

QSFP DD Cable Assemblies

200G / 400G / 800G SOLUTIONS

Amphenol's QSFP DD (Double Density) passive copper cable assemblies double the number of channels from 4 to 8 lanes when compared to the existing 100G QSFP cabling systems, enabling more bandwidth within the same mechanical envelope. Compatible with 25G/Lane NRZ up to 112G/Lane PAM4 signaling protocols that allow cables to deliver aggregate bandwidths of 200G, 400G, and 800G per cable assembly. Available in both Passive and Active variants.

- Addresses current and future market desired bandwidth port capability requirements
- Backwards mate compatible with QSFP receptacles
- Data Rate: 25G NRZ / 56G PAM4 / 112G PAM4
- Cable sizes: 25 AWG – 32 AWG
- 112G Passive cable lengths up to 2 meters
- 112G Active cable lengths up to 4 meters



TARGET MARKETS



FEATURES

- Configurable & flexible
- Backwards plug capability to 100G; seamless transition to future higher aggregate bandwidth
- Optimized PCB interface board with auto soldering process
- Assembled with industry leading twin-axial SKEWCLEAR® 8-pair or 16-pair wire
- EEPROM in cable assembly
- 25AWG – 32AWG cable sizes
- 112G Passive copper length to 2 meters and Active copper length to 4 meters
- Compatible with existing 100G QSFP based connector ports (with heat sinks and / or light pipes) as well as 200G / 400G / 800G ports
- Custom solutions supported
- 10-12W single port dissipative heat capacity

BENEFITS

- 200G, 400G, or 800G aggregate bandwidth capacity, dual 8-pair or single 16-pair wire supported
- Addresses current and future market desired bandwidth port capability requirements
- Exceeds 25G NRZ and 50G, 112G PAM4 performance and SI parameter in standard specification
- Great SI reliability and physical capabilities (softer and better bending performance than other cables)
- Programmable to customer requirements
- Provides optimized cost, performance, cable bulk & routing solutions
- Meets industry standard signal performance requirements up to lengths of 3 meters at 400G and 2 meters at 800G
- Assured cable pluggability regardless of port bandwidth configuration
- Custom solutions from adapter cables to loopback cables and beyond
- Enables use of copper and optical based cabling solutions

► QSFP DD Cable Assemblies

TECHNICAL INFORMATION

MATERIAL

- Nickel plated zinc die cast shells & latching mechanism parts
- EM-888K laminated PCB with gold finger and solder pads
- Dual 8 differential pair or single 16 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 25G NRZ / 50G PAM4, InfiniBand and OIF specifications (per MSA agreement)

MECHANICAL PERFORMANCE

- Durability: 50 cycles
- Mating Force: 90N max. (Per MSA agreement)
- Modular Retention: 125N min.
- Cable Axial Strain Relief: 90N min.
- Cable Flex: Per SFF-8417

ENVIRONMENTAL

- Thermal Shock: EIA 364-32, Condition 1, 25 cycles, -55°C to $+85^{\circ}\text{C}$
- Service life to exceed 5 years at 65°C

APPROVALS AND CERTIFICATIONS

- RoHS2 Compliant

PART NUMBERS

Data Rate	Length	AWG	Part Number	AWG	Part Numbers
28G / Lane	1 meter	32AWG	NDYYJR-0001	Passive	NDYYR-0006
28G / Lane	2 meters	32AWG	NDYYJR-0002	Passive	NDYYR-0001
28G / Lane	3 meters	32AWG	NDYYJR-0003	Passive	NDYYF-0001
56G / Lane	1 meter	32AWG	NDYYR-0001	Passive	NDYYF-0004
56G / Lane	2 meters	30AWG	NDYYF-0002	Passive	NDYYH-000x
56G / Lane	3 meters	27AWG	NDYYH-0003	Passive	NDYYH-000x
56G / Lane	4 meters	30AWG	NJYYFR-0004	Linear Active	NDYYR-0006
56G / Lane	5 meters	30AWG	NJYYFR-0005	Linear Active	NDYYR-0001
112G / Lane	1 meter	32AWG	NJYYEK-0001	Passive	NDYYF-0001
112G / Lane	2 meters	25AWG	NJYYEN-0002	Passive	NDYYF-0004
112G / Lane	3 meters	32AWG	NJYYLK-0003	Linear Active	NDYYH-000x
112G / Lane	4 meters	30AWG	NJYYLR-0004	Linear Active	NDYYH-000x
112G / Lane	4 meters	32AWG	NJHHN8-0004	DSP Active	NDYYH-000x

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SPECIFICATIONS

- Refer to the latest revision of the QSFP-DD hardware specification for QSFP double density 8X pluggable transceiver
- 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



Data Center Networking

External Storage Systems

High Performance Computing (HPC)

Networked Storage Systems

Servers

Disclaimer

Please note that the above information is subject to change without notice.