

25G_SFP28_SR_Optical Engine

Product Specification Data

Product Name: QM_25G_SFP28_SR_OE

Part Number: 10000027/10001337

Record Number: TS09018

Version: A3

Date: 2025.02.24

Features

- Support 25GBASE-SR/25G Fiber Channel application
- Transmission distance up to 70m (OM3)
- LC optical cable connection
- +3.3V single power supply
- Low power consumption
- Operating case temperature
Commercial: 0°C~70°C
- RoHS compliant



Applications

- 25 Gigabit Ethernet
- InfiniBand QDR, DDR, SDR
- High-performance computing clusters
- Servers, switches, storage and host card adapters

Standards

- Compliant with SFF-8431
- Compliant with SFF-8432

ESD

- ESD compatible with MIL-STD-883 method 3015

Laser Safety

- Laser eye safety compatible with FDA 21CFR 1040.10 and 1040.11 EN60950, EN (IEC) 60825-1,2

Absolute Maximum Ratings

Parameters	Symbol	Min.	Typical	Max.	Unit	Notes
Storage Temperature	T_s	-40		+85	°C	
Supply Voltage	V_{CC}	-0.5		+3.6	V	
Operating Humidity	RH	+5		+85	%	1

Note: 1 No condensation

Recommended Operating Condition

Parameters	Symbol	Min.	Typical	Max.	Unit	Notes
Supply Voltage	V_{CC}	3.135	3.3	3.465	V	
Power Supply Current	I_{CC}			300	mA	
Power Consumption	P_c			1.0	W	
Operating Case Temperature	T_c	0		70	°C	
Bit Rate	BR		25.78125		Gb/s	

Transceiver Optical and Electrical Specification

Module Specification

Parameters	Symbol	Min.	Typical	Max.	Unit	Notes
Bit Rate	BR		25.78125		Gb/s	
Link Length on (OM3) MMF	L			70	m	1

Note: 1 Maximum link length of 70m on OM3 MMF and 100m on OM4 MMF.

Transmitter Specification

Unless specified else, the specifications below are defined at $T_c=25\pm3^\circ\text{C}$

Parameters	Symbol	Min.	Typical	Max.	Unit	Notes
Center Wavelength Range	λ_c	840	850	860	nm	
RMS spectral width	$\Delta\lambda$			0.6	nm	
Average Optical Power	P_o	-5		2.4	dBm	
Extinction Ratio	ER	2.5	4.5		dB	
Optical Eye Mask	-	5			%	1
Power Supply	V_{CC}	3.135	3.3	3.465	V	
Input Differential Impedance	Z_{in}	90	100	110	Ω	
Differential Data Input voltage	V_{ppin}	200		1000	mV	

Receiver Specification

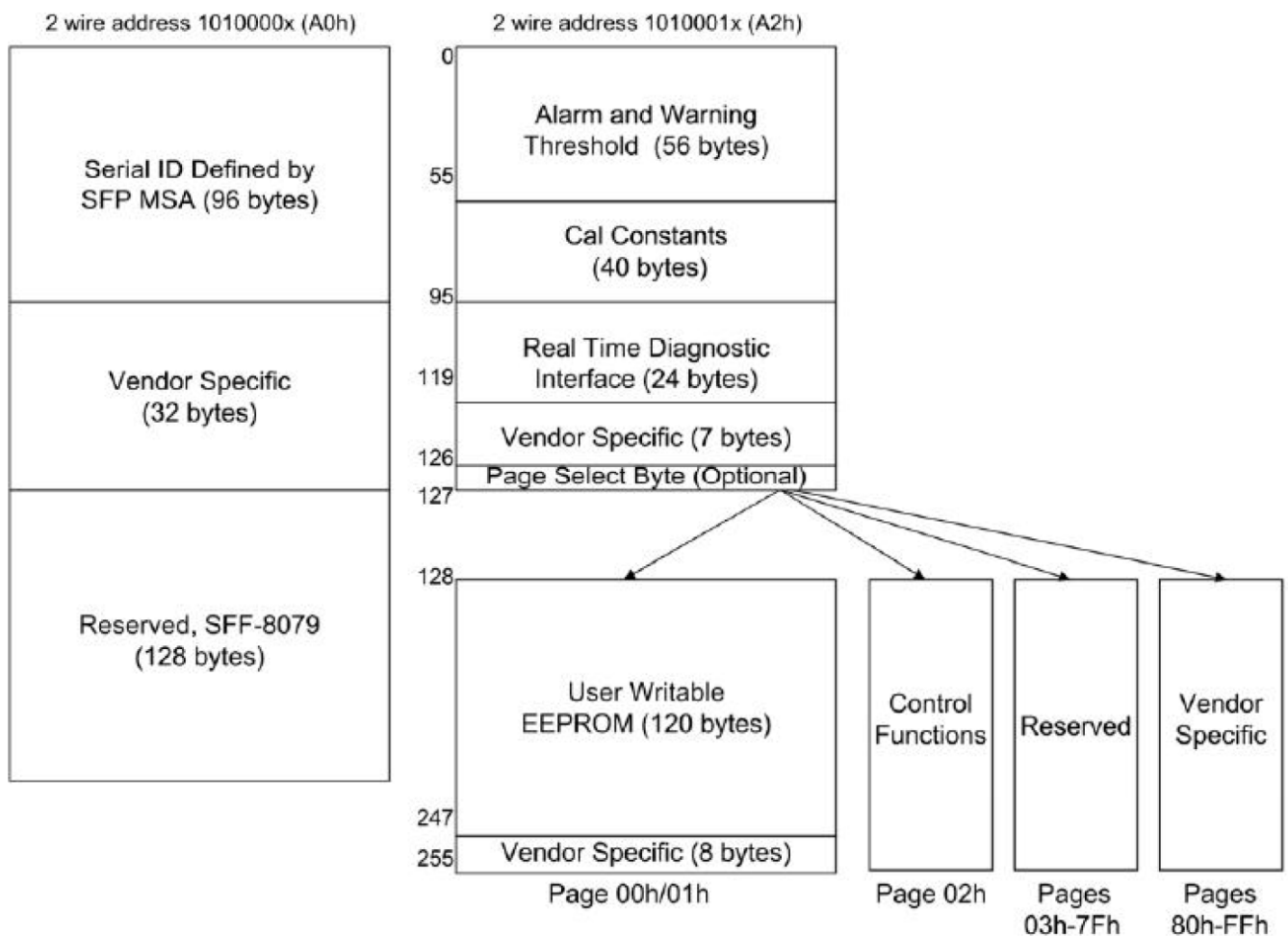
Unless specified else, the specifications below are defined at $T_C=25\pm3^\circ\text{C}$

Parameters	Symbol	Min.	Typical	Max.	Unit	Notes
Center Wavelength Range	λ_c	840	850	860	nm	
Receiver Sensitivity	Sen			-10.3	dBm	1
Receiver Sensitivity	Sen			-5.2	dBm	2
Overload Input Optical Power	P_{in}	2.4			dBm	
LOS De-Assert	$LOSD$			-13	dBm	
LOS Assert	$LOSA$	-30			dBm	
LOS Hysteresis	$LOSH$	0.5			dB	
Output Differential Impedance	Z_{out}	90	100	110	Ω	
Differential Data Output Swing	$V_{pp_{out}}$	200		1000	mV	

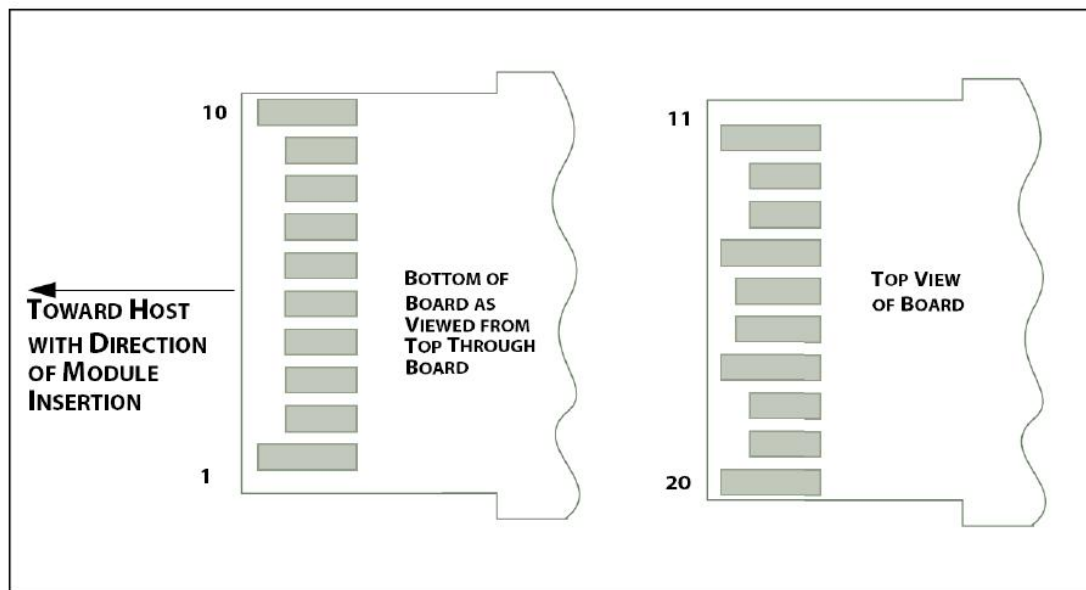
Note:

1. Measured with PRBS $2^{31}-1$ test pattern @25.78125Gbps and BER=5E-5.
2. Measured with PRBS $2^{31}-1$ test pattern @25.78125Gbps and BER=1E-12.

Monitoring Specification



Electrical Connections

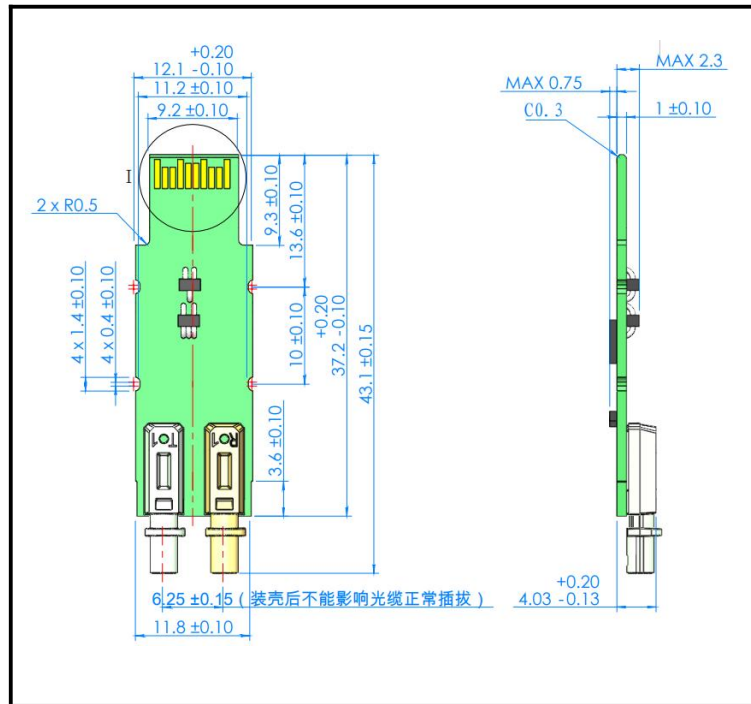


PIN Description

Pin	Symbol	Name/Description
1	V _{EE} T	Transmitter Ground
2	TX_FAULT	Transmitter Fault Indication
3	TX_DISABLE	Transmitter Disable
4	SDA	Module Definition 2
5	SCL	Module Definition 1
6	MOD_ABS	Module Definition 0
7	RS0	Rx Rate Select(L VTTL)
8	LOS	Loss of Signal
9	RS1	TX Rate Select (LVTTL)
10	V _{EE} R	Receiver Ground
11	V _{EE} R	Receiver Ground
12	RD-	Receiver Inverted Data Output
13	RD+	Receiver Non-Inverted Data Output
14	V _{EE} R	Module Receiver Ground
15	V _{EE} R	Module Receiver Ground
16	V _{CC} T	Module Transmitter 3.3 V Supply
17	V _{EE} T	Module Transmitter Ground
18	TD+	Transmitter Non-Inverted Data Input
19	TD-	Transmitter Inverted Data Input
20	V _{EE} T	Module Transmitter Ground

Mechanical Outline Dimensions

10000027/10001337:



(Unit: mm)

Product list

Part Number	Product Name	Note
10000027	光引擎_850nm_25G_SFP28_SR_100m_LC_1*1_J97	II-VI PD
10001337	光引擎_850nm_25G_SFP28_SR_100m_LC_1*1_J97	三安 PD