

# OSFP-XD Copper Cable Assemblies

## PCIe® GEN 5, ETHERNET 400G (16X25G), 800G (16X50G), 1.6T (16X100G) AND 3.2T (16X200G)

Amphenol is at the forefront of OSFP-XD (Octal Small Form Factor Pluggable eXtra Dense) cable development, setting new industry standards with our innovative designs. Our advanced OSFP-XD cable assemblies are designed to meet the rigorous demands of both PCIe® Gen 5 and Ethernet protocols, providing a future-proof solution with unparalleled bandwidth capabilities. These assemblies support a range of bandwidths, including 400G (16x25G), 800G (16x50G), 1.6T (16x100G), and 3.2T (16x200G) per cable, ensuring seamless integration with evolving technology standards. Available in both passive and soon-to-be-released active variants, our OSFP-XD cables deliver superior performance for next-generation applications.



### TARGET MARKETS



- Engineered for both copper and optical-based cable solutions
- Optimized thermal management
- 25G NRZ / 56G PAM4 / 100G PAM4 / 200G PAM4
- 32AWG for optimal performance and flexibility
- PCIe® Gen 5 Lengths up to 3M for passive and up to 7M for active DSP variants
- High-speed ethernet lengths: Up to 2M passive, 3M linear active, and 5M DSP / Up to ~1M passive, ~2M linear active, and ~4M DSP

### FEATURES

- Configurable & flexible
- Optimized PCB interface board with laser soldering process
- EEPROM in cable assembly
- Assembled with industry leading twinaxial SkewClear® 32-pair wire
- Integrated heat sink and air flow channels part of module
- Custom solutions supported
- 30W single port dissipative heat capacity

### BENEFITS

- Up to 1.6T aggregate bandwidth capacity, 32-pair wire supported
- Exceeds PCIe® Gen 5 or 25G NRZ, 50G, 112G PAM4 or 224G PAM4 performance and SI parameter in standard specification
- Programmable to customer requirements
- Great SI reliability and physical capabilities (softer and better bending performance than other cables)
- Fully compliant with optical module design, easier for customer system development
- Custom solutions from adapter cables to loopback cables and beyond
- Enables use of copper, short and long reach optical

## TECHNICAL INFORMATION

### MATERIAL

- Nickel plated Zinc die cast shells & latching mechanism parts
- EM-888k laminated PCB with Gold finger and solder pads
- 32 differential pair wire with EMI shielding braid and LSZH or PVC Flex Sleeves for 112G & 224G bundles.
- Thermoplastic cable pull tab

### ELECTRICAL PERFORMANCE

- Differential Impedance:  $92\Omega \pm 10\Omega$
- SI performance 25G NRZ / 56G PAM4 / 112G PAM4, 224G PAM4, PCIe® Gen 5, 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
- PCIe® Gen 5 (now) & Gen 6 (Coming soon)
- Applicable IEEE specifications
  - IEEE802.3by (coming soon)
  - IEEE802.3bj (coming soon)
  - IEEE802.3cd (coming soon)
  - IEEE802.3ck (coming soon)
  - IEEE802.3dj (coming soon)
- The InfiniBand architecture specification and annexes (coming soon)

### 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
PCIe® Gen 5	1 meter	32AWG	NEUUEX-0001	Passive
PCIe® Gen 5	2 meters	32AWG	NEUUEX-0002	Passive
PCIe® Gen 5	3 meter	32AWG	NEUUEX-0003	Passive
PCIe® Gen 5	1.5 meters	32AWG	NEUUEX-0007	Passive
PCIe® Gen 5	0.75 meters	30AWG	NEUUEX-0011	Passive
PCIe® Gen 5	1.25 meters	32AWG	NEUUEX-0012	Passive
PCIe® Gen 5	Coming soon	Coming soon	Coming soon	Active DSP
PCIe® Gen 6	Coming soon	Coming soon	Coming soon	Passive & DSP
112G/Lane	Coming soon	Coming soon	Coming soon	Passive
112G/Lane	Coming soon	Coming soon	Coming soon	Linear Active & DSP
224G/Lane	Coming soon	Coming soon	Coming soon	Passive
224G/Lane	Coming soon	Coming soon	Coming soon	Linear Active & DSP

Find part number details using the search box on [www.amphenol-cs.com](http://www.amphenol-cs.com)