

# Mini Cool Edge 0.60mm Connectors

## MEETS SFF-TA-1002, GEN Z, EDSFF, OCP NIC 3.0 AND PCIE® ENCLOSURE COMPATIBLE FORM FACTOR(PECF) SPECIFICATION

Mini Cool Edge is a 0.60mm high density, high speed card edge connector for new generation small form factor system. This fine pitch solution offers multiple BTB applications like right angle, mezzanine and coplanar and support cable interconnect options.

Mini Cool Edge 0.60mm meets SFF-TA-1002, Gen Z, EDSFF and OCP NIC 3.0 specifications.

- Common applications include Solid State Drive, Network Interface Card, Add-In Card.
- Vertical, right angle, straddle mount and orthogonal options are available
- High Speed from 32GT/s to 56GT/s, and can upgrade to 112GT/s PAM4 and 224GT/s PAM4 in future

### FEATURES

- Signal pin pitch at 0.60mm with current rating of 1.1A, up to 12 pins for power application
- Signal pins options from 56, 84, 140, 168, 280
- Customization of pin count upon request
- Small form factor
- Discrete pin design
- Supports 1.6mm thick mating board, 1.97mm, 2.36mm option upon request
- Hybrid & power individual options from 4C-HP, 4 power pins and 2 power pins available



### BENEFITS

- Supports small power BTB applications
- Provides power for module card
- Supports different board-to-board, module applications like FPGA, SSD, NIC
- Serves as a space-saving connector
- Support single-ended, high speed diff pairs up to 32G NRZ, 56G PAM4, 64G PAM4 and can upgrade to 112G PAM4 and 224G PAM4 in future
- For most standard BTB applications
- Support accelerator card, GPU application and power module

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### 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: 15mΩ max. change after test
- Insulation resistance: 1000MΩ min.
- Dielectric Withstanding Voltage: 300V AC

#### MECHANICAL PERFORMANCE

- Durability: 200 mating cycles
- Mating Force: 0.55N/pin max.
- Unmating Force: 0.05N/pin min.

#### SPECIFICATIONS

- Amphenol Product Specification: S-ME-004

#### ENVIRONMENTAL

- Humidity: EIA-64-31B, Method III without conditioning
- Temperature Life: EIA-364-17, Method A (without electrical load) Test temperature and test duration per EIA 364-1000 Table 8
- Thermal Shock: EIA-364-32, Method A, Table 2, Test condition 1, -55°C to 85°C, perform 5 cycles in mated condition
- Mixed Flow Gas: EIA-364-65, Class IIA, option 4. For 7 years field life

#### TOOLING INFORMATION

- Special pin count option available upon request

#### TARGET MARKETS/APPLICATIONS



Baseband  
Commercial Systems  
Networking  
Radio Units



High-end Computing System  
Server and Storage Systems

## PART NUMBERS

Description	Part Numbers
Mini Cool Edge 0.60mm 48 signal pins, SMT, Vertical	MET004810101011
Mini Cool Edge 0.60mm 56 signal pins, SMT, Vertical	ME1005610101011
Mini Cool Edge 0.60mm 84 signal pins, SMT, Vertical	ME1008410101011
Mini Cool Edge 0.60mm 84 signal pins, SMT, Vertical, High Mating cycle 10K	ME1008410114014
Mini Cool Edge 0.60mm 140 signal pins, SMT, Vertical	ME1014010101011
Mini Cool Edge 0.60mm 168 signal pins, SMT, Vertical	ME1016810101011
Mini Cool Edge 0.60mm 196 signal pins, SMT, Vertical	ME1019610101011
Mini Cool Edge 0.60mm 224 signal pins, SMT, Vertical	ME1022410103011
Mini Cool Edge 0.60mm 280 signal pins, SMT, Vertical	ME1028040101011
Mini Cool Edge 0.60mm 168 signal pins, SMT, Vertical, 1.97 mm PCB	ME1016810115011
Mini Cool Edge 0.60mm 56 signal pins, SMT, Vertical, 2.36mm PCB	ME1005610115011
Mini Cool Edge 0.60mm 168 signal pins, SMT, Vertical, 2.36mm PCB	ME1016810110011
Mini Cool Edge 0.60mm 140 signal pins with 4 power pins, SMT, Vertical	ME1014040183011
Mini Cool Edge 4 power pins, Vertical	ME10000401P0011
Mini Cool Edge 2 power pins, Vertical	ME10000101P1011
Mini Cool Edge 0.60mm 56 signal pins, SMT, Right angle, Seating height 3.05mm	ME1005610203071
Mini Cool Edge 0.60mm 84 signal pins, SMT, Right angle, Seating height 3.05mm	ME1008410201071
Mini Cool Edge 0.60mm 140 signal pins, SMT, Right angle, Seating height 3.05mm	ME1014010201071
Mini Cool Edge 0.6mm 168 signal pins, SMT, Right angle, Seating height 3.05mm	ME1016810201071
Mini Cool Edge 0.60mm 56 signal pins, SMT, Right angle, Seating height 4.05mm	ME1005610201091
Mini Cool Edge 0.60mm 84 signal pins, SMT, Right angle, Seating height 4.05mm	ME1008410201091
Mini Cool Edge 0.60mm 140 signal pins, SMT, Right angle, Seating height 4.05mm	ME1014010201091
Mini Cool Edge 0.60mm 168 signal pins, SMT, Right angle, Seating height 4.05mm	ME1016810201091
Mini Cool Edge 0.60mm 56 signal pins, SMT, Right angle, Seating height 4.05mm, Gen 5, TOP connector for belly to belly application	ME1005611201041
Mini Cool Edge 0.60mm 56 signal pins, SMT, Right angle, Seating height 4.05mm, Gen 5, BOTTOM connector for belly to belly application	ME1005611202041
Mini Cool Edge 0.6mm 56 signal pins, SMT, Right angle, Seating height 7.05mm	ME1005610211081
Mini Cool Edge 0.60mm 168 signal pins, SMT, Right angle, Seating height 7.05mm	ME1016810202081
Mini Cool Edge 0.60mm 84 signal pins, SMT, Right angle, Seating height 7.2mm	ME1008410202061
Mini Cool Edge 0.60mm 56 signal pins, SMT, Straddle mount, 1.6mm PCB, 0.0mm offset	ME1005613401101
Mini Cool Edge 0.60mm, 56 signal pins, SMT, Straddle mount, 1.93mm HB, 0.3mm offset	ME1005613401311
Mini Cool Edge 0.60mm 56 signal pins, SMT, Straddle mount, 2.36mm PCB, 0.0mm offset	ME1005613401201
Mini Cool Edge 0.6mm 56 signal pins, SMT, Straddle mount, 2.794mm PCB, 0.0mm offset	ME10056334B1A01
Mini Cool Edge 0.6mm, 56 signal pins, 1.57mm PCB, Panel mount, Cable end, Gen5	ME1005634478101
Mini Cool Edge 0.60mm 84 signal pins, SMT, Straddle mount, 1.6mm PCB, 0.0mm offset	MET008431401101
Mini Cool Edge 0.6mm 84 signal pins, SMT, Straddle mount, 1.93mm PCB, -0.3mm offset	MET008431401311
Mini Cool Edge 0.6mm 84 signal pins, SMT, Straddle mount, 2.36mm PCB, 0.0mm offset	ME1008413402201

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Description	Part Numbers
Mini Cool Edge 0.60mm 140 signal pins, SMT, OCP, Straddle mount, 1.6mm PCB, 0.0mm offset	ME1014013401101
Mini Cool Edge 0.60mm 140 signal pins, SMT, OCP, Straddle mount, 1.93mm PCB, -0.3mm offset	ME1014013401311
Mini Cool Edge 0.60mm 140 signal pins, SMT, OCP, Straddle mount, 2.36mm PCB, 0.0mm offset	ME1014013401201
Mini Cool Edge 0.60mm 168 signal pins, SMT, OCP, Straddle mount, 1.6mm PCB, 0.0mm offset	ME1016813401101
Mini Cool Edge 0.60mm 168 signal pins, SMT, OCP, Straddle mount, 1.93mm PCB, -0.3mm offset	ME1016813401311
Mini Cool Edge 0.6mm 168 signal pins, SMT, OCP, Straddle mount, 2.11mm PCB, 0.0mm offset	ME10168434A0601
Mini Cool Edge 0.60mm 168 signal pins, SMT, OCP, Straddle mount, 2.2mm PCB, 0.3mm offset	ME1016843401G11
Mini Cool Edge 0.60mm 168 signal pins, SMT, OCP, Straddle mount, 2.36mm PCB, 0.0mm offset	ME1016813401201
Mini Cool Edge 0.60mm 168 signal pins, SMT, OCP, Straddle mount, 2.55mm PCB, 0.0mm offset	ME1016833401B01
Mini Cool Edge 0.60mm 168 signal pins, SMT, OCP, Straddle mount, 2.6mm PCB, 0.0mm offset	ME1016843433701
Mini Cool Edge 0.60mm 168 signal pins, SMT, OCP, Straddle mount, 2.67mm PCB, 0.00mm offset	ME1016833401J01
Mini Cool Edge 0.6mm 168 signal pins, SMT, OCP, Straddle mount, 2.794mm PCB, 0.0mm offset	ME10168334B2A01
Mini Cool Edge 0.6mm 168 signal pins, SMT, OCP, Straddle mount, 3.00mm PCB, 0.0mm offset	ME1016813401411
Mini Cool Edge 0.6mm 56 signal pins, 1x1, Gen 4+, Press-fit, Orthogonal	ME2005602311011
Mini Cool Edge 0.6mm 56 signal pins, 1x4, Gen 4+, Press-fit, Orthogonal	ME2005602311041
Mini Cool Edge 0.6mm 56 signal pins, 1x1, Gen 5, Press-fit, Orthogonal	ME3005602311011
Mini Cool Edge 0.6mm 56 signal pins, 1x4, Gen 5, Press-fit, Orthogonal	ME3005602311041
Mini Cool Edge 0.60mm 56 signal pins, 1x1, PCB-SMT, Orthogonal, 7.805mm offset, Gen 4	ME2005630501111
Mini Cool Edge 0.60mm 56 signal pins, 1x1, PCB-SMT, Orthogonal, 7.805mm offset, Gen 5	ME3005630501111
Mini Cool Edge 0.60mm 56 signal pins, 1x1, PCB-SMT, Orthogonal, 8.655mm offset, Gen 4	ME2005630501211
Mini Cool Edge 0.60mm 56 signal pins, 1x1, PCB-SMT, Orthogonal, 8.655mm offset, Gen 5	ME3005630501211
Mini Cool Edge 0.60mm 56 signal pins, 1x1, PCB-SMT, Orthogonal, 12.17mm offset, Gen 5	ME3005630502311
Mini cool edge 0.6mm, 84signal pins, Orthogonal, 1x1, PCB-SMT, 7.805mm offset, Gen 4	ME2008430501111
Mini cool edge 0.6mm, 84signal pins, Orthogonal, 1x1, PCB-SMT, 7.805mm offset, Gen 5	ME3008430501111
Mini cool edge 0.6mm, 84signal pins, Orthogonal, 1x1, PCB-SMT, 8.655mm offset, Gen 4	ME2008430501211
Mini cool edge 0.6mm, 84signal pins, Orthogonal, 1x1, PCB-SMT, 8.655mm offset, Gen 5	ME3008430501211
Mini Cool Edge DDIMM/AIC Latch, Height 20mm	CELB15701005-1

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