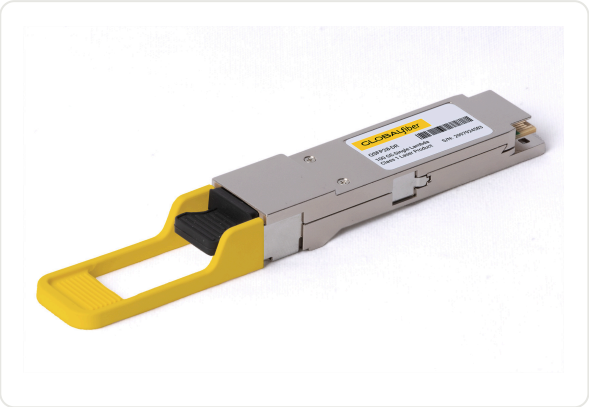
QSFP28 100G DR1 500m

QSFP28 transceiver · 100G · 1311 nm · 500 m SMF · Duplex LC · NVIDIA compatible

The GLOBALfiber Q100G-DR1-NVE is a 100G QSFP28 transceiver for NVIDIA Ethernet networks. It uses 1 × 100G PAM4 lanes at 1311 nm for links up to 500 m SMF over Duplex LC. The module is coded for NVIDIA equipment and is available with Ethernet coding.



KEY FEATURES

- QSFP28 form factor
- 100G, 1 × 100G PAM4, 53.125 GBd
- Wavelength 1311 nm
- Reach up to 500 m SMF
- Duplex LC optical connector
- Max. power consumption 4 W
- Digital diagnostics (DDM), hot-pluggable
- Case temperature 0 to +70 °C

APPLICATIONS & COMPATIBILITY

- NVIDIA switches: Spectrum SN2700/SN2100, Spectrum-2 SN3700C, Spectrum-3 SN4600C
- NVIDIA adapters / systems: ConnectX-4, ConnectX-5, ConnectX-6, ConnectX-6 Dx, ConnectX-7, BlueField-2/3
- Replaces NVIDIA MMS1V70-CM

KEY SPECIFICATIONS

Form factor	QSFP28
Data rate	100G
Lanes	1 × 100G PAM4, 53.125 GBd
Wavelength	1311 nm
Reach	500 m SMF
Connector	Duplex LC
Fiber	Singlemode
Max. power	4 W
Case temperature	0 to +70 °C
Protocol	Ethernet (EDR / 100GbE)

ORDERING INFORMATION

GLOBALfiber item	Coding	Replaces NVIDIA	Description
Q100G-DR1-NVE	ETH Ethernet	MMS1V70-CM	QSFP28 100G DR1 500m

Choose the coding that matches the host: InfiniBand for NVIDIA Quantum switches, Ethernet for NVIDIA Spectrum switches. Other coding on request: salg@globalfiber.no.

ABSOLUTE MAXIMUM RATINGS

Parameter	Min	Max	Unit
Supply voltage	-0.5	3.6	V
Control input voltage	-0.3	Vcc+0.5	V
Storage temperature	-40	85	°C
Relative humidity (non-condensing)	5	95	%

RECOMMENDED OPERATING CONDITIONS

Parameter	Min	Typ	Max	Unit
Case temperature	0	–	70	°C
Supply voltage	3.135	3.3	3.465	V
Power consumption	–	–	4	W
Link distance	2	–	500	m

OPTICAL CHARACTERISTICS – TRANSMITTER (PER LANE)

Parameter	Min	Typ	Max	Unit
Center wavelength	1304.5	1311	1317.5	nm
Side-mode suppression ratio	30	–	–	dB
Average launch power	-2.9	–	4.0	dBm
OMA outer	-0.8	–	4.2	dBm
Launch OMA outer minus TDECQ (ER ≥ 5 dB)	-2.2	–	–	dBm
TDECQ	–	–	3.4	dB
Extinction ratio	3.5	–	–	dB
Average power with TX off	–	–	-15	dBm
RIN (OMA)	–	–	-136	dB/Hz

OPTICAL CHARACTERISTICS – RECEIVER (PER LANE)

Parameter	Min	Max	Unit
Damage threshold	5	–	dBm
Average receive power	-5.9	4.0	dBm
Receive power OMA outer	–	4.2	dBm
Sensitivity OMA outer	–	max(-3.9, SECQ-5.3)	dBm
Stressed sensitivity OMA outer	–	-1.9	dBm
Receiver reflectance	–	-26	dB

DIGITAL DIAGNOSTICS (DDM)

Parameter	Range	Accuracy
Case temperature	0 to 70 °C	±3 °C
Supply voltage	0 to Vcc	±0.1 V
TX bias per lane	0 to 100 mA	±10 %
TX power per lane	Operating range	±3 dB
RX power per lane	Operating range	±3 dB

COMPLIANCE

- IEEE 802.3cd (100GBASE-DR)
- QSFP28 MSA
- SFF-8636
- Class 1 laser product
- RoHS compliant

INSTALLATION NOTES

- Use in QSFP28 host ports.
- Confirm host support, port mode, firmware version and FEC before deployment.
- Check the optical link budget and fiber loss for the full link (singlemode fiber, Duplex LC).
- Keep connectors clean and capped when not in use.

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