Overview

The data series fiber transmission products support optical transmission of bi-directional data up to 4 channels through one fiber either in multi-mode or single-mode. Adjustment and maintenance free, these modules are designed to support data interface.

A cost-effective single unit design, this product is well-suited for in field configuration and also accommodates installation and system growth while delivering long operating distances of up to 60 Km. Featuring robust construction well suited for harsh environments the unit is available in both rack mount and wall mount configuration. Plug-and-Play design ensures ease of installation requiring no electrical or optical adjustments.

Standard Features

Data

- Supports one or four bi-directional data
- Supports multi-protocol data in RS232, RS422 & RS485 2 or 4-Wire Tri-state formats
- External access for data format selection via DIP switches
-

LEDs

- Duplicated LED indicators on the front and rear of the unit for the convenience of observation

Network management system for rack communications

- Web browser support
- Systems data performance monitoring
- System devices and components Transmitters, Receivers, Modules, etc. status monitoring and operational management
- LAN, Ethernet networking capabilities
- IP addressable
- Alarm activation, execution, message responding and reporting
- Operational level determination and access control
- Network ready for health and connection monitoring

Others

- Adjustment and maintenance free
- Unique modular design for in field configuration to match installation and system growth
- Long distances operation up to 60Km
- No setup just plug-and-play
- Excellent suppression of EMI & RFI and elimination of ground loop
- Transient voltage protection on power supply and all signal inputs & outputs
- Robust design for harsh environment applications

Single- or Four-Channel

Bi-directional Data Transmitter/ Receiver

Specifications

Data	
Data Direction	Bi-directional Duplex
Data Interface	RS232, RS422, RS485 2 or 4-wire Tri-state
Selection Method	DIP switch-selectable
Data Rate	0~115,200bps
Data Protocol	Protocol transparency
Line Carrier Detection	RS485 (2/4-wire) Tri-state output
Data Tx & Rx Status	Green/Red LED lit
Input/ Output Connectors	7-pin screw terminals

Optical		
Wavelength	1310 and 1550	
Number of Fiber	1	
Tx Output Power:		
Single Mode (40Km)	1310nm & 1550nm	-9dBm ± 3 dBm
Multi-Mode (4Km)	1310nm & 1550nm	-7dBm ± 2 dBm
Optical Buget:		
Multi-mode (62.5µm/125µm)	12dB	
Single-mode (9µm/125µm)	18dB (wavelength in 1310nm) 14dB (wavelength in 1550nm)	
Single-mode (9µm/125µm) Long Haul	25dB (wavelength in 1310nm) 19dB (wavelength in 1550nm)	
Transmission Distance:		
Multi-Mode (Limited by Fiber Bandwidth)	4Km (DFVMMD101-T/R & DFVMMD102-T/R)	
Single-Mode (Limited by Fiber Bandwidth)	40Km	
Fiber Connector (Standard Supply)	ST	

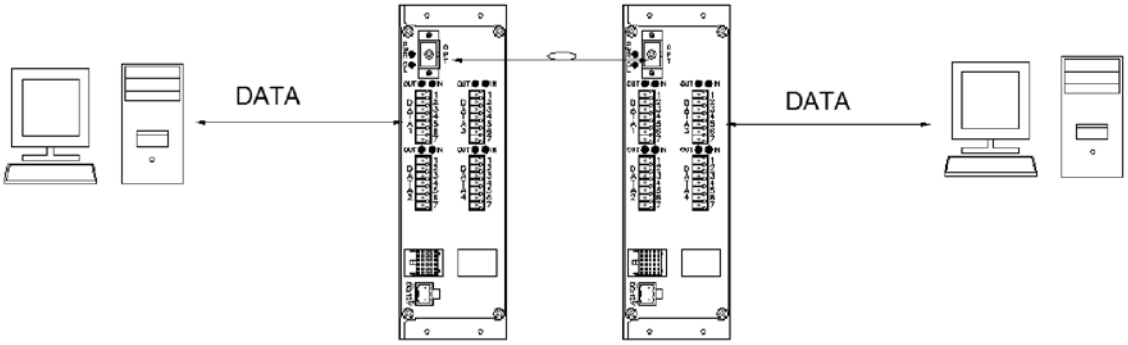
Mechanical	
Dimensions or module HxWxD in mm	a)25.4 x 158.4 x 231.8 1-Slot b) 50.8 x 158.4 x 231.8 2-Slot
Shipping weight	a) 0.74kg 1-slot b) 1.07kg 2-slot

Environmental	
Operating Temp	-40 C to +75 C
Storage Temp	-40 C to +85 C
Relative Humidity	0 to 95% non-condensing

Power Requirement	
Supply Voltage	12VDC Standalone: Derived from an external adaptor via the 2-pin connector at rear of the module. Rack chassis: derived from the chassis PSU via the 30-pin connector at rear of the module.
Cord protection	Poly Fuse (1A)
Current Consumption	Max. 500mA

Application Diagram

Cable connection of DFDSM004-TX/RX, DFDSML004-TX/RX and DFDMM004-TX/RX



Model Number Key

DF	10 bit rack/module
F	8 bit rack/module
MF	8 bit module only
V	Video
D	Data
A	Audio
CC	Contact Closure

SM	Single mode
MM	Multimode
L	Long distance
D	Duplex

First digit	Number of video channels
Second digit	Number of audio channels
Third digit	Number of data channels
Forth digit	Number of contact closures
T	Transmitter
R	Receiver

Part Number Key

DFD□M(L)00□—□

Optical type
S Single Mode
M Multi Mode

Number of Data Channels
1
4

Data type
TX Transmitter
RX Receiver

North America
T 888-GE-SECURITY
888-437-3287
F 503-691-7566

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

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

Europe
T 32-2-719-98-47
F 32-2-719-98-46

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

Specifications subject to change without notice.

Ordering Information

Fiber Type		Part Number	Description	Opt. PWR. Budget dB		Max. Distance (Km)	No. of slots
				1310nm	1550nm		
(I) Single-mode (9/125µm)	(i) 1D	DFDSM001-TX	1-Ch. Bi-directional Data Transceiver	18	14	40	1
		DFDSM001-RX	1-Ch. Bi-directional Data Transceiver	18	14	40	1
	(ii) 4D	DFDSM004-TX	4-Ch. Bi-directional Data Transceiver	18	14	40	2
		DFDSM004-RX	4-Ch. Bi-directional Data Transceiver	18	14	40	2
(II) Single-mode (9/125µm For Long Distance Transmission)	(i) 1D	DFDSML001-TX	1-Ch. Bi-directional Data Transceiver	25	19	60	1
		DFDSML001-RX	1-Ch. Bi-directional Data Transceiver	25	19	60	1
	(ii) 4D	DFDSML004-TX	4-Ch. Bi-directional Data Transceiver	25	19	60	12
		DFDSML004-RX	4-Ch. Bi-directional Data Transceiver	25	19	60	2
(III) Multi-mode (62.5/125µm)	(i) 1D	DFDMM001-TX	1-Ch. Bi-directional Data Transceiver	12	12	4	1
		DFDMM001-RX	1-Ch. Bi-directional Data Transceiver	12	12	4	1
	(ii) 4D	DFDMM004-T	4-Ch. Bi-directional Data Transceiver	12	12	4	2
		DFDMM004-RX	4-Ch. Bi-directional Data Transceiver	12	12	4	2

Accessories	DFR. 19' Rack mount chassis purchased separately for housing modules
Options	ST type connector is standard

Notes: Transmission distance will suffer if additional losses are introduced by the optical connectors, fusions, splices and the fibers within the network. Operating distance of multimode is limited by the characteristics of the fiber bandwidth