Card Edge Connectors

Product Presentation

PCI Express* (PCIe) Card Edge Connectors

Updated datasheet describing PCIe Gen 3 products – Available Now!

All standard links per PCI-SIG CEM Specification

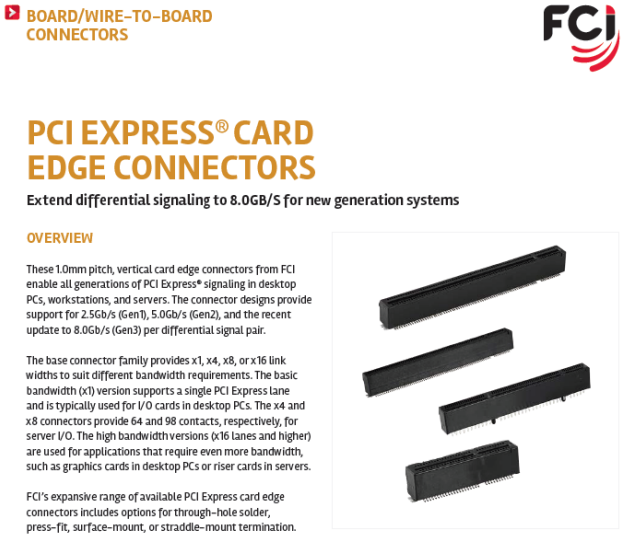
- X1 = 36P = Client I/O
- X4 = 64P = Server I/O
- X8 = 98P = Server I/O
- X16 = 164P = Graphics / Riser card

Support 2.5 Gb/s Gen1 and 5 Gb/s Gen2 specification requirements … and also proposed 8.0 Gb/s Gen3 requirements

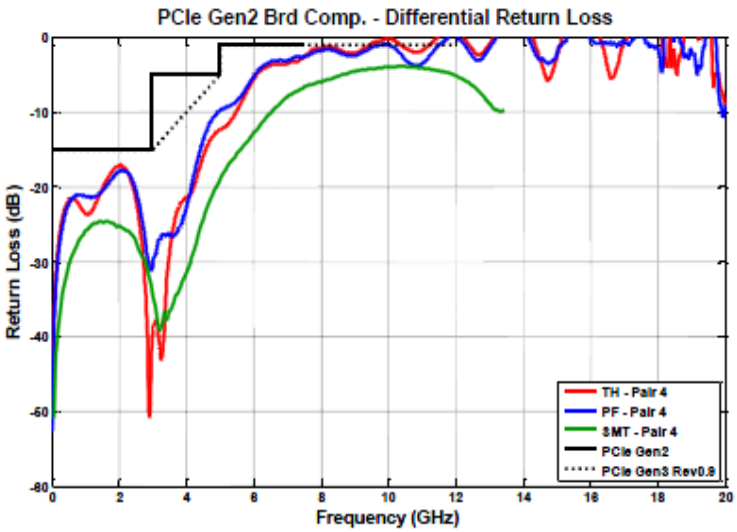
Available options

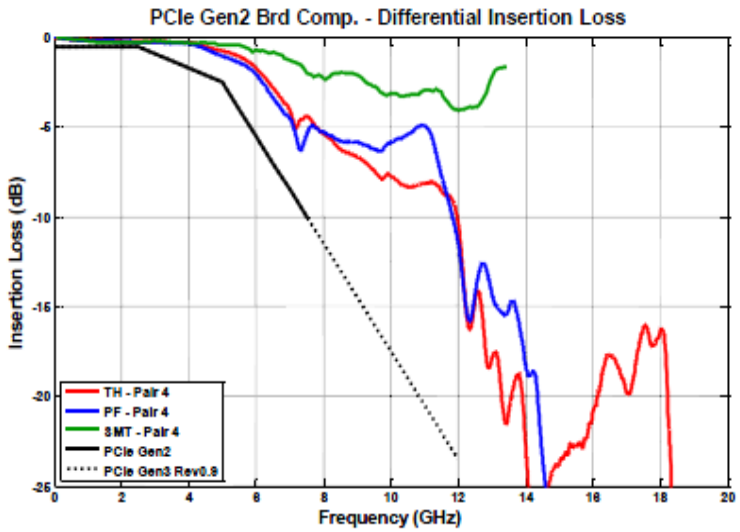
- x1 (36P), x4 (64P), x8 (98), x16 (164P) sizes
- 200P, 230P & 280P for server riser cards
- Termination types
  - PTH solder
  - Press-fit
  - Surface-mount (X1, X4, X8 and X16)
  - Straddle-mount (X1, X4, X8 and X16) is available now

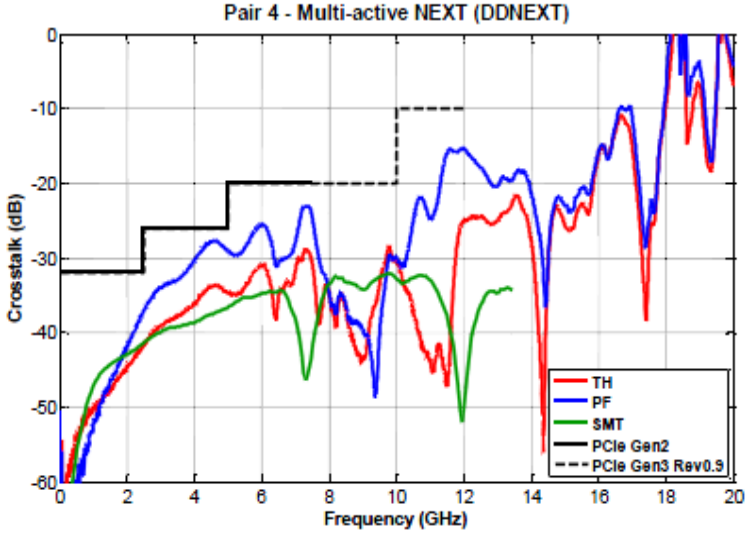
PCIe Gen3 Straddlemount 10125756



Differential Electrical Performance @ 8 Gb/s







Support proposed requirements for 8.0 Gb/s per differential signal pair

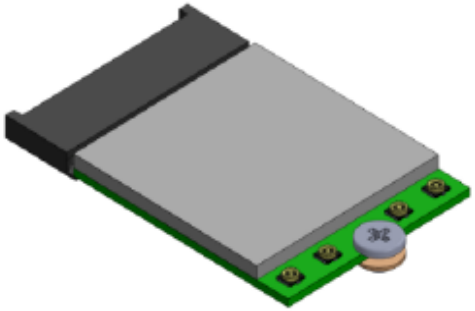
- Measured results are referenced to 85Ω differential environment
- Through-hole solder, press-fit and surface-mount termination types met PCIe Gen3 requirements when evaluated on Gen2 test boards
- FCI Gen2 connectors work for Gen3

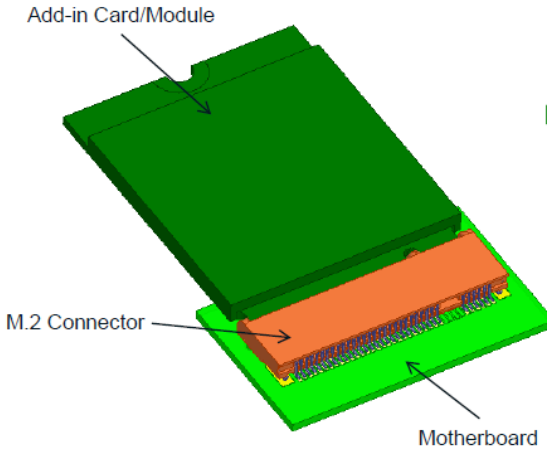
PCI Express M.2 Specification Overview

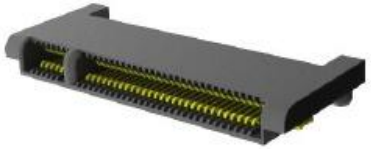
The initial M.2 specification was released on November 1, 2013

- Culmination of an industry-wide effort led by PCI-SIG to evolve the existing HMC (Half Mini Card) form factor standard to the new M.2 (informally known as NGFF) standard
- Supporting multiple types of platforms (notebooks, tablets, etc.)
- The Key Features of the M.2 include:
  - Reduced add-in card footprint and Z-Height
  - New Connector Keying scheme to support a multitude of Host interfaces and enabling new system partitioning:
    - A Wi-Fi centric socket
    - A SSD cache / WWAN / Other socket
    - SSD high performance socket (with x4 PCIe interface)
  - Support for both Connector-ized and Soldered-Down (LGA) solutions

FCI PN	Height	Key
10128786	3.2mm	A
10128787	3.2mm	B
10128788	3.2mm	E
10130618	3.2mm	M
10128792	4.2mm	A
10128793	4.2mm	B
10128794	4.2mm	E
10130616	4.2mm	M
10128798	5.5mm	M
10128796	8.5mm	B
10128797	8.5mm	E
10131758	8.5mm	M

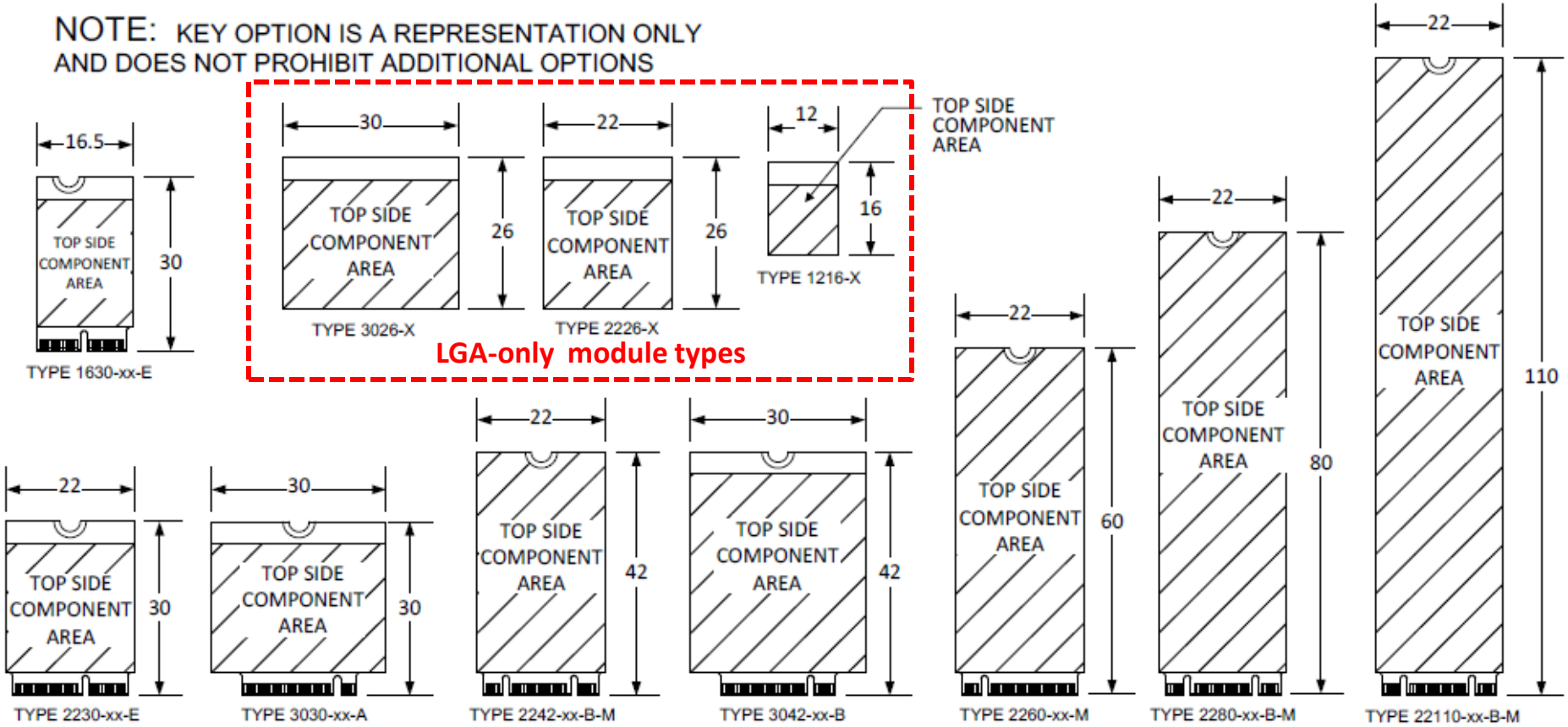






Numerous M.2 Module Card Form Factors

All module types use the M.2 connector except LGA types 1216, 2226 and 3026



GENERAL TOLERANCE IS ± 0.15

Dimensions in mm

M.2 Connector Features & Benefits

Product Features

- 75 positions with 8 positions are used for connector key, 0.5mm pitch
- Available in various height options
- Support both single and double-sided modules
- Support PCI Express 3.0, USB 3.0, & SATA 3.0

Benefits

- Occupies less PCB board space compared to mini PCIe card
- Flexible to meet various design needs
- Reduces overall height profile
- Supports higher data rates transmission

Part Number

- 10125101: H = 3.2mm, B Key
- 10128793: H = 4.0mm, B Key

Target Applications

- Laptop, Ultra-books, Tablets, Desktop, Server, SSD

THANK YOU