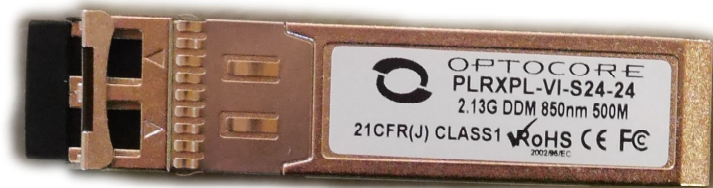
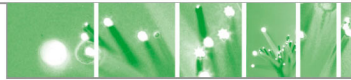


OPTOCORE

RoHS-Compliant 1.063/1.25/2.125 Gbps 850 nm SFP Transceiver PLRXPL-VI-S24-24





This lead-free and RoHS-compliant multirate small form factor pluggable (SFP) transceiver provides superior performance for Fibre Channel and Ethernet applications. The multirate feature enables its use in a wide range of system applications.

It is fully compliant with FC-PI 100-M5/M6-SN-I, 200-M5/M6-SN-I, and 1000BASE-SX specifications. The housing provides superior EMI performance for demanding applications. This transceiver features a highly-reliable 850 nm oxide vertical-cavity surface-emitting laser (VCSEL) coupled to an LC optical connector. Its small size allows for high-density board designs that, in turn, enable greater total aggregate bandwidth.

This transceiver is an upgrade to the now obsolete PLRXPL-VI-S24-22 from JDSU with enhanced performance, using latest advanced Optocore 4th generation design.

Highlights

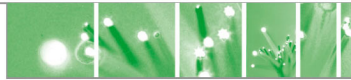
- 1 G FC, 2 G FC, and 1 GE triple-rate performance enables flexible system design and configuration
- Lead free and RoHS compliant per European Directive RoHS 2 (2011/65/EU)
- Enhanced digital diagnostic feature set allows real-time monitoring of transceiver performance and system stability
- Extended voltage and industrial temperature
- MSA SFF-8074i compliant small form factor footprint
- Special SFP+ style housing provides superior EMI performance

Applications

- High-speed storage area networks
 - Switch and hub interconnect
 - Mass storage systems interconnect
 - Host adapter interconnect
- Audio data networks using professional Fiber Channel standard
- Short-reach consumer Ethernet standard

Quick Comparison Table between JDSU PLRXPL-VI-S24-22 and Optocore PLRXPL-VI-S24-24

Parameter	JDSU PLRXPL-VI-S24-22	Optocore PLRXPL-VI-S24-24
Operating Temperature	-20 to +85 °C	-40 to +85 °C
Link Length	350m	500m
Power consumption typ	125mA	130mA
Power consumption max	210mA	200mA
Total Jitter max	0.64UI	0.35UI
Receiver Sensitivity max	-14dBm	-16dBm

**ABSOLUTE MAXIMUM RATINGS**

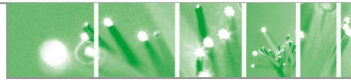
Parameter	Symbol	Min	Max	Unit
Supply Voltage	V_{CC}	-0.5	4	V
Storage Temperature	TS	-40	85	°C
Relative humidity	RH	0	90	%

RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	T_c	-40		85	°C
Power Supply Voltage	V_{CC}	3.13	3.3	3.47	V
Power Supply Current	I_{CC}		130	200	mA
Data Rate		1.0	2.125	2.2	Gbps

OPTICAL AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Typical	Max	Unit
Transmitter					
Centre Wavelength	λ_c	830	850	860	nm
Spectral Width (-20dB)	$\Delta\lambda$		0.5	0.85	nm
Average Output Power	P_{out}	-9		-4	dBm
Extinction Ratio	ER	9			dB
Optical Rise/Fall Time (20%~80%)	$t_{raise/fall}$			150	ps
Optical modulation amplitude	OMA	200	500	1125	μ W
Receiver					
Centre Wavelength	λ_c	770	850	870	nm
Receiver Sensitivity	SENS			-16	dBm
Maximum input power	P_m	0			dBm
LOS De-Assert	LOSD		-24	-18	dBm
LOS Assert	LOSA	-40			dBm
LOS High	VOH	$V_{CC} - 0.5$		V_{CC}	V
LOS Low	VOL	0		0.5	V



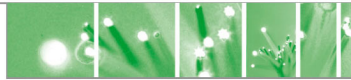
LINK LENGTH

Data rate / standard	Fiber type	Modal bandwidth @850 nm	Distance range (m)
1.0625 GBps	62.5/125 µm MMF OM1	200	.5 to 300
	50/125 µm MMF OM2	500	.5 to 600
	50/125 µm MMF OM3	1500	.5 to 860
	50/125 µm MMF OM4	3500	.5 to 860
1.25 GBps	62.5/125 µm MMF OM1	200	.5 to 275
	50/125 µm MMF OM2	500	.5 to 550
	50/125 µm MMF OM3	1500	.5 to 800
	50/125 µm MMF OM4	3500	.5 to 860
2.125 GBd	62.5/125 µm MMF OM1	200	.5 to 215
	50/125 µm MMF OM2	500	.5 to 500
	50/125 µm MMF OM3	1500	.5 to 590
	50/125 µm MMF OM4	3500	.5 to 710

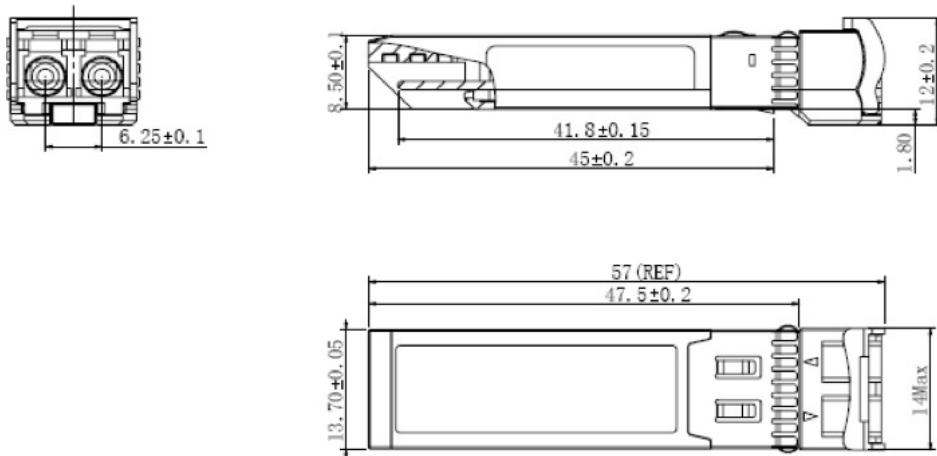
Distances shown above are calculated for worst case fiber and transceiver characteristics based on the optical and electrical specifications using techniques utilized in IEEE802.3. In the nominal case, longer distances are achievable.

REGULATORY COMPLIANCE

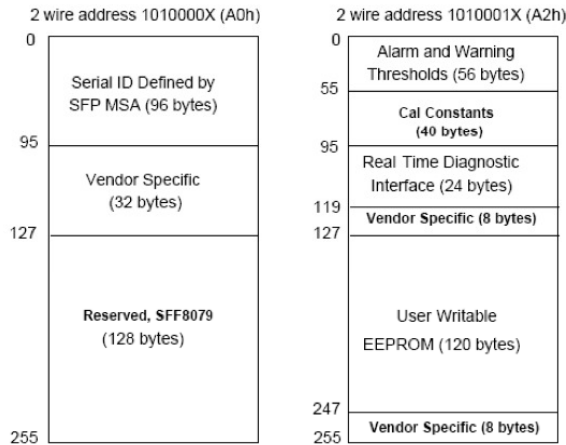
Feature	Test method	Performance
Component safety	UL 60950	UL File E209897 TUV Report/Certificate (CB scheme)
	UL94-V0	
	IEC 60950	
Lead-free and RoHs-compliant	Directive 2011/65/EU	Compliant per the Directive 2011/65/EU of the European Parliament
Laser eye safety	U.S. 21CFR (J) 1040.10	CDRH compliant and Class 1 laser safety
	EN 60825-1,2	
CE	EU Declaration of Conformity	Compliant with European EMC and Safety Standards
Electromagnetic emissions	EMC Directive 89/336/EEC	EMI compatible with FCC Part 15 Class B EN55022 Class B (CISPR 22B) VCCI Class B
	FCC CFR47 Part 15	
	IEC/CISPR 22	
	AS/NZS CISPR22	
	EN55022	
	ICES-003, Issue 4 VCCI-03	
Electromagnetic immunity	EMC Directive 89/336/EEC	compatible with MIL-STD-883 Method 3015
	IEC/CISPR/24	
	EN 55024	
ESD immunity	EN 61000-4-2	Exceeds requirements. Withstand discharges of: 8 kV contact, 15kV and 25kV Air
Radiated immunity	EN61000-4-3	Exceeds requirements. Field strength of 10 V/m RMS, from 10 MHz to 1GHz. No effect on transceiver performance is detectable between these limits.



DIMENSIONS (in mm)



Digital Diagnostic Monitoring Interface



Parameter	Range	Accuracy	Calibration
Temperature	-40 to +85 °C	±3°C	Internal
Voltage	2.97 to 3.63V	±3°C	Internal
Bias Current	0 to 100mA	±10%	Internal
TX Power	-9 to -4dBm	±3dB	Internal
RX Power	-18 to 0dBm	±3dB	Internal

All monitored data is internally calibrated. No external calibration is necessary.