

# PCI Express® Gen 3 Card Edge Connectors

## SPECIALLY DESIGNED 8Gb/s SOCKETS FOR LOW PROFILE SYSTEMS

Amphenol ICC's 1.00mm pitch, vertical card edge connectors enable PCI Express® (PCIe®) signalling from 2.5Gb/s (Gen 1) and 5Gb/s (Gen 2) up to 8Gb/s (Gen 3) per differential signal pair. A modular design of these connectors allow standard pin counts like 36, 64, 98, 164 and 280.

The basic bandwidth (x1) version supports a single PCI Express® lane and is typically used for I/O cards in desktop PCs. The x4 and x8 connectors provide 64 and 98 contacts respectively for server I/O. The high bandwidth versions (x16 lanes and higher) are used for higher bandwidth applications like graphics cards in PCs or riser cards in servers.

- Available in through-hole, press-fit and surface-mount terminations
- Available in straddle-mount orientation
- Supports a wide range of bandwidth and performance requirements

### FEATURES

- Connector range offers x1, x4, x8, or x16 serial PCIe links
- 200, 230 (x24), and 280 position vertical connectors available
- ExpressModule™ versions provide an expanded lead-in window
- Straddle mount connectors featuring mounting ears
- Integrate rugged stand-alone retention mechanism



### TARGET MARKETS



### BENEFITS

- Supports different bandwidth requirements
- Supports PC and server riser cards
- Supports blind mate server applications
- Assures proper alignment to the host PCB
- Secures graphics cards during shipping and handling

# TECHNICAL INFORMATION

## MATERIAL

- Contact Base Metal: Copper alloy
- Contact Area Finish: Gold over nickel
- Solder Area Finish: Tin over nickel or tin-lead over Nickel
- Metal Board Locks: Copper alloy
- Board Locks Finish: Tin over nickel or tin-lead over nickel
- Housing: High-temperature thermoplastic

## ELECTRICAL PERFORMANCE

- Contact Resistance:
  - Initial: 30mΩ max.
  - Finish: Delta 20mΩ max.
- Current Rating: 1.1A for 8 specified power contacts and 8 nearest ground contacts
- Voltage Rating: 50V AC (rms)

## MECHANICAL PERFORMANCE

- Durability: 50 mating cycles
- Insertion Force: 1.15N (0.117Kgf) max. per contact pair
- Withdrawal Force: 0.15N (0.015Kgf) min. per contact pair
- Contact Retention Force: 0.5Kgf min. per pin

## ENVIRONMENTAL

- Salt Spray: Contact Resistance 20Ω max. final)
- Thermal Shock: Contact Resistance (20Ω max. final)
- Solderability: 90% of immersed area must show no voids and pin holes

## APPROVALS AND CERTIFICATIONS

- UL
- CSA

## SPECIFICATIONS

- Amphenol Product Specification:
  - GS-12-1193 PCI Express® 3.0 Straddle Mount Connectors Product Specification
  - GS-12-233 PCI Express® Connector Product Specification
  - GS-12-319 PCI Express® Press-Fit Connector Product Specification
  - CS-12-288 PCI Express® Retention Mechanism Product Specification
  - GS-12-390 PCI Express® Surface-Mount Connector Product Specification
- Industry Specification:
  - PCI Express Card Electromechanical Specification
  - PCI Express® Module Electromechanical Specification
  - For more information on the applicable PCI-SIG specification, visit [www.pcisig.com](http://www.pcisig.com)

## PACKAGING

- Tray

## TOOLING INFORMATION

- Tooled Up

## TARGET MARKETS/APPLICATIONS



Desktop PC  
Server  
Workstation

## PART NUMBERS

Description	Data Rate	Orientation	Termination	Position	Part Numbers
PCIe Gen 3	8GT/s	Vertical	SMT	36, 64, 98,164pos	10061913*
PCIe Gen 3	8GT/s	Vertical	SMT	230pos	10124870*
PCIe Gen 3	8GT/s	Vertical	SMT	280pos	10138069*
PCIe Gen 3	8GT/s	Vertical	TH	36, 64, 98,164pos	10108777*
PCIe Gen 3	8GT/s	Vertical	TH	200pos	10054652*
PCIe Gen 3	8GT/s	Vertical	TH	230pos	10132403*
PCIe Gen 3	8GT/s	Vertical	TH	280pos	10027747*
PCIe Gen 3	8GT/s	Vertical	Straddle Mount	36, 64, 98,164pos	10125756*
PCIe Gen 3	8GT/s	Vertical	PF	36, 64, 98,164pos	10082378*
PCIe Gen 3	8GT/s	Right Angle	SMT	98, 164pos	G630HXXX8XXEXHR
PCIe Gen 3	8GT/s	Right Angle	TH	98pos	G630H98X4210HR

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

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [PCI Express/PCI Connectors](#) category:*

*Click to view products by [Amphenol](#) manufacturer:*

Other Similar products are found below :

[UEX220-6U](#) [10039755-10110TLF](#) [1-1871239-2](#) [2170560-2](#) [10125756-980000LF](#) [EB220-3U](#) [WD2M144WB2R300](#) [10061913-120PLF](#)  
[GPCP146400111HR](#) [GPCP442628110HR](#) [GPCP446200120HR](#) [GPCP245400111HR](#) [10082378-10000TLF](#) [87715-9256](#) [MDT580M03001](#)  
[0877159107](#) [MDT580M01001](#) [10018783-11000MLF](#) [10018783-11101TLF](#) [10108777-10000ALF](#) [10141523-111T0LF](#) [10145445-10003MLF](#)  
[PSASF2130311TR](#) [PSASF3130411TR](#) [PSASF3130131TR](#) [7-1734774-7](#) [3-1761465-1](#) [10039755-10111TLF](#) [10039755-10112TLF](#) [10018783-](#)  
[10211TLF](#) [10018784-10211TLF](#) [10018784-10212TLF](#) [1761465-2](#) [1871058-1](#) [5-1761465-4](#) [10018783-10200MLF](#) [10018783-10213TLF](#)  
[10018784-10210TLF](#) [10018784-11113TLF](#) [10025026-10001TLF](#) [5145154-8](#) [1871058-4](#) [2041119-2](#) [10018783-10212TLF](#) [10018784-](#)  
[10102TLF](#) [10018783-11200TLF](#) [10123371-001TRLF](#) [10018784-10110TLF](#) [6-1734774-7](#) [6-1734774-9](#)