OSFP–XD (Hexadecimal Small Form Factor Pluggable) Copper Cable Assemblies

PCIE® GEN 5, 400G / 800G / 1600G

Amphenol is leading the industry in OSFP–XD cable development. Our industry breakthrough OSFP (Hexadecimal Small Form Factor Pluggable) cable assemblies are compatible with PCIe® Gen 5 and in the future 112G/lane and 224G/lane channel signaling protocols that allow the cables to deliver aggregate bandwidths of 400G, 800G, and 1.6T per cable assembly. Available in both passive and soon to be 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 / 224G PAM4
- Cable sizes: 32AWG
- PCIe® Gen 5 lengths to 3M passive & 7M active DSP
- 112G lengths to 2M passive & 3M Linear active & 5M DSP
- 224G lengths to ~1M passive & ~2M Linear active & ~4M DSP

TARGET MARKETS

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
- 32AWG cable sizes
- Passive copper length to 3 meters and active copper length to 7 meters; depending on speed and standard
- 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
- Provides optimized cost, performance, cable bulk & routing solutions
- Meets industry standard signal performance requirements
- 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: 92Ω ± 10Ω
- 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

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