

Cool Edge 1.00mm PCIe® Connectors

HIGH SPEED SPACE–SAVING CONNECTOR FOR BOARD–TO–BOARD APPLICATIONS

Cool Edge PCIe® connectors bring high speed PCIe® support into a one-piece card edge package with 16GT/s Gen 4 and 32GT/s Gen 5 capabilities. Slim connector design saves space on the motherboard while facilitating other higher density applications. These connectors come with a simple housing design with an overall reduced footprint, providing additional benefits over standard PCIe® CEM solutions. The conductive plastic design of these connectors provide enhanced signal integrity. The contact pads extend outwards from housing, making inspection easier.

- Provides standard and short solder tail versions
- Supports speeds up to 32GT/s
- Saves more space than standard PCIe® solution
- Enhanced signal integrity using conductive plastic design
- Simple housing design allows vertical AOI inspection

FEATURES

- 1.00mm signal pin pitch based on PCIe® interface
- 1.1A per pin for power application
- 0.7A per pin for signal application
- Supports speeds from 16GT/s, up to 25GT/s and 32GT/s
- PCIe® slots of x8, x16 and x24
- Supports 1.60mm thick mating board
- Slim connector design: height 9.60mm; width 5.80mm; length 95mm
- Simple housing design in vertical configuration
- Connector design with conductive plastic at the base
- Contact pads extend outwards from housing
- Short solder tail version available



TARGET MARKETS



BENEFITS

- Supports board-to-board applications
- Backward compatibility with PCIe® Gen 3 and forward compatibility with PCIe® Gen 5
- Supports most add-in card and next generation GPU applications
- Multiple applications served, from ICT to Consumer
- Saves more space than standard PCIe® with slimmer form factor, smaller width and footprint
- Allows for easy Automated Optical Inspection (AOI) of the connector
- Provides good signal integrity performance at high speeds up to 32GT/s
- Makes inspection easier compared to standard PCIe®
- Good for short riser card fanout and routing at PCB edge

TECHNICAL INFORMATION

MATERIAL

- Contact Base Metal: Copper alloy
- Contact Area Finish: Gold over nickel
- Solder Area Finish: Tin over nickel
- Housing: High temperature thermoplastic (UL 94V-0)

ELECTRICAL PERFORMANCE

- Contact Resistance:
 - 30mΩ max.
 - 10mΩ max. change after test
- Current Rating: 1.1A per pin for power application/0.7A per pin for signal application with temperature rise not exceeding 30°C
- Dielectric Withstanding Voltage: 500V

MECHANICAL PERFORMANCE

- Durability: 200 mating cycles
- Mating Force: 0.6N/pin max. for signal pin
- Unmating Force: 0.06N/pin min. for signal pin

SPECIFICATIONS

- Amphenol Product Specification: SCE009

ENVIRONMENTAL

- Temperature Life: 105±2°C for 240 hours. Per EIA 364-17
- Thermal Shock: 10 cycles between -55°C to +85°C. Per EIA 364-32
- Humidity: 24 cycles between 25±3°C at 80±3% RH and 65±3°C at 50±3% RH. Per EIA 364-31
- Mixed Flow Gas

PACKAGING

- Tray

TARGET MARKETS/APPLICATIONS



Baseband
Commercial Systems
Networking
Radio Units



High-end Computing System
Server and Storage Systems