

Q100G-DAC

QSFP28 100GbE Copper Twinax Passive 100GBase-CR4 DAC

1. Product overview

GLOBALfiber Q100G-DAC is a passive direct attach copper cable assembly for short-distance host interconnection.

2. Key features

QSFP28 to QSFP28; 4 x 25.78 Gb/s; passive twinax.

3. Applications

100 Gigabit Ethernet, Fibre Channel over Ethernet, SAN and data center networks.

4. Technical data

Parameter	Specification	Parameter	Specification
Differential Impedance	Min: 9; Typ.: 100; Max: 110; Unit: ohm	Differential to common Mode Conversion Loss	Min: 10
Insertion loss	Min: 8; Max: 22.48; Unit: dB; Note: At 12.8906	Differential to common Mode Conversion Loss (continued)	Max: equation [5]
Differential Return Loss	Min: 12.45; Max: equation [1]; Unit: dB dB; Note: At 0.05 to At 4.1 to 19 At 0.2 to 19 GHz	Differential to common Mode Conversion Loss (continued)	Min: 6.3
Differential Return Loss (continued)	Min: 3.12; Max: equation [2]	Channel Operating Margin	Min: 3
Common-mode to common-mode output return loss	Min: 2	30 AWG	Cable "OD": 6.7mm; Minimum Bend Radius "R": 33.5mm; Minimum Bend Space "L": 74mm
Differential to common-mode return loss	Min: 12; Max: equation [3]; Unit: dB dB dB; Note: At 0.01 to At 12.89 to At 0.01 to At 12.89 to At 15.7 to	26 AWG	Cable "OD": 9.0mm; Minimum Bend Radius "R": 45mm; Minimum Bend Space "L": 90mm
Differential to common-mode return loss (continued)	Min: 10.58; Max: equation [4]	Channel insertion-loss budget	35 dB at 12.8906 GHz; mated fixture connector 1.07 dB; extra host connector allocation 0.62 dB

5. Recommended operating conditions

Parameter	Specification
Operating Case Temperature	Min: 0; Max: +70; Unit: °C
Relative Humidity	Min: 0; Max: 80; Unit: %
Supply Voltage	Min: 1.7; Max: 5.5; Unit: V
Data Rate Per Lane	Min: 1; Max: 25.78; Unit: Gb/s
Storage Temperature	Min: -40; Max: 85; Unit: °C

Simplified functional illustration - not to scale



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6. Optical characteristics

Not applicable. This is a passive copper cable; optical wavelength, launch power and receiver sensitivity do not apply.

7. Digital diagnostics and management

I2C two-wire EEPROM identification; customizable host coding.

8. Safety and regulatory

QSFP28 MSA; SFF-8665; IEEE 802.3bj 100GBASE-CR4; RoHS-6. Use ESD-safe handling and observe the stated cable bend limits.

9. Ordering information

Parameter	Specification
GLOBALfiber product number	Q100G-DAC
Product description	QSFP28 100GbE Copper Twinax Passive 100GBase-CR4 DAC
Selectable lengths	0,5 m, 1 m, 1,5 m, 2 m, 3 m, 4 m, 5 m, 7 m
Available coding	Arista, Cisco, Custom, Dell, Extreme, Fortinet, Generic, Huawei, Intel, Juniper, NVIDIA-Mellanox(ETH)

Confirm equipment model, port mode and software version when ordering. Coding availability does not guarantee support for every platform or mode.

Cable variants documented in the technical source:

Parameter	Specification
1m, 2m, 3m	Data Rate: Up to 100G; Wire Gauge: AWG30; Connector Type: Passive Copper; Temp. Range: 0-70°C; Cable Jacket: PVC
5m	Data Rate: Up to 100G; Wire Gauge: AWG26; Connector Type: Passive Copper; Temp. Range: 0-70°C; Cable Jacket: PVC