OSFP (Octal Small Form Factor Pluggable) Copper Cable Assemblies

200G / 400G / 800G SOLUTIONS

Amphenol's leading the industry in OSFP cable development. Our *Electronics Products* 'Product of the Year' award-winning OSFP (Octal Small Form Factor Pluggable) cable assemblies are compatible with 25G/lane channel NRZ up to 112G/lane channel PAM4 signaling protocols that allow the cables to deliver aggregate bandwidths of 200G, 400G, and 800G per cable assembly. Available in both Passive and Active variants.

- Comprehensive system integrated interconnect design for copper or optical based cable solutions
- Addresses current and future market desired bandwidth port capability requirements
- Optimized heat dissipative and air flow features to maximize the heat dissipative properties of the system
- 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	BENEFITS
Configurable & flexible	200G, 400G, or 800G aggregate bandwidth capacity, dual 8-pair or single 16-pair wire supported
Optimized PCB interface board with auto soldering process	Exceeds 25G NRZ and 50G, 112G PAM4 performance and SI parameter in standard specification
EEPROM in cable assembly	Programmable to customer requirements
Assembled with industry leading twin-axial SKEWCLEAR® 8-pair or 16-pair wire	Great SI reliability and physical capabilities (softer and better bending performance than other cables)
Integrated heat sink and air flow channels as part of module design	Fully compliant with optical module design, easier for customer system development
25AWG - 32AWG cable sizes	Provides optimized cost, performance, cable bulk & routing solutions
RoHS2 compliant	Environmentally friendly
112G Passive copper length to 2 meters and Active copper length to 4 meters	Meets industry standard signal performance requirements
Custom solutions supported	Custom solutions from adapter cables to loopback cables and beyond
15 watt single port dissipative heat capacity	Enables use of copper as well as short and long reach optical applications

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: 100Ω ±10Ω
- SI performance 25G NRZ / 50G PAM4 / 112G PAM4, InfiniBand, and OIF specifications (per MSA agreement)

MECHANICAL PERFORMANCE

- Durability: 50 cycles
- Mating Force: 40N max.
- Modular Retention: 25N min.
- Cable Flex: Per SFF-8417

ENVIRONMENTAL

- Thermal Shock: EIA 364-32, Condition 1, 25 cycles, -55°C to +85°C
- Service life to exceed 5 years at 65°C

APPROVALS AND CERTIFICATIONS

- RoHS2 Compliant

SPECIFICATIONS

- Refer to the latest revision specification of the OSFP octal small form factor pluggable module
- 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 Communications Systems
Network Interface Card (NICs)
Routers
Switches

Data Center Networking
External Storage Systems
High Performance Computing (HPC)Networked Storage Systems
Server

PART NUMBERS

Data Rate	Length	AWG	Part Number	Type
28G / Lane	1 meter	32AWG	NDVVJR-0001	Passive
28G / Lane	2 meters	32AWG	NDVVJR-0012	Passive
28G / Lane	2.5 meters	30AWG	NDVVJF-0012	Passive
56G / Lane	1 meter	32AWG	NDVVYR-0001	Passive
56G / Lane	2 meters	30AWG	NDVVYF-0002	Passive
56G / Lane	3 meters	28AWG	NDVVYG-0003	Passive
56G / Lane	3.5 meters	25 AWG	NDVVYX-0006	Passive
112G / Lane	1 meter	32AWG	NJMMEK-0001	Passive
112G / Lane	2 meters	25AWG	NJMMEN-0002	Passive
112G / Lane	2 meters	32AWG	NJMMLK-0002	Linear Active
112G / Lane	3 meters	30AWG	NJMMLR-0003	Linear Active

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