SMR CWDM family

SMR-L50-Cxx / SMR-L80-Cxx / SMR-L120-Cxx

1. Product overview

GLOBALfiber multirate SFP optical transceivers provide serial optical data communications for telecom and data networking. This family supports 50 km / 80 km / 120 km over single-mode fiber, with digital diagnostics accessible through an I2C serial interface.

2. Key features

Hot-pluggable SFP; up to 18 CWDM wavelengths; 20 nm channel steps; digital diagnostics; up to 120 km and 31 dB budget.

3. Applications

STM-16 FEC / OC-48 FEC; STM-16 / OC-48; 1G/2G Fibre Channel; Gigabit Ethernet; STM-4 / OC-12; DVB-ASI; ESCON; STM-1 / OC-3. CWDM systems.

4. Technical data

Parameter	Specification
Form factor	Small Form-Factor Pluggable (SFP)
Technical data-rate range	155 Mb/s to 2.67 Gb/s
Fiber	Single-mode
Reach	50 km / 80 km / 120 km
Optical interface	Duplex LC
Wavelengths	1271-1611 nm (50/80/120km)
Diagnostics	Digital diagnostics via I2C; SFF-8472

5. Recommended operating conditions

Parameter	Specification
Operating case temperature	0 to + 70 C
Supply voltage / power consumption	Not specified



Simplified functional illustration - not to scale

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6. Optical characteristics

Product number	Wavelength (nm)	TX output (dBm)	RX sensitivity (dBm)	Budget (dB)
SMR-L50-Cxx	1271-1611	-2 to +3	-20 to -3	18
SMR-L80-Cxx	1271-1611	0 to +5	-28 to -9	28
SMR-L120-Cxx	1271-1611	0 to +5	-31 to -10	31

Receiver ranges are reproduced under the original sensitivity heading; the upper value is not reclassified as overload.

CWDM channel selection

C127 = 1271 nm; C129 = 1291 nm; C131 = 1311 nm; C133 = 1331 nm; C135 = 1351 nm; C137 = 1371 nm; C139 = 1391 nm; C141 = 1411 nm; C143 = 1431 nm; C145 = 1451 nm; C147 = 1471 nm; C149 = 1491 nm; C151 = 1511 nm; C153 = 1531 nm; C155 = 1551 nm; C157 = 1571 nm; C159 = 1591 nm; C161 = 1611 nm. The 120 km model covers C47-C61.

7. Digital diagnostics and management

Digital diagnostic functions are available over the I2C serial bus specified by SFP MSA SFF-8472. Modules are hot-pluggable.

8. Safety and regulatory

ITU G.957 (SDH/SONET); IEEE 802.3 Gigabit Ethernet; ANSI Fibre Channel specifications; SFP MSA; SFF-8472. ITU G.694.2 and G.695. Class 1 laser product: IEC-60825 and FDA 21 CFR 1040.10 / 1040.11. Operate within specified temperature and voltage limits. Terminate optical ports with an optical connector or dust plug.

9. Ordering information

Parameter	Specification
SMR-L50-Cxx	SFP Multirate 100M-2.7G DDM up to 50km, CWDM 1271nm-1611nm 18dB SM
SMR-L80-Cxx	SFP Multirate 100M-2.7G DDM up to 80km, CWDM 1271nm-1611nm 28dB SM
SMR-L120-Cxx	SFP Multirate 100M-2.7G DDM up to 120km, CWDM 1271nm-1611nm 31dB SM

10. General notes

The ordering descriptions use 100M-2.7G; the technical range is 155 Mb/s to 2.67 Gb/s.