PCI Express® Gen 4 and Gen 5 Card Edge Connectors

EXTEND DIFFERENTIAL SIGNALING TO 16GT/S AND 32GT/S FOR NEXT–GENERATION SYSTEMS

PCIe Gen 4 and Gen 5 connectors meet industry standard PCIe 4.0 and 5.0 (Proposed) requiring higher speed performance. The optimized series supports backwards mating and is footprint compatible with PCIe 3/2/1.

These 1.00mm pitch, vertical card edge connectors enable all generations of PCI Express® signaling in desktop PCs, workstations, and servers. The connector designs provide support for 2.5GT/s (Gen1), 5.0GT/s (Gen2), 8.0GT/s (Gen3) and recently upgrade to 16GT/s (Gen 4), even further to Gen 5 32GT/s per differential signal pair.

Amphenol's expansive range of vertical PCIe Gen 4 and Gen 5 connectors will include options for surface mount (SMT), through hole solder, press–fit (PF) and straddle mount terminations.

- Backward mating and footprint compatible
- Higher speed performance without altering footprint
- Wide range of positions available
- Optional ridge feature according to customer preference

TARGET MARKETS

FEATURES

- A variety of termination types are available

- x1, x4, x8, x16 (36/64/98/164positions) standard links as per PCI–SIG CEM specification

- Backward mating and footprint compatible

- Capable to support up to 32GT/s without altering design

- RoHS compliant

- Low–halogen material

BENEFITS

- Different options to meet different application mounting

- Suitable for different bandwidth requirement

- Meets PCIe Gen 4 requirement, also backward compatible with Gen 1 and Gen 2 specification

- Suitable for next–generation systems

- Meets environmental, health and safety requirements

- Meets next–generation requirements

TECHNICAL INFORMATION

MATERIAL

▪ Nylon

ELECTRICAL PERFORMANCE

▪ Speed: 16GT/s, up to 32GT/s

▪ Differential Impedance: 85Ω

▪ Current Rating: 1.1A min. per pin for 8 power pins and 8 nearest ground pins

MECHANICAL PERFORMANCE

▪ Durability: 50 mating cycles

▪ Insertion Force: 1.15N max. per contact pair

▪ Removal Force: 0.15N min. per contact pair

ENVIRONMENTAL

▪ RoHS compliant

▪ Halogen-free

APPROVALS & CERTIFICATION

▪ CSA

▪ UL

PACKAGING

▪ Hard Tray

▪ Soft Tray

TARGET MARKETS/APPLICATIONS

Servers
Workstations

Desktop PCs
Notebook PCs

Routers
Switches
Base Stations

Embedded Systems

PART NUMBERS

Description	Data Rate	Orientation	Termination	Position	Part Numbers
PCIe Gen 5	32GT/s	Vertical	SMT	36, 64, 98, 164	10146070*
PCIe Gen 4	16GT/s	Vertical	SMT	36, 64, 98, 164	10146065*
PCIe Gen 4	16GT/s	Vertical	SMT with Blade Hold Down	36, 64, 98, 164	10144661*
PCIe Gen 4	16GT/s	Vertical	SMT	230, 280	10139595*
PCIe Gen 4	16GT/s	Vertical	Low Profile SMT	36, 64, 98, 164	10146788*
PCIe Gen 4	16GT/s	Vertical	SMT with Open Side Wall	36, 64, 98, 164	10146067*
PCIe Gen 4	16GT/s	Vertical	Through Hole	36, 64, 98, 164	10142333*
PCIe Gen 4	16GT/s	Vertical	Through Hole with Open Side Wall	36, 64, 98, 164	10148195*
PCIe Gen 4	16GT/s	Vertical	Press-fit	36, 64, 98, 164	10145445*
PCIe Gen 4	16GT/s	Vertical	SMT without ridges	36, 64, 98, 164	10146507*
PCIe Gen 4	16GT/s	Vertical	SMT with latch and Blade Hold Down	36, 64, 98, 164	10147430*
PCIe Gen 4	16GT/s	Right Angle	Straddle Mount	36, 64, 98, 164	10146027*

*denotes base part number. Please contact Amphenol ICC for complete part numbers.

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www.amphenol-icc.com