



DMQ56DD-OZR

Optical Transceiver QSFP56DD 400G OpenZR+

DMQ56DD-OZR-HPMR

Optical Transceiver QSFP56DD 400G OpenZR+ High-Power/Multi-Rate

PRODUCT DESCRIPTION

OPENZR+ 400G OPTICAL TRANSCEIVERS

This document describes the characteristics of Datacom's OpenZR+ 400G optical transceiver line. The line is available in two distinct models: the Standard model and the High Power Multi-Rate model. The following chapters present the detailed technical characteristics of each model.

GENERAL FEATURES

	DMQ56DD-OZR	DMQ56DD-OZR-HPMR
Description	QSFP56DD 400G OpenZR+ OPTICAL TRANSCEIVER	QSFP56DD 400G OpenZR+ High-Power/Multi-Rate OPTICAL TRANSCEIVER
Code / PN	377.1504.00	377.1508.00
Client-Side Interfaces (internal electrical)	1*400GAUI-8 4*100GAUI-2	400GAUI-8/4*100GAUI-2 3*100GAUI-2 2*100GAUI-2/2*CAUI-4 100GAUI-2/CAUI-4
Line-Side Interfaces (optics)	ZR400-OFEC-16QAM	ZR400-OFEC-16QAM ZR300-OFEC-8QAM ZR200-OFEC-QPSK ZR100-OFEC-QPSK
CMIS version	CMIS 4.0	CMIS 5.0
Grid	Supports Flex-grid channel spacing DWDM in C-band	
Form Factor	Standard QSFP-DD Type 2A form factor	
MSA	QSFP-DD MSA compliant connector	
Standard	OpenZR+	
RoHS	RoHS compliant	

HOST AND MEDIA INTERFACE

DMQ56DD-OZR	DMQ56DD-OZR-HPMR	Application Code (AppSel)	Host				Media		
			Host Interface	Application Data	Lane Count	Modulation	Payload	Modulation	FEC
✓	✓	1	1*400GAUI-8	400 GbE	8	PAM4	400G	DP-16QAM	oFEC
✓	✓	2	4*100GAUI-2	4*100 GbE	8	PAM4	400G	DP-16QAM	oFEC
	✓	3	3*100GAUI-2	3*100 GbE	3*2	PAM4	300G	DP-8QAM	oFEC
	✓	4	2*100GAUI-2	2*100 GbE	2*2	PAM4	200G	DP-QPSK	oFEC
	✓	5	2*CAUI-4	2*100 GbE	2*4	NRZ	200G	DP-QPSK	oFEC
	✓	6	100GAUI-2	100 GbE	2	PAM4	100G	DP-QPSK	oFEC
	✓	7	CAUI-4	100 GbE	4	NRZ	100G	DP-QPSK	oFEC

OPERATION CONDITIONS

PARAMETER		DMQ56DD-OZR	DMQ56DD-OZR-HPMR
Operating temperature (case temperature)		0 a 70 °C	
RX Optical Input Damage Threshold		10 dBm	
RX Optical Maximum Input Power		0 dBm	
Power Dissipation	ZR400-16QAM	21 W	22 W
	ZR300-8QAM	-	22 W
	ZR200-QPSK	-	22 W
	ZR100-QPSK	-	18 W

OPTICAL TRANSMISSION PARAMETERS

PARAMETER	DMQ56DD OZR	DMQ56DD OZR-HPMR	NOTES
Transmitter Output Power Range	-12 to -8 dBm	-5 to +1 dBm*	*This is the minimum provisionable range. There are tolerances involved that may alter this value. For projects, consider 0dBm as the maximum guaranteed for the TX of the HP+MR model.
Transmitter Frequency Range	191,3 to 196,1 THz		ITU-T C grid band
Laser Frequency Stability	±1,8 GHz		Frequency stability relative to the ITU-T grid
Output Power Stability	±0,5 dB		Difference between configured and delivered
Output Power Accuracy	±2 dB		Difference between power delivered and read by digital diagnosis
Transmitter Turn-up Time from Cold Start	<120s		
Transmitter OSNR (Inband)	>34 dB/0,1nm		

OPTICAL RECEPTION PARAMETERS

PARAMETER		DMQ56DD OZR	DMQ56DD OZR-HPMR
Receiver Frequency Range		191,3 to 196,1 THz	
Input Power Reading Accuracy - Diferença entre potência recebida e lida pelo diagnóstico digital		±2 dB	
Input Power Range (dBm)	ZR400-16QAM, OSNR ≥ 24db/0,1nm	-12 to 0	
	ZR300-8QAM, OSNR ≥ 21db/0,1nm	-	-15 to 0
	ZR200-QPSK, OSNR ≥ 16db/0,1nm		-18 to 0
	ZR100-QPSK, OSNR ≥ 12,5db/0,1nm		
Receiver Sensitivity (dBm)	ZR400-16QAM, OSNR ≥ 34dB/0,1nm	-20	-22
	ZR300-8QAM, OSNR ≥ 34dB/0,1nm	-	-26
	ZR200-QPSK, OSNR ≥ 34dB/0,1nm		-28
	ZR100-QPSK, OSNR ≥ 34dB/0,1nm		-28
CD Tolerance (ps/nm)	ZR400-16QAM	>9000	>12000
	ZR300-8QAM	-	>20000
	ZR200-QPSK		>30000
	ZR100-QPSK		>50000
PMD Tolerance (ps)	ZR400-16QAM	>20	
	ZR300-8QAM	-	>25
	ZR200-QPSK		>25
	ZR100-QPSK		>30
Optical Return Loss (dB) - Optical reflectance at the Rx connector input		>20	

LASER SAFETY

This is a Class 1 laser product.

Do not look directly into the transmitter fiber connector at any time while the module is in operation.

LEGAL NOTICE

Although all precautions have been taken in the preparation of this document, DATACOM assumes no responsibility for any errors or omissions, nor any liability for damages resulting from the use of the information contained in this manual. The specifications provided in this manual are subject to change without notice and are not to be construed as any form of contract.

© 2020 DATACOM - All Rights Reserved.

WARRANTY

This product is guaranteed against defects in material and workmanship for the period specified on the sales invoice.

The warranty covers only the repair and replacement of defective components or parts at no cost to the customer. Defects resulting from: improper use of the transceiver, electrical network failures, natural phenomena (such as lightning-induced surges), failure of equipment connected to this product, inadequate grounding installations, or repairs performed by unauthorized personnel, are not covered.

This warranty does not cover on-site repairs at the customer's premises. Transceivers must be sent to DATACOM for repair.

For more details, please refer to our warranty policy on the website www.datacom.com.br.

Phone contact: +55 51 3933-3094

CONTACTS

TECHNICAL SUPPORT

DATACOM provides a call center for technical support during setup and use of the equipment, as well as technical assistance for repairs and maintenance.

Website: <https://supportcenter.datacom.com.br>

Phone: +55 51 3933-3122

SALES

E-mail: comercial@datacom.com.br

Phone: +55 51 3933-3000

GENERAL INFORMATION

For any additional information, visit <http://www.datacom.com.br> and access Datacom Connection Magazine.

For other inquiries, please contact:

DATACOM

Rua América, 1000 | 92990-000 | Eldorado do Sul | RS | Brazil

Phone: +55 51 3933-3000

DATACOM

Rua América, 1000 | 92990-000 | Eldorado do Sul | RS | Brasil

+55 51 3933 3000

www.datacom.com.br