25G SFP28 AOC Optical Engine

Product Specification Data

Product Name: QM_25G_SFP28_AOC_OE

Part Number: 10000010/10001422

Record Number: TS09017

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℃~70℃
- RoHS compliant

Applications

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

Standards

- Compliant to SFP+ Electrical MSA SFF-8431
- Compliant to SFP+ Mechanical MSA SFF-8432
- Compliant to Digital Monitoring SFF-8472

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	℃	
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	℃	
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 100m on OM4 MMF.

Transmitter Specification

Unless specified else, the specifications below are defined at T_C=25±3℃

Parameters	Symbol	Min.	Typical	Max.	Unit	Notes
Power Supply	V_{CC}	3.135	3.3	3.465	V	
Input Differential Impedance	Z_{in}	90	100	110	Ω	
Differential Data Input Swing	Vpp_{in}	200		1000	mV	

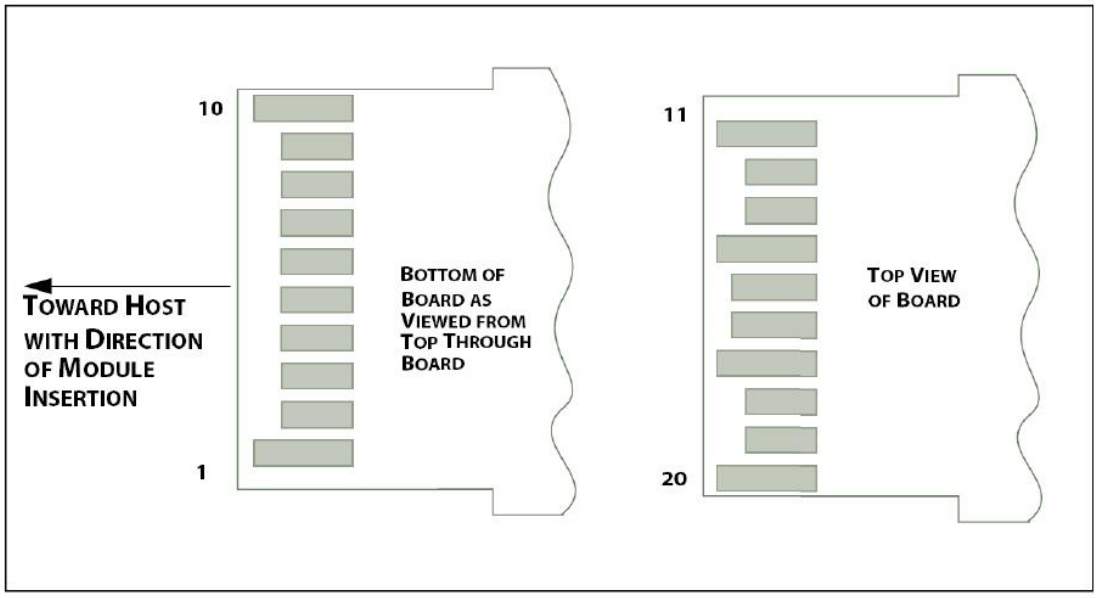
Receiver Specification

Unless specified else, the specifications below are defined at T_C=25±3℃

Parameters	Symbol	Min.	Typical	Max.	Unit	Notes
Output Differential Impedance	Z_{out}	90	100	110	Ω	
Differential Date Output Swing	Vpp_{out}	200		1000	mV	
Bit Error Rate	*BER*			5E-5		1

Note: 1 Measured with PRBS 2^{31}-1 test pattern @ 25.78125Gb/s.

Electrical Connections

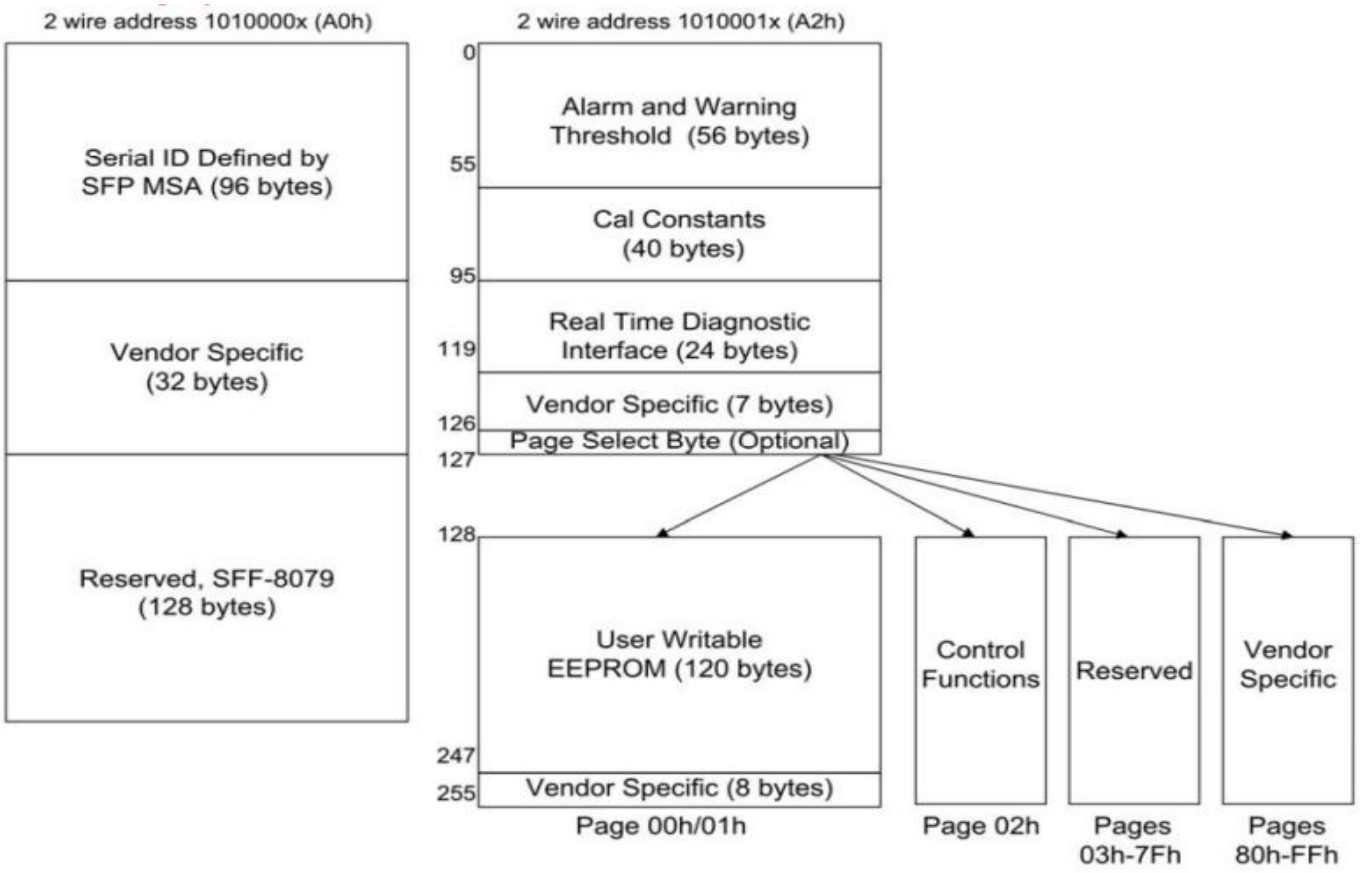


PIN Description

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

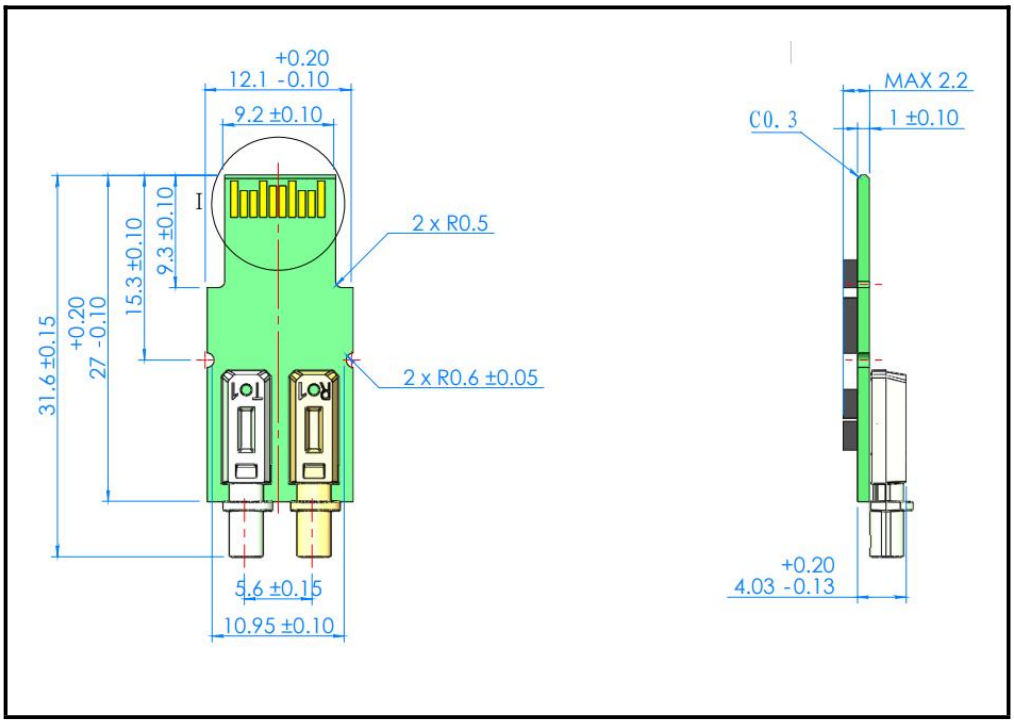
13	RD+	Receiver Non-Inverted Data Output
14	$V_{EE}R$	Module Receiver Ground
15	$V_{EE}R$	Module Receiver Ground
16	$V_{CC}T$	Module Transmitter 3.3 V Supply
17	$V_{EE}T$	Module Transmitter Ground
18	TD+	Transmitter Non-Inverted Data Input
19	TD-	Transmitter Inverted Data Input
20	$V_{EE}T$	Module Transmitter Ground

Monitoring Specification



Mechanical Outline Dimensions

10000010/10001422:



(Unit:mm)

Product list

Part Number	Product Name	Note
10000010	光引擎_850nm_25G_SFP28_AOC_100m_LC_1*1_J97	II-VI PD
10001422	光引擎_850nm_25G_SFP28_AOC_100m_LC_1*1_J97	三安 PD