

PRE-QSFP56DD-ZRPHT

QSFP-DD, OpenZR+, 0dBm, Tunable, C-Band, 400G,
80km (unamplified)



Product Features:

- Full DWDM C-band Tunable
- Digital Coherent Optics
- Up to +1dBm TX Power
- 1000km+ Reach (Amplified)
- 80km Reach (Unamplified)
- Duplex LC-UPC Connector
- C-Temp
- <23.5W Power Consumption
- Digital Diagnostics Monitoring (DDM) and Versatile Diagnostics Monitor (VDM)



Product Applications:

- Data Center Interconnect
- ROADM and Long Haul Networks
- DWDM 400G Ethernet

Compliance:

- QSFP-DD
- OpenZR+ and OIF 400ZR
- CMIS and C-CMIS
- RoHS

General Specifications:

Parameter	Min	Typical	Max	Unit
Case Operating Temperature	0	-	70	°C
Power Consumption	-	-	23.5 ¹	W
Power Supply Voltage	3.14	3.3	3.46	V
Operating Humidity	5	-	95	%
Storage Temperature	-40	-	85	°C
Transmission Distance (PtP)	-	-	80 ²	km
Transmission Distance (OLS)	-	-	1000 ³	km
Data Rate (Total)	100	-	481	Gbps

¹ The actual Power Consumption will vary depending on the application selected.

² Unamplified, Single Wave Point to Point

³ Line System, dispersion limited links, G.652 fiber. Max reach will depend on network design and application configured.

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Applications

HOST				MEDIA				
Host IF	FEC	Modulation	Baud Rate (GBd)	Line Rate	Mode	FEC	Modulation	Baud Rate (GBd)
1x 400GAUI-8	RS(544,514)	PAM4	26.5625	400G	400ZR	C-FEC	DP-16QAM	59.8438
4x 100GAUI-2	RS(544,514)	PAM4	26.5625	400G	400ZR	C-FEC	DP-16QAM	59.8438
1x 400GAUI-8	RS(544,514)	PAM4	26.5625	400G	ZR400-OFEC-16QAM	O-FEC	DP-16QAM	60.1385
4x 100GAUI-2	RS(544,514)	PAM4	26.5625	400G	ZR400-OFEC-16QAM	O-FEC	DP-16QAM	60.1385
3x 100GAUI-2	RS(544,514)	PAM4	26.5625	300G	ZR300-OFEC-8QAM	O-FEC	DP-8QAM	60.1385
2x 100GAUI-2	RS(544,514)	PAM4	26.5625	200G	ZR200-OFEC-QPSK	O-FEC	DP-QPSK	60.1385
1x 100GAUI-2	RS(544,514)	PAM4	26.5625	100G	ZR100-OFEC-QPSK	O-FEC	DP-QPSK	30.0693

Optical Characteristics: Transmitter

Parameter	Min	Typical	Max	Unit
Tx Output Power Range	-6	-	1	dBm
Tx Output Power Resolution	-	-	0.1	dB
Tx Output Power Accuracy	-1	-	1	dB
Tx Output Power Stability	-1	-	1	dB
In-band OSNR	38	-	-	dB
Out-of-Band OSNR	40	-	-	dB
Tx Disable Power	-	-	-20	dBm
Tx Reflectance	-	-	-20	dB
Frequency Range	191.3	-	196.1	THz
Frequency Fine Tuning	3.125	-	100	GHz

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Optical Characteristics: Receiver

Parameter		Min	Typical	Max	Unit
Rx Input Power (Unamplified OSNR>35dB)	400ZR	-20	-	0	dBm
	ZR400-OFEC-16QAM	-22		0	
	ZR300-OFEC-8QAM	-26		0	
	ZR200-OFEC-QPSK	-30		0	
	ZR100-OFEC-QPSK	-32		0	
Rx Input Power (Amplified)	400ZR	-12	-	0	dBm
	ZR400-OFEC-16QAM	-12		0	
	ZR300-OFEC-8QAM	-15		0	
	ZR200-OFEC-QPSK	-18		0	
	ZR100-OFEC-QPSK	-18		0	
Rx OSNR Tolerance	400ZR	-	-	26	dB/0.1nm
	ZR400-OFEC-16QAM			24	
	ZR300-OFEC-8QAM			21	
	ZR200-OFEC-QPSK			16	
	ZR100-OFEC-QPSK			12.5	
CD Tolerance	400ZR	-	-	2,400	ps/nm
	ZR400-OFEC-16QAM			20,000	
	ZR300-OFEC-8QAM			40,000	
	ZR200-OFEC-QPSK			50,000	
	ZR100-OFEC-QPSK			100,000	

Product Ordering Information

Part Number	Description
PRE-QSFP56DD-ZRPHT	QSFP-DD, OpenZR+, 0dBm, Tunable, C-Band, 400G, 80km (unamplified), SMF/LC, C-Temp

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