

PCIe® Gen 4 M.2 1A Card Edge Connectors

HIGH DENSITY HIGH PERFORMANCE CONNECTOR

Amphenol's PCIe® Gen 4 M.2 1A connectors provide 67 contacts on 0.50mm pitch and signal transmission speed of 16Gb/s. It occupies less board space, offers more connector height options. It is designed for PCIe® 4.0 1A applications, making it suitable for tablets, laptops and low profile storage and server applications. PCIe® Gen 4 M.2 1A Card Edge Connectors also support higher data rate transmission with both single and double-sided modules.

- Various connector height and keying options
- Accepts angled insertion of add-in module cards
- Provide right angle orientation M.2 connectors



TARGET MARKETS



FEATURES

- Card edge connector with 67 contacts on a 0.50mm pitch
- Compliant with PCIe® 4.0
- 75 positions with 2 connector key options
- Available in various connector height
- Supports both single and double-sided modules

BENEFITS

- Fully compliant with PCI-SIG PCIe® M.2 1A specification
- Serves multiple high speed peripheral applications
- Design flexibility
- Enables higher data rates

TECHNICAL INFORMATION

MATERIAL

- Contact: Copper Alloy with Gold plating sufficient to meet all mechanical and environmental requirements
- Contact Finish: Must be compatible with Lead-free soldering process
- Housing: Complies with UL 94 V-0. Must be compatible with Lead-free soldering process

ELECTRICAL PERFORMANCE

- Low Level Contact Resistance: EIA-364-23, 55mΩ max. (initial) per contact, Δ20mΩ max. change allowed
- Insulation Resistance: EIA-364-21, * >500MΩ at 500VDC
- Dielectric Withstanding Voltage: EIA-364-20, * >300VAC (RMS) at sea level
- Current Rating: *1A/Power contact (continuous), * The temperature rise above ambient shall not exceed 30°C, * The ambient condition is still air at 25°C, * EIA-364-70 Method 2
- Voltage Rating: 50VAC per contact

MECHANICAL PERFORMANCE

- Durability:
 - Normal M.2: 25-60 mating cycles

ENVIRONMENTAL

- Durability: EIA-364-9; *Option 1 - 25 Cycles, *Option 2 - 60 Cycles, Upon completion of cycles the sample must meet all visual and electrical performance requirements
- Insertion Force: 25N (2.5KgF, 1 Newton = 1 Kg* m/s²) max., EIA-364-13, Method A
- Shock: 250G(Notebook) and 285G(Tablet), At 2ms half sine, On all six axis
- Vibration: EIA-364-1000 Test Group3, EIA-364-28
- Operating Temperature Range: -40°C to +85°C
- Environmental Test Methodology: EIA-364-1000 Test group 1, 2, 3, 4
- Useful Field Life: Three (3) years

PART NUMBERS

Description	Height (mm)	Data rate	Orientation	Key Options	Part Numbers
M.2 Gen 4	4.2	16Gb/s	Right Angle	B	MDT420B0X411
M.2 Gen 4	4.2	16Gb/s	Right Angle	E	MDT420E0X411

*X denotes various plating options: Au Gold Flash/15µin Min. Au/30µin Min. Au

TOOLING INFORMATION

- Tooled Up

PACKAGING

- Reel

SPECIFICATIONS

- Amphenol Product Specification: SMDT005

TARGET MARKETS/APPLICATIONS



Wireless



Laptop
Tablet



Storage