



## Datasheet

## Multi-rate SFP Interfaces



### Features

- Support for protocols from 100 Mbps to 4.25 Gbps
- Multi-rate support for Gigabit Ethernet, Fiber Channel, and 4-Gigabit Fiber Channel
- Digital Diagnostic SFF-8472 compliant
- SFP MSA SFF-8074i compliance
- GR 253/STM G.957 compliance
- Bellcore GR-468 compliance
- Low jitter
- Hot plug-in support
- Low EMI metal enclosure
- Class 1 laser
- RoHS compliance
- 21 CFR 1040.10 and 1040.11 compliance (may carry "UL", "TUV", or "CSA" laboratory certifications)

### Overview

Small Form-Factor Pluggable (SFP) interfaces from MRV Communications provide flexible high speed links in a small industry standard package. They deliver the deployment options and inventory control that network administrators demand for growing networks.

SFPs are designed to Multi-Source Agreement (MSA) standards to ensure network equipment compatibility. They are a perfect addition to the MRV Communications line of Fiber Driver® pluggable media modules and chassis, and they compliment the OptiSwitch® line of routers and switches. With other MRV modular products, they define the ultimate in managed fiber optic networks.

Visit the MRV website at [www.mrv.com](http://www.mrv.com) or contact your nearest authorized MRV Communications dealer for more information.

### Ordering Information

Model	Description	Protocol (Mbps)	Wavelength (nm)	Output Power (dBm)		Min. Receiver Sensitivity (dBm)	Min. Link Budget (dBm)**	Saturation Power (dBm)	BER	Data Rate	Supply Voltage (V)	Oper. Temp. Range (°C)	Digital Diagnostics	Distance Range (km)***
				Min	Max									
<b>SFP-MR2-M</b>	SFP Multi-mode	Multi-rate 100-200	1310	-22	-14	-29	DL*	-14	1.0E <sup>-12</sup> 1.00E <sup>-10</sup> 1.00E <sup>-15</sup>	125 Mbps 155 Mbps 200 Mbps	3.3	0 to 70	No	0 - 2
<b>SFP-MR27D-MMX</b>	SFP Multi-mode Extender	Multi-rate 100-2700	1310	-10	-3	-20	DL*	-3	1.00E <sup>-10</sup> 1.00E <sup>-12</sup>	SONET 1.25 Gbps	3.3	0 to 70	Yes	0 - 1
<b>SFP-MR27D-SR1</b>	SFP Single-mode	Multi-rate 100-2700	1310	-10	-3	-20	10	-3	1.00E <sup>-10</sup> 1.00E <sup>-12</sup>	SONET 1.25 Gbps	3.3	0 to 70	Yes	0 - 20
<b>SFP-MR27D-IR1</b>	SFP Single-mode	Multi-rate 100-2700	1310	-5	0	-20	14	0	1.00E <sup>-10</sup> 1.00E <sup>-12</sup>	SONET 1.25 Gbps	3.3	0 to 70	Yes	0 - 28
<b>SFP-MR27D-IR2</b>	SFP Single-mode	Multi-rate 100-2700	1550	-5	0	-20	14	0	1.00E <sup>-10</sup> 1.00E <sup>-12</sup>	SONET 1.25 Gbps	3.3	0 to 70	Yes	0 - 56
<b>SFP-MR27D-LR1</b>	SFP Single-mode	Multi-rate 100-2700	1310	-2	3	-27	24	-9	1.00E <sup>-10</sup> 1.00E <sup>-12</sup>	SONET 1.25 Gbps	3.3	0 to 70	Yes	20 - 48
<b>SFP-MR27D-LR2</b>	SFP Single-mode	Multi-rate 100-2700	1550	-2	3	-28	24	-9	1.00E <sup>-10</sup> 1.00E <sup>-12</sup>	SONET 1.25 Gbps	3.3	0 to 70	Yes	40 - 96

\* DL - Dispersion Limited

\*\* Dispersion penalty may apply

\*\*\* Maximum range quoted not possible with all wavelengths and/or fiber. Please consult MRV.


**Ordering Information**

Model	Description	Protocol	Wavelength (nm)	Output Power (dBm)		Min. Receiver Sensitivity (dBm)	Min. Link Budget (dBm)**	Saturation Power (dBm)	BER	Data Rate (Gbps)	Oper. Temp. Range (°C)	Digital Diagnostics	Distance Range (km)***
				Min	Max								
<b>SFP-DGD-SX</b>	Dual Rate SFP, Multi-mode	GbE/1 Gbps FC/ 2.1 Gbps FC	850	-10	-2	-18	DL*	0	1.00E <sup>-12</sup>	2.125	-20 to 85	Yes	0 - 0.50
<b>SFP-TGD-SX</b>	Triple Rate SFP, Multi-mode	1.063/2.125/4.25 Gbps FC/1.25 Gbps GbE	850	-10	-2	-15	DL*	0	1.00E <sup>-12</sup>	4.25	-20 to 85	Yes	0 - 0.50
<b>SFP-DGD-LX</b>	Dual Rate SFP, Single-mode	GbE/1 Gbps FC/ 2.1 Gbps FC	1310	-10	-3	-21	10	0	1.00E <sup>-12</sup>	2.125	-40 to 85	Yes	0 - 10
<b>SFP-TGD-SR4</b>	Triple Rate SFP, Single-mode	1.063/2.125/4.25 Gbps FC/1.25 Gbps GbE	1310	-10	3	-18	8	0	1.00E <sup>-12</sup>	4.25	-20 to 85	Yes	0 - 10 (1GFC) 0 - 4 (4GFC)

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MRV has more than 50 offices throughout the world. Addresses, phone numbers, and fax numbers are listed at [www.mrv.com](http://www.mrv.com). Please e-mail us at [sales@mrv.com](mailto:sales@mrv.com) or call us for assistance.

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