

Cool Edge 0.80mm Hybrid Power & Signal Connectors

HYBRID CONNECTOR FOR VERSATILE BOARD-TO-BOARD APPLICATIONS

Cool Edge Hybrid Power and Signal connectors provide one-piece high speed and high power card-edge package. These versatile solutions address multiple standards like PCIe, SAS/SATA, and offer multiple BTB configurations such as mezzanine, coplanar and midplane/backplane. Moreover, the connectors are designed as Open Pin Field and are hot plug capable. These connectors feature modular tooling that allows multiple power-signal combinations for vertical configurations. It is also available in right angle and straddle mount options.

- Right angle and straddle mount options are available upon request
- Comes with cable-to-board option
- High Speed 0–32 Gb/s (or 56Gb/s PAM4) capability
- Supports multiple impedance systems



TARGET MARKETS



FEATURES

- Power pin pitch at 9.10mm with current rating of 25A per pin
- Signal pin pitch at 0.80mm with current rating of 0.5A per pin
- Power pins from 2 to 6 and signal pins range from 20 to 200
- Through hole power pin termination
- Open pin field design
- Vertical, right angle, and straddle mount configurations for coplanar, mezzanine, and backplane applications
- Built-in guide block option
- Supports 1.6mm thick mating board
- Slimmer form factor than standard PCIe®

BENEFITS

- Supports medium to high power BTB applications
- Supports most mating board applications
- Allows flexible power-signal combinations
- Provides higher power through several power layers
- Supports both single-ended and differential pairs with speeds up to 32Gb/s (or 56Gb/s PAM4)
- Supports multiple applications ranging from ICT to consumer
- Tolerates mis-alignment and facilitates blind-mating conditions
- Supports most standard BTB applications
- Serves as a space-saving alternative compared to the standard

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. initial; 15mΩ max. change after test
- Current Rating: 25A per power pin, 0.5A per signal pin with temperature rise not exceeding 30°C
- Dielectric Withstanding Voltage: 1000V DC for power and 500V DC for signal

MECHANICAL PERFORMANCE

- Durability: 200 mating cycles
- Mating Force: 10N/pin max. for power pin; 0.6N/pin max. for signal pin
- Unmating Force: 1.5N/pin min. for power pin; 0.06N/pin min. for signal pin

SPECIFICATIONS

- Amphenol Product Specification: SCE001
- Amphenol Application Specification: SCE002

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

APPROVALS & CERTIFICATION

- UL

PACKAGING

- Tray/Reel

TOOLING INFORMATION

- Special pin count option available upon request

TARGET MARKETS/APPLICATIONS



Server and Storage Systems
High-end Computing system



Baseband
Radio Units
Networking
Commercial Systems