GE
Security

D1000 Series
IFS RS-232/422 Point-to-Point Data Transceivers

Overview

The IFS D1000 series data transceivers provide point-to-point transmission of simplex or duplex EIA RS232/RS-422 data signals over one or two optical fibers. The transceivers are transparent to data encoding allowing for broad-range compatibility. The transceivers are also compatible with the IFS D2100 series drop and repeat data transceivers when used as line terminating devices. Models within this series are available for use with multimode or single mode optical fiber. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. Each transceiver incorporates power and transmit/receive data status indicating LED's for monitoring proper system operation. The modules are available in either stand-alone or rack mount versions.

Application Examples

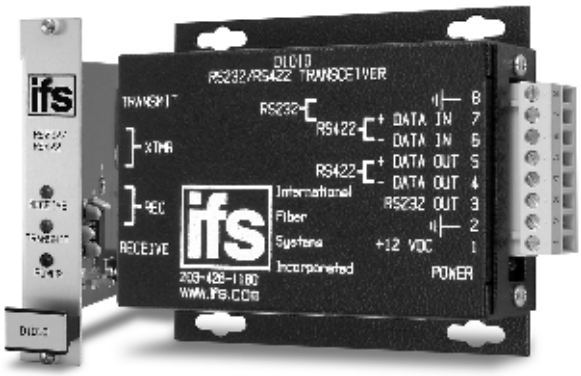
- Access Control Systems
- Building Automation and Environmental Control Systems
- Computer/Data Equipment
- Fire & Alarm Systems
- Traffic Signal Control Equipment

Standard Features

- Meets EIA RS-232/422 Specifications (Simplex or Duplex)
- Point-to-Point Topology
- Transparent to Data Encoding / Compatible with Major Data Protocols
- Data Rates up to 1.5 Mbps
- No In-field Electrical or Optical Adjustments Required
- Power, Transmit and Receive Data Status LED Indicators
- NTCIP Compatible
- Tested and Certified by an Independent Testing Laboratory for Full Compliance with the Environmental Requirements (Ambient Operating Temperature, Mechanical Shock, Vibration, Humidity with Condensation, High-Line/Low-Line Voltage Conditions and Transient Voltage Protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- Integrated WDM for Greater Product Reliability
- Automatic Resettable Solid-State Current Limiters
- Hot-Swappable Rack Modules
- Distances up to 37 Miles (60 km)
- Comprehensive Lifetime Warranty

RS-232/422 Point-to-Point Data Transceivers

Transmission of simplex or duplex EIA RS-232/RS-422 data signals over one or two optical fibers.



imagination at work

GE
Security

North America
T 888-GE-SECURITY
888-437-3287
F 503-691-7566
E sales@ifs.com

Asia
T 852-2907-8108
F 852-2142-5063

Australia and New Zealand
T 613-9239-1200
F 613-9239-1299

Europe
T 44-113-238-1668
F 44-113-253-8121

Latin America
T 305-593-4301
F 305-593-4300

gesecurity.com/ifs

Specifications subject to
change without notice

Agency compliance

FCC PART 15 COMPLIANT CE cULus GSA Federal Supply Schedule Contract No. GS-07F-0049M

Made in the USA

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

Specifications

Data

Data Interface:	RS-232 (data lines only), or RS-422 (see note)
Data Rate:	DC - 1.5 Mbps (NRZ)
Operating Mode:	Asynchronous Simplex or Full-Duplex
Bit Error Rate:	<1 in 10^{9}

Wavelength

D1010: 850 nm, MM D1010WDMA: 850/1310 nm, MM
D1010WDMB: 1310/850 nm, MM D1020: 1310 nm, MM
D1030: 1310 nm, SM D1030WDMA: 1310 nm, SM
D1030WDMB: 1550 nm, SM

Number Of Fibers

D1010: 2 D1010WDMA: 1 D1010WDMB: 1 D1020: 2
D1030: 2 D1030WDMA: 1 D1030WDMB: 1

Connectors

Optical:	ST
Data and Power:	Terminal Block with Screw Clamps

Electrical & Mechanical

Power:	
Surface Mount:	12 VDC @ 150 mA
Rack:	From Rack
Number of Rack Slots:	1
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./cm.) (LxWxH)	
Surface Mount:	4.2 x 4.0 x 1.0 in., 10.7 x 8.9 x 2.5 cm
Rack Mount:	7.0 x 4.9 x 1.0 in., 17.8 x 12.5 x 2.5 cm
Shipping Weight:	< 2 lbs./0.9 kg

Environmental

MTBF:	> 100,000 hours
Operating Temp:	-40° C to +74° C
Storage Temp:	-40° C to +85° C
Relative Humidity:	0% to 95% (non-condensing)†

†May be extended to condensation conditions by adding suffix '–C' to model number for conformal coating.

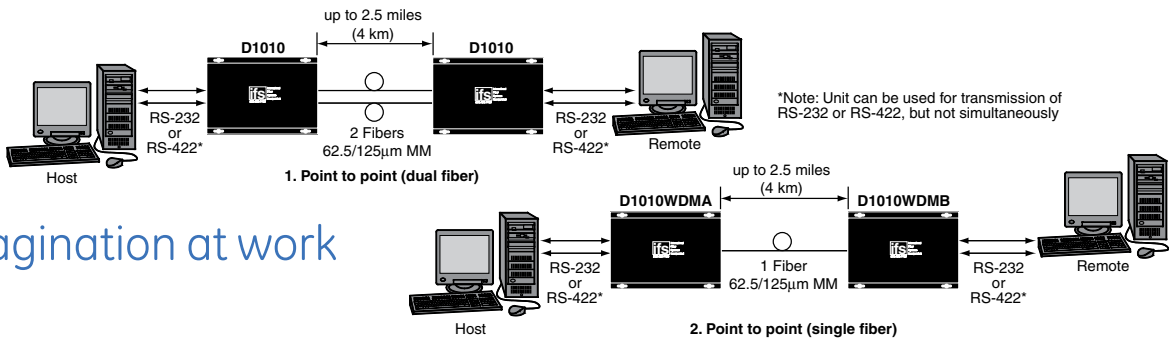
NOTE: The D1010 Series is compatible with some RS-485 (4-wire) systems, consult factory.

Ordering Information

	Part Number	Description	Fibers Required	Opt. Pwr. Budget	Max. Distance*
Multimode 62.5/125µm**	D1010	RS-232/RS-422 Data Transceiver (850 nm)	2	14 dB	2.5 miles (4 km)
	D1010WDMA✧	RS-232/RS-422 Data Transceiver (850/1310 nm)	1	14 dB	2.5 miles (4 km)
	D1010WDMB	RS-232/RS-422 Data Transceiver (1310/850 nm)	1	14 dB	2.5 miles (4 km)
	D1020	RS-232/RS-422 Data Transceiver (1310 nm)	2	13 dB	8 miles (13 km)
Single Mode 9/125µm	D1030	RS-232/RS-422 Data Transceiver (1310 nm)	2		
	D1030WDMA✧	RS-232/RS-422 Data Transceiver (1310 nm)	1	20 dB	37 miles (60 km)
	D1030WDMB	RS-232/RS-422 Data Transceiver (1550 nm)	1		
Accessories♦	PS-12VDC 12 Volt DC Plug-in Power Supply (Included) PS-12VDC-230 12 Volt DC Plug-in Power Supply, 230 VAC Input (Included if specified at time of order)				
Options	Add '-R3' to Model Number for R3 Rack Mount - No Charge (Requires R3 Rack purchased separately) Add '-C' for Conformally Coated Printed Circuit Boards (Extra charge, consult factory)				

*Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels.
Distance can also be limited by fiber bandwidth. **For 50/125 Fiber, subtract 4 dB from Optical Power Budget. ♦ All accessories are third party manufactured. ✧ WDMA must mate with a WDMB.

System Design



imagination at work