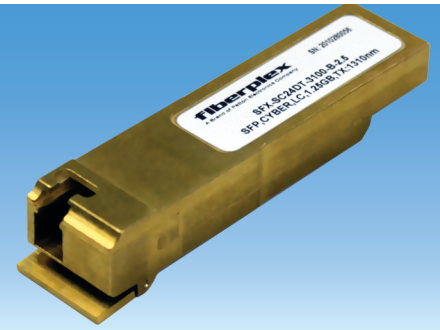


# FiberPlex™ Data Diode SFP Modules

## Model SFX-DD



*FiberPlex SFX-DD Data Diode SFP Modules for cyber security, with gigabit or 10-gigabit optics, transmit data in one direction only without the possibility for a return path, making them ideal for applications such as file transfer, real-time data streaming, database replication, and remote monitoring.*

### Product Features

- Single LC connector
- Single direction with no possibility for a return path
- Hot-pluggable SFP footprint
- RoHS compliant and Lead Free
- Milled Brass enclosure for maximum EMI/RFI containment and durability
- Single +3.3V power supply
- Low power dissipation <800mW
- SFP MSA SFF-8074i Compliant.
- Designed and Manufactured in the USA: Top notch quality and reliability with local support.

The FiberPlex SFX-DD Data Diode, with gigabit or 10-gigabit optics, features a data diode functionality which means that the modules transmit data in one direction only without the possibility for a return path. There is only one optical opening to connect a single fiber.

The SFX-DD modules are high performance, cyber secure modules supporting a host of data rates and distances.

Patton's FiberPlex Cyber-SFP Modules are compatible with the small

form-factor pluggable (SFP) multi-source agreement (MSA). They are RoHS compliant and lead-free.

These optical modules are designed for digital data applications, and are not recommended for digital video applications due to SMPTE encoding that may cause pathological signal errors. For video applications, see our line of video optimized SFP modules.

Visit [www.patton.com](http://www.patton.com) to view our huge selection of SFP modules, kits and more.

## Specifications\*

Electrical Specifications					
		Min	Typ	Max	Unit
Environmental	Storage Temperature (°C)	-40	-	85	°C
		0	-	70	°C
Power Requirement SFX-xC24	Voltage Range	3.13	3.3	3.47	VDC
	Supply Current	-	-	250	mA
Power Requirement SFX-xC92	Voltage Range	3.13	3.3	3.47	VDC
	Supply Current	-	-	350	mA

Physical Specifications				
	Length	Width	Height	Weight
SFX	2.22 in. (56.5 mm)	0.54 in (13.7 mm)	0.47 in (12 mm)	0.8 oz (22.7 g)

# FiberPlex SFX-DD Data Diode SFP Modules

## SFP MSA Compliance

The SFP multi-source agreement (MSA) is an agreement that was drafted among competing manufacturers of SFP optical modules. The SFF Committee was formed to oversee the creation and maintenance of these agreements including the SFP MSA designated as INF-8074i. This agreement describes a mutually agreed upon standard for the form and function of SFP modules. However, not all SFPs produced are MSA compliant. The MSA provides for a transceiver (TX/RX) pinout. FiberPlex Technologies Data SFPs are fully compliant with SFF-8074i. The pinout for these SFPs can be seen in the table at right.

SFP Pinout	
Pin	Transceiver / BiDi (MSA)
1	VEE
2	TX_FAULT [VEE]
3	TX_DIS
4	MOD_DEF(2)-SDA
5	MOD_DEF(1)-SCL
6	MOD_DEF(0)-PRESENCE [VEE]
7	Rate [NC]
8	LOS
9	VEE
10	VEE
11	VEE
12	RD-
13	RD+
14	VEE
15	VCC
16	VCC
17	VEE
18	TD+
19	TD-
20	VEE

## Regulatory Compliance

- ESD to the Electrical Pins: compatible with MIL-STD-883 Method 3015
- ESD to the Duplex LC Receptacle: compatible with IEC 61000-4-2
- EMI compatible with FCC Part 15 Class B EN55022 Class B (CISPR 22B) VCCI Class B
- Immunity compatible with IEC 61000-4-3
- Laser Eye Safety compatible with FDA 21CFR 1040.10 and 1040.11 EN60950, EN (IEC) 60825-1,2
- RoHs compliant with 2002/95/EC 4.1&4.2 2005/747/EC

## A Large Selection of Optics

The FiberPlex line of SFP Modules supports a host of data rates, wavelengths ( $\lambda$ ) and power configurations providing maximum flexibility. The SFPs simultaneously support various SONET, synchronous digital hierarchy (SDH) and IEEE Ethernet standards. The table below lists many of the popular options and the corresponding Patton SFP part number.

### Two Fiber Optical Transceiver Modules

SFX Modules										
FiberPlex SFP	TX/RX	Data Rate	SONET/SDH/IEEE	Fiber Type	$\lambda$ (nm)	Transmitter Power (dBm)		Receiver Sensitivity (dBm)	TX Jitter (JT <sub>Xp-p</sub> )	Max Distance @ Max Data Rate
						Min	Max			
<b>SFX-MC24DT-3100-2</b>	TX	1.25 Gbps	OC24/Fibre Channel/GbE	Singlemode	1310	-9	-3	-	200 ps	10 km
<b>SFX-MC24DR-0031-2</b>	RX									
<b>SFX-SC24DT-3100-B</b>	TX									
<b>SFX-SC24DR-0031-B</b>	RX									
<b>SFX-MC92DT-8500-0</b>	TX	10 Gbps	OC192/10G Ethernet	Singlemode	1310	-8.2	+0.5	-	200 ps	10 km
<b>SFX-MC92DR-0085-0</b>	RX									
<b>SFX-SC92DT-3100-A</b>	TX									
<b>SFX-SC92DR-0031-A</b>	RX									



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