09/125μ	-10 dBm	-26 dBm	16 dB	25 km	FC

\* Chromatic dispersion and additional losses should be taken into account

# Data (Ethernet/Serial/USB)

## Data

T1 Data rate	1.544 Mbps
E1 Data Rate	2.048 Mbps
RS-232C Data Rate	19.2—38.4 Kbps, DB25 pin
RS-485 Data Rate	200-700 Kbps, DB25 pin
RS-530A Data Rate	100 Kbps, DB25 pin
RS-422A Data Rate	2.048 Mbps, DB37 pin
TTL Level Data Rate	3.5 Mbps, DB9 pin
RS-449A Data Rate	100 Kbps, DB 37 pin

## General

Dimensions & Weight	Stand Alone (SA): 1.12" L x 5.0" W x 2.5" H	10 oz
	Insert Card (IC): 3.0" L x 1.25" W x 5.5" H	7.5 oz
Operating temperature	-20° C to +70° C	
Storage temperature	-30° C to +85° C	
Humidity	0 to 95% non-condensing	
Operating voltage	12 V <sub>DC</sub> (300mA) and -48 V <sub>DC</sub> (150mA) optional	
Vibration	Up to 5 g's	
Shock	Up to 12 g's	

## Diagnostics

Status monitoring/Visual alarms	LED indication
Data output alarm	+6v into 2K Ohm load
Bit error Rate	10 <sup>E-9</sup> or better
Switch	DTE/DCE

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## Sample Configuration

