

# Micro Cool Edge NF1/NGSFF 0.50mm Connectors

## CARD EDGE CONNECTOR FOR ENTERPRISE SSD APPLICATIONS

Micro Cool Edge NF1/NGSFF 0.50mm is a new small form factor card edge connector designed for enterprise and data center SSD (Solid State Drive) server. It supports NF1/NGSFF (Next Generation Small Form Factor) which can double storage capacity and enable front side service within server systems compared to the M.2 standard.

Vertical and right angle Micro Cool Edge has the same interface as orthogonal, which can be used inside the system for higher density applications. With 0.50mm pitch, 67pin, M Key that is similar to the M.2 connector, Micro Cool Edge supports NVMe SSD and meets speed up to 16GT/s.

- SSD PCB thickness 0.80mm
- Supports hot plug and front loading
- Supports NVMe, speed up to 16GT/s
- Ideal for 1U system application
- Gang mechanical framework can be 1x1, 1x2 and 1x4

### FEATURES

- 0.50mm pitch, 67pins, M key
- Vertical design
- Right angle design
- Orthogonal design
- Air slot between connector
- Gang mechanical framework in 1x1, 1x2 and 1x4 configuration with staggered mounting feature
- Special pin design
- Robust gang bracket with metal key



### TARGET MARKETS



### BENEFITS

- Small form factor for 1U server system
- Supports high density internal SSD drive application
- Suitable for low profile design
- Simplifies system design
- Provides good thermal performance
- Increases drive density in system
- Supports hot pluggable applications
- Provides good mechanical support for drive front loading

## Micro Cool Edge NF1/NGSFF 0.50mm Connectors

### TECHNICAL INFORMATION

#### MATERIAL

- Contact Base Metal: Copper Alloy
- Contact Area Finish: Gold over Nickel
- Press fit Area Finish: Tin over Nickel
- Housing: High temperature thermoplastic (UL 94V-0)

#### ELECTRICAL PERFORMANCE

- Contact Resistance: 300mΩ max. initial; 30mΩ max. change after test
- Power supply: 16W max
- Dielectric Withstanding Voltage: 300V AC @ Sea Level

#### MECHANICAL PERFORMANCE

- Durability: 50 mating cycles
- Mating Force: 55N max.
- Unmating Force: 3N min.

#### ENVIRONMENTAL

- Humidity: 96 hours, 40±2°C at 90% ~95% RH. Per EIA 364-31
- Temperature Life: 105±2°C for 168 hours. Per EIA 364-17
- Thermal Shock: 10 cycles between -55°C to +85°C. Per EIA 364-32
- Mixed Flow Gas: 10 days to simulate 7 years field life. EIA364-65 class IIA

#### APPROVALS & CERTIFICATION

- UL

#### SPECIFICATIONS

- Amphenol Product Specification (Vertical): S-MDT-002
- Amphenol Product Specification (Orthogonal): S-MDT-003
- Amphenol Application Specification (Orthogonal): S-MDT-004
- Amphenol Product Specification (Right Angle): S-MDT-006

#### PACKAGING

- Tray (Orthogonal)
- Tape & Reel (Vertical & Right Angle)

#### 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
Micro Cool Edge NF1/NGSFF Orthogonal 1x1	MD3671M23100212
Micro Cool Edge NF1/NGSFF Orthogonal 1x4	MD3674M23100312
Micro Cool Edge NF1/NGSFF Right Angle	MD3670M02006111
Micro Cool Edge NF1/NGSFF Vertical*	MD3670MX100011X

\*Note: Variations for Micro Cool Edge Vertical can be found in the part number selector below.

MD3670M	—	X	100011	X
0	TH Boardlock	1	Tape & Reel With Cap	
1	SMT Boardlock	2	Tray Packed Without Cap	

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