PRODUCT SPECIFICATION — D8000 SERIES
8-CHANNEL FULL-DUPLEX DATA MULTIPLEXER

DESCRIPTION

The IFS D8000 Series is a fully-digital data multiplexer that supports up to 8 channels of full duplex data on one optical fiber, and is ideal for those applications where the available fiber count may be limited or additional data channels must be added to an existing optical cable plant. These environmentally hardened data multiplexers are designed for use in unconditioned out-of-plant or roadside installations. Any of the eight available data channels may be independently configured for either RS-232, RS-422 or RS-485 (2 or 4 wire) operation, providing a high level of versatility. Plug-and-play design ensures ease of installation and no electrical or optical adjustments are ever required. LED status indicators are provided for rapidly ascertaining equipment operating status, and these units are available in either stand-alone or rack mount configurations.

APPLICATIONS

- Access Control Systems
- Intelligent Transportation Systems /Traffic Signalization Networks
- Building Automation and Environmental Control Systems
- Computer/Data Equipment
- Fire & Alarm Systems

FEATURES

- Supports up to 8 Channels of Full-Duplex RS-232, RS-422, and RS-485 (2 or 4 Wire) Data on 1 or 2 Fibers
- Environmentally hardened design assures extremely high reliability in unconditioned roadside or out-of-plant environments
- Transparent to Data Encoding
- Automatic Resettable Solid-State Current Limiters
- Data rates up to 115 kbps
- No In-field Electrical or Optical Adjustments Required
- Integrated WDM for Greater Product Reliability
- 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.
- Operating Power, Transmit and Receive Data, TDM Lock and Optical Carrier Detect LED Status Indicators
- Hot-Swappable Rack Modules
- Distances up to 37 Miles (60 km)
- Comprehensivee Warranty

8D

Available at: www.ifs.com

- A & E Specifications, (CSI)
- AutoCAD Drawings
- Operation Manuals
- Technical Bulletins

ORDERING INFORMATION

	PART NUMBER	DESCRIPTION	FIBERS REQUIRED	OPTICAL PWR BUDGET	MAX. DISTANCE*
MULTIMODE 62.5/125µm**	D8020WDMA❖ D8020WDMB	8 Full Duplex Data Channels (1310/1550 nm) 8 Full Duplex Data Channels (1550/1310 nm)	1	10 dB	6.2 miles (10 km)
SINGLEMODE 9/125µm	D8030WDMA❖ D8030WDMB	8 Full Duplex Data Channels (1310/1550 nm) 8 Full Duplex Data Channels (1550/1310 nm)	1	20 dB	37 miles (60 km)
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) Add '-SC' to Model Number for SC Optical Connectors (For Single-mode Equipment Only) Add '-FC' to Model Number for FC Optical Connectors (For Single-mode Equipment Only)				

*** 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. ❖ WDMA must mate with a WDMB.**

♦ All accessories are third party manufactured.

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TECHNICAL SPECIFICATION — D8000 SERIES
8-CHANNEL FULL-DUPLEX DATA MULTIPLEXER

SPECIFICATIONS

DATA

Data Interface:	RS-232, RS-422, RS485 (2 or 4 wire) Each channel is independently configurable for use with any of these data protocols.
Data Rate:	DC-115 kbps
Operating Mode:	Asynchronous, Simplex or Full Duplex
Bit Error Rate:	<1 in 10^{-9}
Number of Channels:	8

WAVELENGTH

D8020WDMA:	1310/1550 nm, Multimode: LED
D8020WDMB:	1550/1310 nm, Multimode: LED
D8030WDMA:	1310/1550 nm, Singlemode: Laser Diode
D8030WDMB:	1550/1310 nm, Singlemode: Laser Diode

NUMBER OF FIBERS

1

CONNECTORS

Optical:	ST, SC, or FC (See ordering information)
Data:	RJ-45
Power:	Terminal Plug with screw clamps

ELECTRICAL & MECHANICAL

Power:	12 VDC @ 400 mA
Number of Rack Slots:	3
Current Protection:	Automatic Resettable Solid-State Current Limiters
Circuit Board:	Meets IPC Standard
Size (in./ cm.) (LxWxH):	
Surface Mount:	7.0 x 4.9 x 3.0 in., 17.8 x 12.5 x 7.7 cm.
Rack Mount:	7.7 x 5.0 x 3.0 in., 19.6 x 12.7 x 7.7 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.

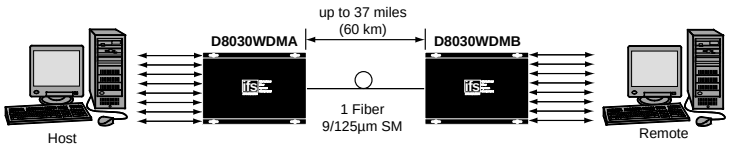
MADE IN THE USA

OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSCEIVER MODEL	OPTICAL PWR BUDGET	MAX. DISTANCE*
Multimode 62.5/125µm**	1310/1550 nm	D8020WDMA (1310/1550 nm) D8020WDMB (1550/1310 nm)	10 dB	6.2 miles (10 km)
Singlemode 9/125µm	1310/1550 nm	D8030WDMA (1310/1550 nm) D8030WDMB (1550/1310 nm)	20 dB	37 miles (60 km)

*** Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Multimode transmission distance can also be limited by fiber bandwidth. **For 50/125 Fiber, subtract 4 dB from Optical Power Budget.**

SYSTEM DESIGN



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