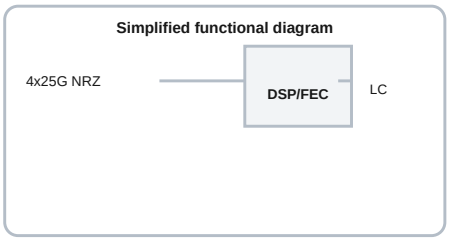
QSFP28-BX20D-23

QSFP28, BiDi, 100GbE-LR, 20km

Tx/Rx=1270/1330nm, SM, LC

1. Product overview

100G BiDi QSFP28 transceiver for 20 km over a single strand of SMF using a simplex LC interface. The module uses one PAM4 optical lane at 106.25 Gb/s and a 4x25.78 Gb/s NRZ CAUI-4 host interface. It is paired with the complementary wavelength version.



2. Key features

- Supports 100GBASE-LR1-20 BiDi
- 106.25 Gb/s PAM4 optical signaling
- EML laser and PIN receiver
- 4x25.78 Gb/s NRZ CAUI-4 electrical interface
- Simplex LC connector with I2C digital diagnostics
- Maximum power consumption 4 W; 0°C to +70°C

3. Applications

- 100GBASE-LR1-20 BiDi

4. Technical data

Parameter	Value	Parameter	Value
Technology	100G QSFP28 BiDi LR1	Media	SMF, simplex LC
Reach	20 km	Tx/Rx	1270/1330 nm
Optical rate	106.25 Gb/s PAM4	Host	4x25.78 Gb/s NRZ
Power	4 W	DDM	I2C / SFF-8636

5. Recommended operating conditions

Parameter	Specification
Operating case temperature	0°C to +70°C
Supply voltage	3.13 / 3.3 / 3.47 V
Supply current	up to 1.21 A
Transmission distance	20 km

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6. Optical characteristics

Parameter	Specification
Transmitter	
Center wavelength	1264.5 / 1271 / 1277.5 nm
Average launch power	-0.2 to +6.6 dBm
OMAouter	+2.8 to +6.8 dBm
Launch power in OMA minus TDECQ, ER ≥4.5 dB	-0.7 dBm
Launch power in OMA minus TDECQ, ER <4.5 dB	-0.6 dBm
TDECQ max	3.6 dB
TX off power	-15 dBm
SMSR	30 dB
Extinction ratio	3.5 dB
Receiver	
Center wavelength	1324.5 / 1331 / 1337.5 nm
Damage threshold	+7.6 dBm
Average RX power	-10 to +6.6 dBm
Receive power OMAouter	+6.8 dBm max
Receiver sensitivity OMAouter	-7.6 dBm
LOS assert	-26 to -12 dBm
LOS de-assert	-11 dBm
LOS hysteresis	0.5 dB

7. Digital diagnostics and management

Parameter	Specification
Management interface	2-wire serial / I2C through QSFP28 management interface
Digital diagnostics	Temperature, supply voltage, TX bias/power and RX power where implemented
Module controls	ModSelL, ResetL, LPMode, ModPrsL and IntL as applicable
Form factor	Hot-pluggable QSFP28, 38-pin host interface

8. Safety and regulatory

RoHS compliance and normal ESD handling precautions apply. Where stated in the source specification, the optical module is a Class 1 laser product and must be handled in accordance with applicable laser-safety requirements.

9. Ordering information

Ordering number	Product description
Q100G-BX20D-23	QSFP28, BiDi, 100GbE-LR, 20km; Tx/Rx=1270/1330nm

10. General notes

Specifications in this two-page summary are condensed from the supplied GLOBALfiber source data sheet. Values and terminology are retained from the source; no external specifications have been substituted.

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