

DAC-QQ-40-xx

QSFP+ to QSFP+ direct attach cables,
0.5m/1m/2m/3m/4m/5m/7m reach, RoHS6 compliant



Product description

The DAC-QQ-40-xx copper direct-attach cables are suitable for very short distances and offer a highly cost-effective way to establish a 40-Gigabit link between QSFP+ ports of QSFP+ switches within racks and across adjacent racks. These cables are used for 40GbE and Infiniband standards, to maximize performance. QSFP+ are designed to meet emerging data center and high performance computing application needs for a high density cabling interconnect system capable of delivering an aggregate data bandwidth of 40Gb/s. This interconnect system is fully compliant with existing industry standard specifications such as the QSFP MSA and IBTA (InfiniBand Trade Association). The QSFP+ cables support the bandwidth transmission requirements as defined by IEEE 802.3ba (40 Gb/s) and Infiniband QDR (4x10 Gb/s per channel) specifications.

Opticonnect SYSTEMS B.V., an Optical Networking vendor with its headquarters in the Netherlands, provides Optical Transport solutions and Optical Transceivers at the best price performance ratio possible. Our goal is to simplify the planning, deployment and maintenance of

complex Optical Networks. This is achieved by our user friendly planning apps and information, sophisticated products and transparent support. Relying on our superior product quality, all items are supplied with life time warranty.

Features

- 40 Gb/s total bandwidth
- 4 independent duplex channels operating at 10Gbps, 2.5Gbps or 5Gbps data rates
- AC coupling of PECL signals
- 100 ohm differential impedance system
- Lower power consumption < 2W
- Power supply +3.3V
- Low Near-End Crosstalk
- Fully compatible with IEEE802.3ba and Infiniband QDR specifications
- Temperature range -40 to 85°C
- All-metal housing for superior EMI performance
- Precision process control for minimization of pair-to-pair skew
- EEPROM for cable signature & system communications
- Compliant QSFP MSA specifications
- RoHS6 compliant

Applications

- Networked storage systems
- External storage systems
- Data Center networking
- Hubs, Switches, Routers, Servers



All product specifications are subject to change without notice to improve reliability, function or design or otherwise.

Ordering information

Part No.	Description	Passive/Active	Cable Length	AWG
DAC-QQ-40-xx ^{*note1}	QSFP+ to QSFP+	Passive	0.5 - 7 m	

Note1: Standard version. If you need customized services, please contact us.

Absolute maximum ratings^{*note2}

Parameter	Symbol	Min	Typ	Max	Unit	
Storage temperature	T _{st}	-40		125	°C	
Relative Humidity (non-condensation)	R _s	-		85	%	
Operating case temperature	Topc	-40		85	°C	Note3
Supply voltage	VCC3	-0.3	3.3	3.6	V	
Voltage on LVTTTL Input	Vilvttl	-0.3		VCC3 +0.2	V	

Note 2: Exceeding any one of these values may destroy the device immediately.

Note 3: Stress or conditions exceed the above range may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those listed in the operational sections of this specification is not applied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Regulatory compliance

Feature	Standard	Performance
Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883G Method 3015.7	Class 1C (>1000 V)
Electrostatic Discharge to the enclosure	EN 55024:1998+A1+A2 IEC-61000-4-2 GR-1089-CORE	Compliant with standards
Electromagnetic Interference (EMI)	FCC Part 15 Class B EN55022:2006 CISPR 22B :2006 VCCI Class B	Compliant with standards Noise frequency range: 30 Hz to 6GHz. Good system EMI design practice required to achieve Class B margins. System margins are dependent on customer host board and chassis design.
Immunity	EN 55024:1998+A1+A2 IEC 61000-4-3	Compliant with standards. 1KHz sine-wave, 80% AM, from 80MHz to 1GHz. No effect on transmitter/receiver performance is detectable between these limits.
Laser Eye Safety	FDA 21CFR 1040.10 and 1040.11 EN (IEC) 60825-1:2007 EN (IEC) 60825-2:2004+A1	CDRH compliant and Class I laser product. TüV Certificate No. 50135086
Component Recognition	UL and CUL EN60950-1:2006	UL file E317337 TüV Certificate No. 50135086 (CB scheme)
RoHS6	2002/95/EC 4.1&4.2 2005/747/EC 5&7&13	Compliant with standards ^{*note4}

Note 4: For update of the equipments and strict control of raw materials, OPTICONNECT has the ability to supply the customized products since Jan 1st, 2007, which meet the requirements of RoHS6 (Restrictions on use of certain Hazardous Substances) of European Union. In light of item 5 in RoHS exemption list of RoHS Directive 2002/95/EC, Item 5: Lead in glass of cathode ray tubes, electronic components and fluorescent tubes. In light of item 13 in RoHS exemption list of RoHS Directive 2005/747/EC, Item13: Lead and cadmium in optical and filter glass. The three exemptions are being concerned for Opticonnect's transceivers, because Opticonnect's transceivers use glass, which may contain Pb, for components such as lenses, windows, isolators, and other electronic components.