

QSFP Cable Assemblies

40G/ 100G / 200G / 400G / SOLUTIONS

Amphenol’s QSFP copper cable assemblies are designed to meet data center, networking and high-performance computing application needs for high density cabling interconnect systems capable of data rates from 10G/Lane to 112G/Lane transmission rates.

Designed to meet the requirements of Small Form Factor industry standard SFF-8665, Amphenol offers both passive and active cable assemblies tailored to meet specific cable lengths, while meeting all performance requirements.

- Support requirements defined by IEEE, Infiniband, Fibre Channel, SAS, and custom solutions
- Data Rate: 10G NRZ / 25G NRZ / 56G PAM4 / 112G PAM4
- Cable Sizes: 26 AWG – 32 AWG
- 112G Passive cable lengths up to 2 meters
- 112G Active cable lengths up to 4 meters
- Splitters available: QSFP-4x SFP, QSFP-2x QSFP, and QSFP-4x QSFP

FEATURES

- SFF-8665 industry standard compliance
- Optimized PCB with auto soldering process
- EEPROM in cable assembly
- Enables 10Gb/s, 28Gb/s, 56Gb/s and 112Gb/s per channel transmission
- RoHS2 compliant
- 26AWG – 32AWG cable sizes
- Custom solutions supported
- Built with industry leading twin-ax SKEWCLEAR® wire
- 112G Passive copper length to 2 meters and Active copper length to 4 meters



TARGET MARKETS



BENEFITS

- Fully compatible with all QSFP interfaces and mechanical requirements, backwards compatible with QSFP
- Optimized signal integrity performance. Exceeds SI performance parameters in standard specifications
- Programmable to customer requirements
- Meets and exceeds signal performance requirements
- Environmentally friendly
- Provides optimized cost, performance, cable bulk & routing solutions
- Custom solutions from adapter cables to loopback cables and beyond
- Great SI reliability and physical capabilities (softer and better bending performance than other cables)
- Meets industry standard signal performance requirements up to lengths of 4 meters with linear active cables

TECHNICAL INFORMATION

MATERIAL

- Nickel plated zinc die cast shells and latching mechanism parts
- EM-888K laminated PCB with gold finger and solder pads
- 8 differential pair wire with EMI shielding braid and LSZH or PVC jacketing. Flex Sleeves for 112G bundles.
- Thermoplastic cable pull tab

ELECTRICAL PERFORMANCE

- Differential Impedance: $100\Omega \pm 10\Omega$
- SI performance 10G NRZ / 25G NRZ / 50G PAM4 / 112G PAM4, InfiniBand, and OIF specifications (per MSA agreement)

MECHANICAL PERFORMANCE

- Durability: 50 cycles
- Mating Force: 40N max.
- Latch Strength; Axial Load: 180N min.
- Cable Axial Strain Relief: 90N min.
- Cable Flex: 180° flex; 15 cycles per EIA 364-41

ENVIRONMENTAL

- Thermal Shock: EIA-8417 (-55°C to 85°C)
- Temperature Life: EIA-364-17 (500 hours 70°C)

APPROVALS AND CERTIFICATIONS

- RoHS2 Compliant

SPECIFICATIONS

- Refer to the latest revision of the QSFP hardware specification
- Applicable IEEE specifications
 - IEEE802.3by
 - IEEE802.3bj
 - IEEE802.3cd
 - IEEE802.3ck
- The InfiniBand™ architecture specification and annexes

PACKAGING

- Individually packed in anti-static bags
- Cable ends packaged with dust covers

TARGET MARKETS/APPLICATIONS



Low Latency Communication Systems
Network Interface Cards (NICs)
Routers
Switches



Servers
Networked Storage Systems
High Performance Computing (HPC) Applications
Data Center Networking

PART NUMBERS

Data Rate	Length	AWG	Part Number	Type
10G / Lane	1 meter	30AWG	NDAAEA-0001	Passive
10G / Lane	2 meters	30AWG	NDAAEA-0002	Passive
10G / Lane	3 meters	30AWG	NDAAEA-0003	Passive
28G / Lane	1 meter	32AWG	NDAAFR-0001	Passive
28G / Lane	2 meters	32AWG	NDAAFR-0002	Passive
28G / Lane	3 meters	30AWG	NDAAFF-0003	Passive
56G / Lane	1 meter	30AWG	NDAAXF-0001	Passive
56G / Lane	2 meters	28AWG	NDAAXG-0002	Passive
56G / Lane	3 meters	26AWG	NDAAXJ-0003	Passive
56G / Lane	3 meters	30AWG	NJAAF3-0003	Linear Active
112G / Lane	1 meter	32AWG	NJAAK-0001	Passive
112G / Lane	2 meters	26AWG	NJAAK6-0002	Passive
112G / Lane	3 meters	30AWG	NJAALR-0003	Linear Active