

Features

- 8x100G PAM4 data rates
- Hot pluggable OSFP form factor
- 5nm DSP for low power dissipation: < 1.4 W
- Electrical interface compliant with 100G bps per lane defined by IEEE 802.3ck
- I2C Management interface compliant to CMIS Rev 5.0
- Compliant with 100G Lambda MSA 400G-LR4-10
- Internal CDR on both Transmitter and Receiver channels
- OSFP MSA package with Dual LC connectors
- Cooled 1271/1291/1311/1331 EML Laser
- Up to 10 km on 9/125um SMF
- Single +3.3V power supply



- Class 1 Laser safety certified
- Operating case temperature range: 0°C to 70°C
- RoHS 6 Compliant

Applications

- High speed storage area networks
- 2x400G-LR4 applications

1. Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TS	-40	85	°C
Relative Humidity	RH	5	95	%
Supply Voltage	VCC	-0.5	3.6	V

2. Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Temperature	TC	0	40	70	°C
Supply Voltage	VCC	3.135	3.3	3.465	V
Data Rate		-	106.25	-	Gb/s

3. Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Module Supply Current	I _{cc}	-	-	4.47	A	
Power Dissipation	PD	-	-	14	W	
Transmitter						
Input Differential Impedance	Z _{IN}	90	100	110	Ω	
Differential Data Input Swing	V _{IN} , P-P	-	-	845	mVP-P	
DC Common-Mode Input Voltage		-350	-	2850	mV	
Receiver						
Output Differential Impedance	Z _O	90	100	110	Ω	
Differential Data Output Swing	V _{OUT} , P-P	-	-	750	mVP-P	1
Dual Function Signals						
INT/RSTn	V_INT/RSTn_1	0.000	0.000	1.000	V	2
	V_INT/RSTn_2	0.000	0.000	1.000	V	3
	V_INT/RSTn_3	1.500	1.900	2.250	V	4
	V_INT/RSTn_4	2.750	3.000	3.465	V	5
LPWn/PRSn	V_LPWn/PRSn_1	0.000	0.950	1.100	V	6
	V_LPWn/PRSn_2	1.400	1.700	2.250	V	7
	V_LPWn/PRSn_3	2.750	3.300	3.465	V	8

Notes:

- Internally AC coupled, but requires an external 100Ω differential load termination.
- INT/RSTn voltage for no Module
- INT/RSTn voltage for Module installed, H_RSTn=Low.
- INT/RSTn voltage for Module installed, H_RSTn=High, M_INT=Low.
- INT/RSTn voltage for Module installed, H_RSTn=High, M_INT= High.
- LPWn/PRSn voltage for Module installed, H_LPWn=Low.
- LPWn/PRSn voltage for Module installed, H_LPWn =High
- LPWn/PRSn voltage for no Module.

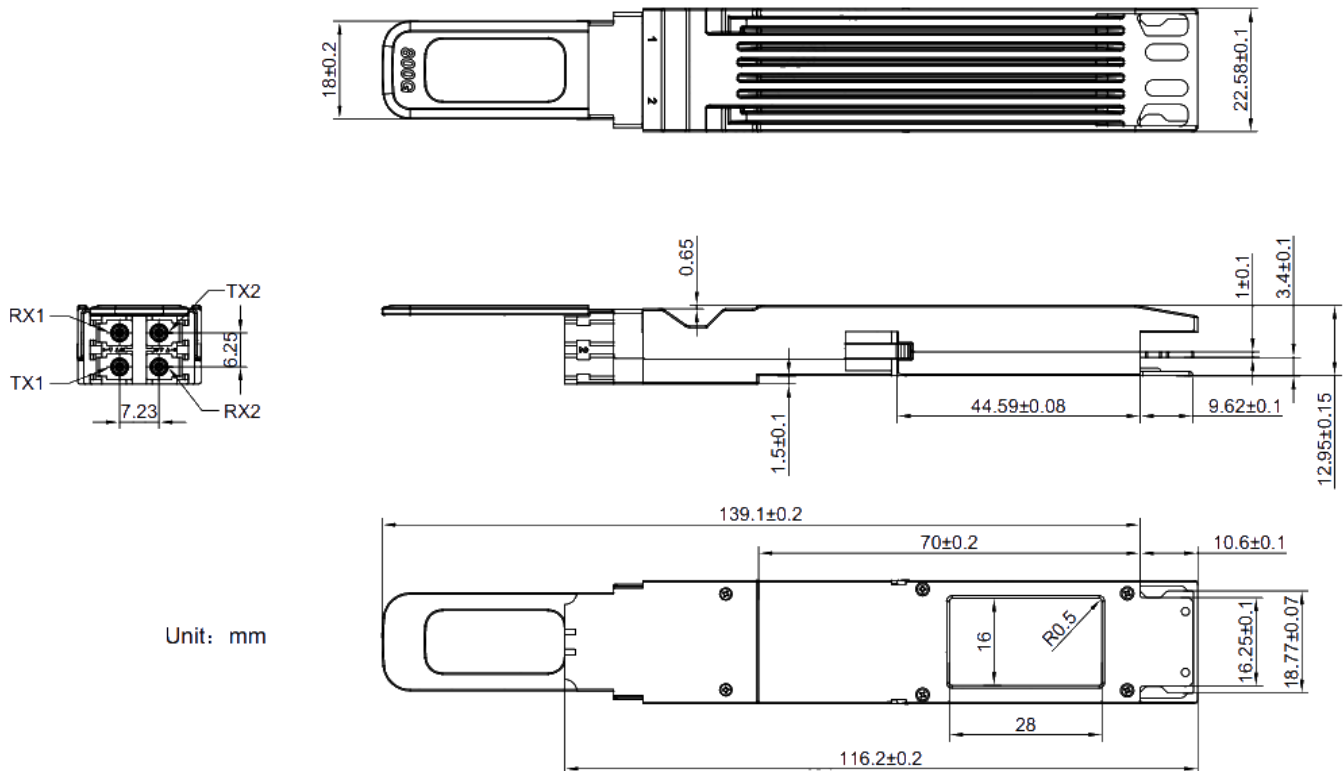
4. Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Average Optical Power per Channel	Pavg	-2.7	-	5.1	dBm	1
OMA per Channel	Poma	0.3	-	4.4	dBm	1
Extinction Ratio	ER	3.5	-	-	dB	
Center Wavelength Range	CH1	1264.5	1271.5	1277.5	nm	1
	CH2	1284.5	1291.5	1297.5	nm	1
	CH3	1304.5	1311.5	1317.5	nm	1
	CH4	1324.5	1331.5	1337.5	nm	1
	CH5	1264.5	1271.5	1277.5	nm	1
	CH6	1284.5	1291.5	1297.5	nm	1
	CH7	1304.5	1311.5	1317.5	nm	1
	CH8	1324.5	1331.5	1337.5	nm	1
Side Mode suppression Ratio	SMSR	30	-	-	dB	5
PAM4 TDECQ		-	-	3.9	dB	
Optical Return Loss Tolerance	ORLT	-	-	15.6	dB	
Pout of OFF transmitter, each lane	Poff	-	-	-30	dBm	
Receiver						
Center Wavelength Range	CH1	1264.5	1271.5	1277.5	nm	1
	CH2	1284.5	1291.5	1297.5	nm	1
	CH3	1304.5	1311.5	1317.5	nm	1
	CH4	1324.5	1331.5	1337.5	nm	1
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	CH7	1304.5	1311.5	1317.5	nm	1
	CH8	1324.5	1331.5	1337.5	nm	1
Receiver Sensitivity (OMA)	RxSENS	-	-	-6.8	dBm	
Receiver Overload (Pavg)	POL	4.4	-	-	dBm	2
Receiver reflectance		-	-	-26	dB	
LOS De-Assert	LOSD	-	-	-10	dBm	3
LOS Assert	LOSA	-16	-	-	dBm	3
LOS Hysteresis		0.5	-	-	dB	

Notes:

1. 13nm width.
2. Per Channel.
3. Average power.
4. Class 1 Laser Safety per FDA/CDRH and EN (IEC) 608 25 regulations.
5. Modulated

5. Mechanical Diagram



Note: External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

6. Ordering Information

OEM	Part Number	OEM	Part Number
Arista	OSFP-800G-2LR4-A	MSA	AN-O800G-FIN-2LR4

7. Contact Information

Tel: 800.590.9535

Web: <http://www.approvednetworks.com>