# 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 airflow 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 |

# OSFP (Octal Small Form Factor Pluggable) Copper 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: 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

- EEE802.3by

- 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 |