Server & Storage

Amphenol is a leader in providing industry proven solutions used across server and storage equipment, and next-generation enterprise applications.

amphenol-cs.com

Amphenol Overview

Amphenol Communications Solutions (ACS), a division of Amphenol Corporation, is a world leader in interconnect solutions for Communications, Mobile Consumer Products, RF, Optics, Broadband and Commercial electronics markets.
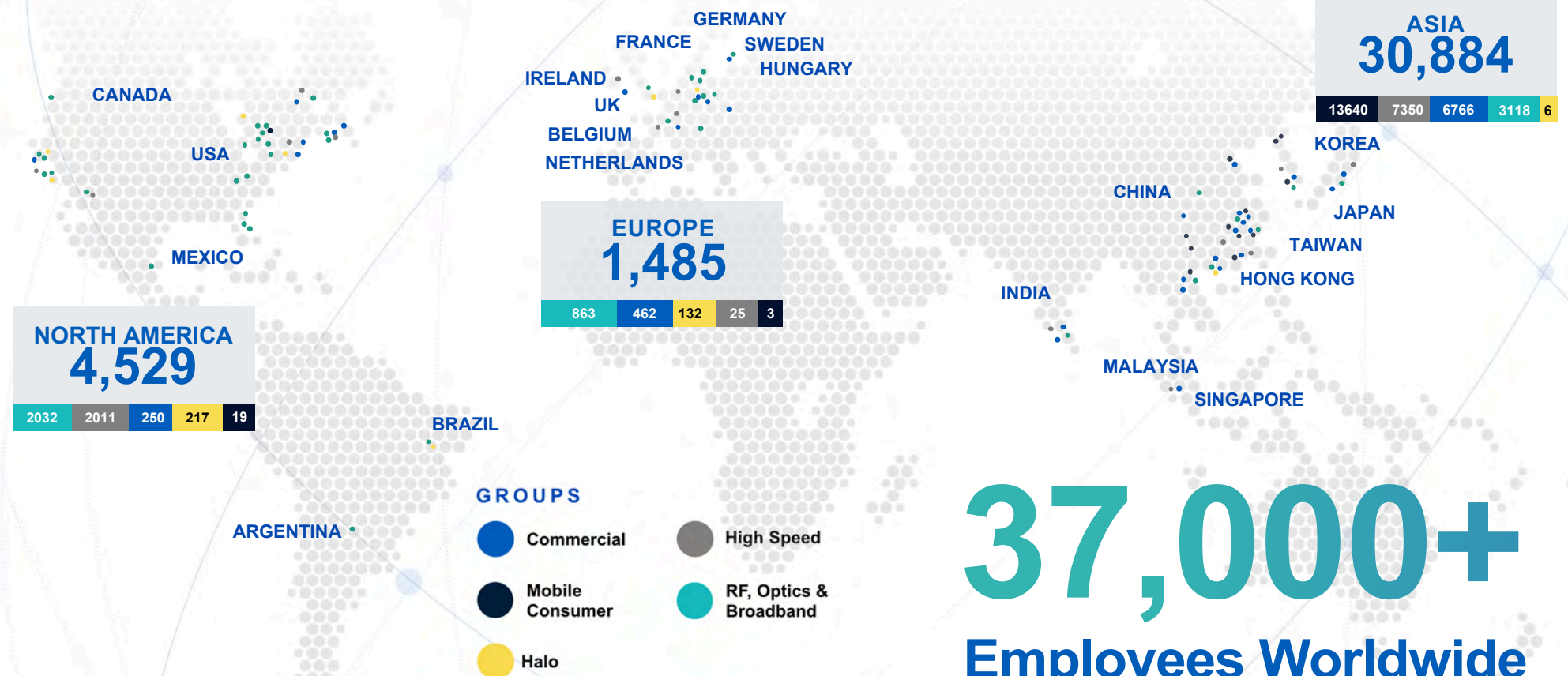
Amphenol Corporation is one of the world's largest designers and manufacturers of electrical, electronic and fiber optic connectors and interconnect systems, antennas, sensors and sensor-based products and coaxial and high-speed specialty cable.

ACS has an expansive global presence in research and development, manufacturing, and sales. We design and manufacture a wide range of innovative connectors as well as cable assemblies for diverse applications including server, storage, data center, mobile, RF, networking, industrial, business equipment and automotive.

Strong Global Presence

We place heavy emphasis on R&D for both new product and technology development, focusing on the advancement of the next generation of high-speed interconnects and power distribution solutions as well as innovative manufacturing solutions.

- Our R&D centers worldwide have registered thousands of patents and licensing agreements, developing some of the world's first innovations in connectors such as Shield-less High-Speed Connectors, Ball-Grid-Array Attachments, economical Stamped High-Power Contacts and cost effective yet reliable plating processes.

- We relentlessly seek improvements of our products, increasing our solutions' overall cost effectiveness, precision and reliability. This ensures that we meet or even surpass the ever changing needs and expectations of market trends.

CANADA
USA
MEXICO
BRAZIL
ARGENTINA

GERMANY
FRANCE
SWEDEN
HUNGARY
IRELAND
UK
BELGIUM
NETHERLANDS

ASIA
30,884

| 13640 | 7350 | 6766 | 3118 | 6 |

KOREA
CHINA
JAPAN
TAIWAN
HONG KONG
INDIA
MALAYSIA
SINGAPORE

EUROPE
1,485

| 863 | 462 | 132 | 25 | 3 |

NORTH AMERICA
4,529

| 2032 | 2011 | 250 | 217 | 19 |

GROUPS

- Commercial
- High Speed
- Mobile Consumer
- RF, Optics & Broadband
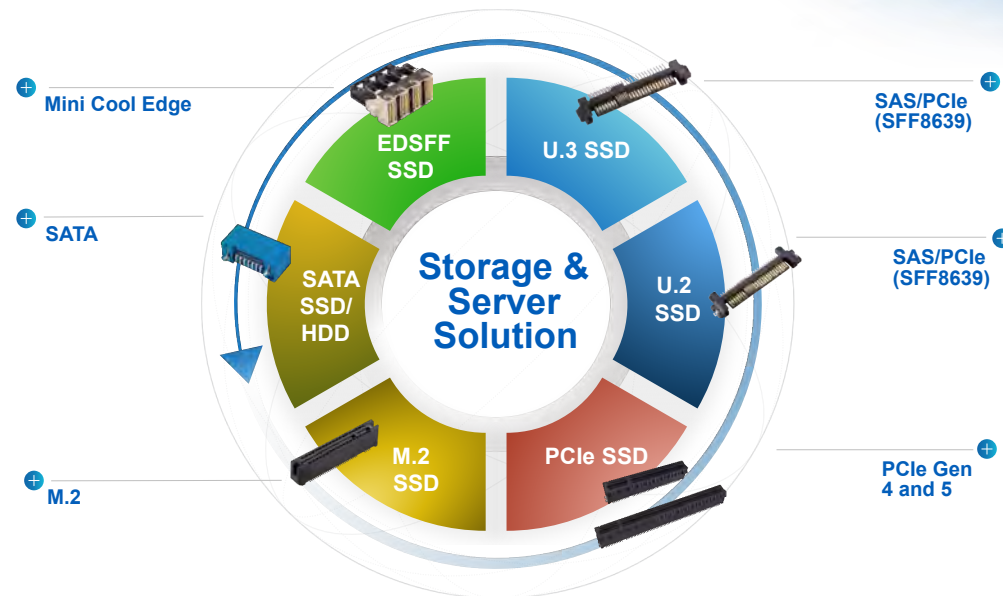- Halo

37,000+
Employees Worldwide

Applications

Amphenol provides high-density, high-performance interconnect solutions for server and storage equipment used in multiple applications and markets.

AI Servers

Server Storage

Networking / Telecommunications

Automotive

Consumer

Industry 4.0
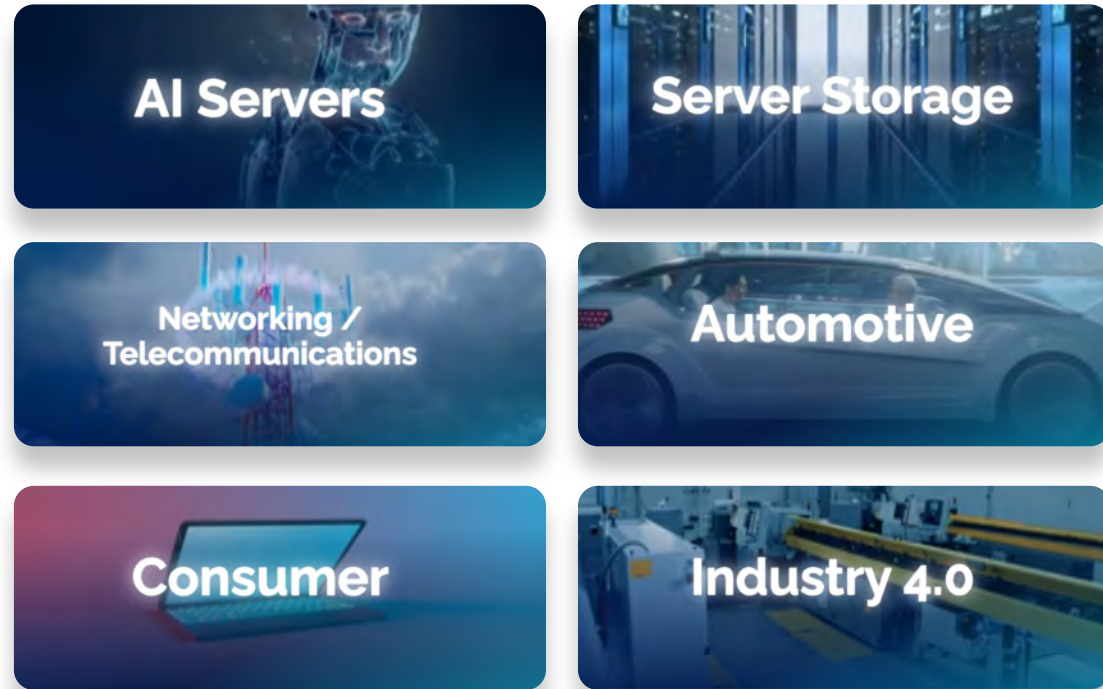
Enterprise storage

Amphenol offers a wide range of high-performance enterprise SSD connector solutions for M.2, EDSFF, SAS, U.2, U.3, SATA and PCIe applications.
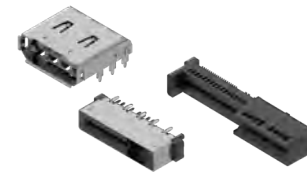

Mini Cool Edge

SATA

M.2

EDSFF SSD

SATA SSD/ HDD

M.2 SSD

Storage & Server Solution

U.3 SSD

U.2 SSD

PCIe SSD

SAS/PCIe (SFF8639)

SAS/PCIe (SFF8639)
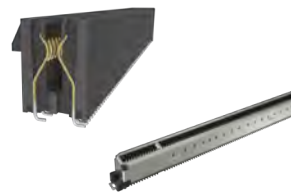
PCIe Gen 4 and 5

Server & Storage

EDSFF, OCP, Power Shelf and PCIe® DirectAttached® Cable Assemblies

- PCIe DirectAttached® cable riser solution supports up to PCIe5.0 32Gb/s, eliminates PCB trace and Vias, improves insertion loss by 0.75db @16GHz at 0.5m cable length
- EDSFF cable assemblies for E1 / E3 specifications
- OCP cable assemblies for OCP NIC 3.0
- Power Shelf cable assemblies for ORv3

Mini and Hyper Cool Edge for EDSFF/ SFF-TA-1002 /SFF-TA-1037/ OCP/ GENZ

- 0.60mm pitch connector, supports high speed from 32GT/s, PCIe® Gen 6 64GT/s, up to 112G PAM4
- Designed to meet SFF TA 1002, SFF TA 1037, EDSFF E1/E3, OCP NIC 3.0 and Gen Z specifications
- Vertical, right angle, straddle mount and orthogonal options are available

Double Density Cool Edge for Ultra Compact Design

- 0.80mm pitch, power and signal hybrid connector
- Highly configurable wafer design for differential, single-ended and power options
- Supports high speed of up to 32GT/s (or 56GT/s PAM4) capability

Standard Cool Edge 0.8mm for Automotive and 5G Antenna

- Robust design with EMI shielding for Automotive Ethernet and Power applications
- Hybrid option for small cell active antenna BTB application
- One-piece small form factor to save space

PCIe® M.2 Gen 5 and Gen 4

- 67 contacts on 0.50mm pitch fully compliant with PCI-SIG PCIe® M.2 specification
- Dual Stacked, Shielded versions are available
- Right angle, vertical and various connector heights and keying options offered

PCIe® Gen 4/5/6

- X1, X4, X8, X16, X24, X32 standard links
- 1.00mm pitch, vertical and right angle with options for ridge, locked latch, side latch, blade hold down, open wall
- Extensive range include options for surface mount, through-hole solder, press-fit and straddle mount terminations and keying options offered

PCIe® Flip CEM, Slim CEM, Metal Cage CEM

- Flip CEM with "JJ" contact or "LL" contact provides better support for card edge to save keep out area for routing as compared to standard PCIe® CEM contact of "JL".
- Standard PCIe® CEM footprint is 8.2mm, Slim CEM is 7.45mm, Flip CEM is 5.9mm
- Metal cage CEM provides enhanced housing support

DDR5 SMT and SO-DIMM Memory module Connectors

- 287-terminal and 288-terminal SMT connectors designed to meet JEDEC SO-023, and the new SO-023D specification. U DIMM/R/LR Socket, Metal tab, Standard/ Narrow/ latch available.
- SO-DIMM: 262-position connectors in high-density design of 0.50mm pitch. JEDEC SO-016, SO-017, SO-019 compliant Available in 4.00mm. 8.00mm, 5.20mm and 9.20mm height, right angle and vertical orientation with SMT mechanical hold-downs.

High Mating Cycle Connectors for Test And Measurement Equipment

- Supports 100k cycle mating/unmating – Ideal solution for test and measurement equipment.
- Non-soldering type allows replacement of connector without damaging the main PCB after 100,000 cycles
- Supports DDR5 data rate

PSAS, SAS and SATA Connectors

- SAS connectors (29-pins) support hot plugging and blind mating of HDDs/SSDs. 2 signal lanes support up to 24Gb data rate (SAS 4.0).
- PSAS connectors (68pins) support SAS HDD and NVME SSDs with 2 SAS lanes supporting up to 24G data rate and 4 PCIe® lanes supporting up to 32G (PSAS 5.0) data rates.

Mini Cool Edge IO

- Up to 64Gb/s PAM4, PCIe® Gen 4, PCIe® Gen 5, PCIe® Gen 6, over 1.0 meter transmission distance
- 0.60mm pitch connectors support both cable and card edge connections
- Options for 92Ω, 85Ω and 95Ω impedance and various pin number options - meeting PCIe®/NVMe/SAS/SFP(+)/QSFP specifications

Multi-Trak™

- Combines original PCIe® and Mini Cool Edge IO in one connector to provide both power (21A) and high/low-speed signal
- Up to 56Gb/s PAM4, PCIe® Gen 5, and target PCIe® Gen 6
- Options for 85Ω impedance and various pin number options - meeting PCIe®/NVMe/SAS/OCP DC-MHS/ SFF-TA-1033 specifications

PwrBlade® ULTRA HD+

- Rated up to 100A per contact
- Next-generation PwrBlade® Connector
- Optimized guide design to reduce connector width

PwrBlade® MiniMezz

- Rated up to 50A per high power contact, 25A per low power contact
- Available in stack heights from 8mm to 20mm (tooled in 1mm increments)
- +/- 0.80mm of gatherability for blind-mate applications

PwrBlade® Mini Cable-to-Board

- Rated up to 25A per contact (50A per column)
- Built-in squeeze-to-release latches
- Latching CPA (connector position assurance) features

ExtremePort™ Z-Link

- Compliant with Gen-Z and OCP NIC specifications. SFF-TA-1002/1020 solution
- High speed of up to 56Gb/s PAM4
- Supports both cable and card edge applications

ExtremePort™ Swift

- Ultra-low profile, 0.60mm pitch connector in 8X, 16X configurations. Mating height 8.38mm
- Designed for unshielded, internal I/O connectors
- With 85Ω impedance and meets PCIe® Gen 5 NRZ 32G specifications

Compression, Board to Board Connectors and Interposer

- Provides a connection between either two PCB modules or one PCB and an electrical module
- Single-piece compression-type or two-piece board-to-board surface mount connectors

PwrBlade® Mini Board-to-Board

- Rated up to 45A per power contact
- Lowest-profile PwrBlade® connector (8.10mm height above board)
- No PCB overhang

PwrBlade+® I/O

- Rated up to 50A per contact
- Power and signal contacts are highly configurable
- Wide wire size range available

Power Connectors

- Wire to Board connectors in 3.0 mm and 4.2mm pitch with current ratings from 6.5A to 20A per pin
- Designed for IT and Datacom applications

COM-HPC

- 400pos 0.635mm COM-HPC supporting stack heights of 5mm and 10mm
- Up to PCIe® Gen 5 32Gbs per channel
- Gives CPU power support at 150W
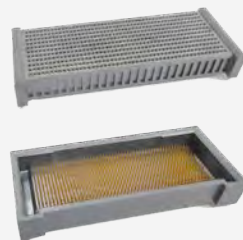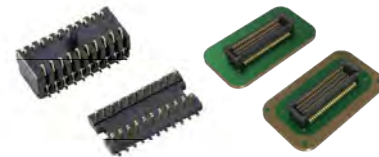- Supports up to 8 full DIMMs

DensiStak™

- High density board to board.
- EMI Shielding, Blind-mating feature.
- Speed up to 16Gb/s.

BergStak® 0.80mm

- High density applications.
- Wide range of positions and stack heights.
- Speed up to 16Gb/s.

Minitek® Pwr Connector and Cable Assembly

- Wire-to-wire and wire-to-board solutions
- Current rating from 5A to 25A
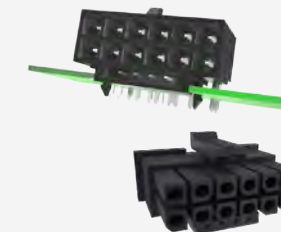- Available in pitch sizes of 3.00mm, 4.20mm, and 5.70mm

Minitek® Pwr CEM-5 PCIe® Connector System

- Rated current up to 9.5A per contact with all 12 power contacts and 4 Signal contacts
- New introduction CEM 5.0 PCI Express® 12VHPWR auxiliary hybrid connector and cable assembly support the 600W GPU cards
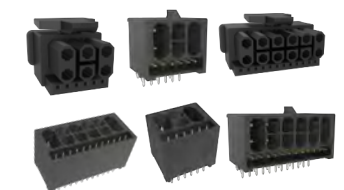- Positive locking on housing with low thumb latch operation

Minitek® Pwr PICPwr OCP Connector Solutions

- 12V connector solution support Open Compute Project Power Distribution and Management architecture requirements
- Operating power and voltage 864W at 12VDC

48V BarKlip®
BK600 IO

- Distributes up to 700A per contact
- Fully compliant with ORv3 Power Output Specification
- Mates with OCP ORv3 laminated busbar (6mm thick)

48V BarKlip®
BK300 IO

- Distributes up to 300A per contact
- Fully compliant with ORv3 IT Gear Power Input Specification
- New sense contact (Mate last- Break First)

BarKlip® XP Series

- Connectors Rated from 200A-1000A
- No housings to maximize power-density
- Mounts directly to PCB or busbar

OCP ORv3 BarKlip® BK150 IO

- Distributes up to 150A per contact between busbars, cables, and circuit boards
- New sense contact (Mate last- Break First)
- Fully compliant with ORv3 IT Gear Power Input Specification

ORv3 AC Input Connectors and Cable Assemblies

- 7-Pin connector designed for Star, Delta, and single-phase connections
- Fully compliant with OCP ORv3 Power Shelf Universal Input Connector Specification
- Rated up to 32A per pin
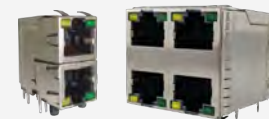
RJ / Modular Jacks

- Cat5, Cat5e, Cat6, Cat6A
- Single port, ganged, stacked multi-port, LEDs, shielded
- Vertical, right angle
- PoE++ capability
- Industrial, commercial, medical, consumer, military applications
- Cable Assemblies
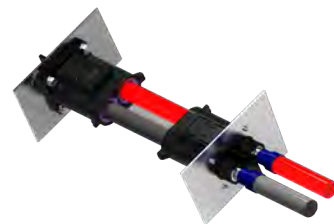
CoolPower® HD

- Rated up to 350A per pin (10.3mm pin diameter)
- Flexible housing form-factor
- Straight-exit and 90-degree cable solution

BarKlip® BK450

- Currents rated up to 450A per contact
- 36 independent points of contact for high current carrying capability
- ±3.5mm of gatherability for blind mate applications

RJMG

- 10/100T, 1GBT (10/100/1000-BT), 2.5G, 5G , 10G, Power Over Ethernet (PoE, 15W~150W) , integrated with surge protection.
- Commercial   0~70℃ and industrial -40~85℃ & -40~105℃ .
- Meets IEEE802.3ab and supports various Ethernet PHY

Server & Storage
High Speed

ExtremePort™ OSFP 224G Connectors

ENABLES 400G, 800G & 1.6T AGGREGATE BANDWIDTH PER PORT
Amphenol's ExtremePort™ OSFP 224G interconnect system is comprised of a 60 position, 0.6mm pitch connector built for use in high-speed serial applications. Allows for use of either 56G, 112G or 224G OSFP products in any port and supports passive & active copper and optical solutions

M-Series Mezzanine Connectors

56GB/S HIGH SPEED MEZZANINE BGA CONNECTOR SYSTEM
Leveraging proven technologies, including an industry leading BGA design, offering superior self-aligning and self-leveling. With a next generation differential pair contact .design for up to 56Gb/s NRZ and 112Gb/s PAM4 performance.

Mini-SAS HD Active Optical Cable Assemblies

FULL SAS 3.0 & SAS 4.0 COMPATIBILITY ENSURES PLUG AND PLAY OPERATION
Used primarily for external Enterprise storage applications (box-tobox, server-to-storage, server-to-switch), this cable is part of Amphenol's comprehensive Mini-SAS HD product offerings that address all board connector and cabling applications, from 1 to 100 meters.
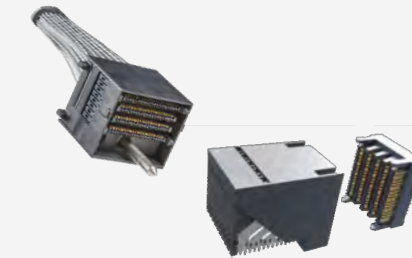
ExaMAX2®

SUPPORTING 112G PAM4 PERFORMANCE
Maintains mating interface compatibility with previous ExaMAX® products to allow cost/performance flexibility. The mating interface and connector design is optimized to support the demanding electrical and mechanical requirements of 112G systems.

OSFP Copper Cable Assemblies

A COMPREHENSIVE INTERCONNECT SYSTEM FOR COPPER OR OPTICAL BASED CABLE SOLUTIONS
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 that addresses current and future bandwidth port capability requirements.
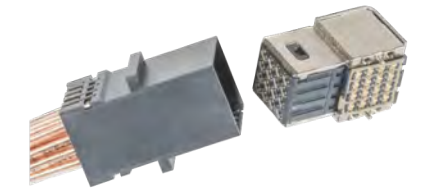
Paladin HD2®

INDUSTRY-LEADING DENSITY & PERFORMANCE – YOUR PATH TO 224Gb/s
Paladin® HD2 leverages the same board attach, twin-ax cable attach, and mating interface as Paladin® HD for backward compatibility, offering a direct upgrade path to 224Gb/s PAM4.

QSFP-DD Cable Assemblies

200G / 400G / 800G CONNECTIVITY SOLUTIONS
Amphenol's Double Density copper cable assemblies double the number of channels from 4 to 8 lanes when compared to the existing QSFP cabling systems, enabling more bandwidth within the same mechanical envelope

Amphenol

COMMUNICATIONS SOLUTIONS

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