# QSFP28 100G PSM4 500m

QSFP28 transceiver · 100G · 1310 nm · 500 m SMF · MPO-12/UPC · NVIDIA compatible

The GLOBALfiber Q100G-PSM-4-NV is a 100G QSFP28 transceiver for NVIDIA InfiniBand and Ethernet networks. It uses 4 × 25G NRZ lanes at 1310 nm for links up to 500 m SMF over MPO-12/UPC. The module is coded for NVIDIA equipment and is available with InfiniBand or Ethernet coding.



## KEY FEATURES

- QSFP28 form factor
- 100G, 4 × 25G NRZ, 25.78125 Gb/s
- Wavelength 1310 nm
- Reach up to 500 m SMF
- MPO-12/UPC optical connector
- Max. power consumption 3.5 W
- Digital diagnostics (DDM), hot-pluggable
- Case temperature 0 to +70 °C

## APPLICATIONS & COMPATIBILITY

- NVIDIA switches: Switch-IB 2 SB7800/SB7890, Quantum QM8700/QM8790 (HDR100/EDR), 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 MMS1C10-CM

## KEY SPECIFICATIONS

| | |
|---|---|
| Form factor | QSFP28 |
| Data rate | 100G |
| Lanes | 4 × 25G NRZ, 25.78125 Gb/s |
| Wavelength | 1310 nm |
| Reach | 500 m SMF |
| Connector | MPO-12/UPC |
| Fiber | Singlemode |
| Max. power | 3.5 W |
| Case temperature | 0 to +70 °C |
| Protocol | InfiniBand or Ethernet (EDR / 100GbE) |

## ORDERING INFORMATION

| GLOBALfiber item | Coding | Replaces NVIDIA | Description |
|---|---|---|---|
| **Q100G-PSM-4-NVI** | IB InfiniBand | MMS1C10-CM | QSFP28 100G PSM4 500m |
| **Q100G-PSM-4-NVE** | ETH Ethernet | MMS1C10-CM | QSFP28 100G PSM4 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 | – | – | 3.5 | W |
| Link distance | 2 | – | 500 | m |

## OPTICAL CHARACTERISTICS – TRANSMITTER (PER LANE)

| Parameter | Min | Typ | Max | Unit |
|---|---|---|---|---|
| Center wavelength | 1295 | 1310 | 1325 | nm |
| Side-mode suppression ratio | 30 | – | – | dB |
| Average launch power per lane | -9.4 | – | 2.0 | dBm |
| OMA per lane | -3.5 | – | 2.2 | dBm |
| TDP per lane | – | – | 2.9 | dB |
| Extinction ratio | 3.5 | – | – | dB |
| Average power with TX off | – | – | -30 | dBm |

## OPTICAL CHARACTERISTICS – RECEIVER (PER LANE)

| Parameter | Min | Max | Unit |
|---|---|---|---|
| Damage threshold | 4.5 | – | dBm |
| Average receive power per lane | -12.66 | 2.0 | dBm |
| Receive power OMA | – | 2.2 | dBm |
| Sensitivity OMA | – | -9.0 | dBm |
| Receiver reflectance | – | -26 | dB |
| LOS assert / de-assert | -20 | -18 | dBm |

## 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

- 100G PSM4 MSA
- 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, MPO-12/UPC).
- Keep connectors clean and capped when not in use.

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