

# BergStak HS™ 0.50mm Mezzanine Connector

Superior performance up to 32Gb/s

## FLEXIBLE SOLUTION FOR HIGH SPEED APPLICATIONS

BergStak HS™ 0.50mm connector is a flexible solution designed for high speed and high density, parallel board-to-board applications with various heights in different sizes.

The BergStak HS™ 0.50mm connector series meets the new 25Gb/s and 32Gb/s performance requirement.

- Available in 50 positions
- Available in 12mm stack height
- 5mm and 8mm stack heights, and up to 120 pin configurations available upon request



### TARGET MARKETS



### FEATURES

- Housing and terminal profile optimized to 25Gb/s and 32Gb/s
- Extension of standard BergStak® 0.50mm
- Vertical versus vertical mating configuration
- 50 position sizes, 12mm stack height available
- 0.50mm double-row contact pitch conserves printed circuit board space
- Scoop-proof feature housings
- Multiple plating options available
- Multiple packaging options available
- PCB locator pegs
- RoHS compliant and lead-free

### BENEFITS

- Supports high speed performance up to 32Gb/s
- Supports higher speed applications from PCIe® Gen 3, PCIe® Gen 4 to PCIe® Gen 5
- Suitable for parallel board stacking applications
- Varying positions and height specification meets 25Gb/s and 32Gb/s requirements
- High density for all electrical applications needs
- Prevents reverse mating
- Satisfies different application requirement
- Suitable for various feeding processing
- Facilitates ease and accuracy during manual assembly
- Meets environmental, health and safety requirements

\*The PCIe® mark is a registered trademark of the PCI-SIG Corp

## TECHNICAL INFORMATION

### MATERIAL

- Housing: Glass filled LCP, UL94V-0
- Contact Base Metal:
  - Receptacle: Copper alloy, high spring
  - Plug: Copper alloy
- Solder Area Finish: Matte pure tin over nickel

### ELECTRICAL PERFORMANCE

- Insulation Resistance:
  - Initial: 100MΩ min.
  - After Test: 50MΩ min.
- Current Rating: 0.5A/contact
- Contact Resistance:
  - Initial: 50mΩ max.
  - After Test: 70mΩ max.
- Voltage Rating: 50VAC
- Signal Integrity (Differential pairs):
  - As simulated data
  - Impedance: Supports both 85Ω and 100Ω applications

- Durability: 100 mating cycles
- Mating Force: 0.9N max./contact
- Unmating Force: 0.1N min./contact

### ENVIRONMENTAL

- Operating Temperature Range: -40°C to +125°C
- High Temperature Life: 105°C ±5°C for 1000 hours
- Humidity: 90–95% relative Humidity for 240 hours

### SPECIFICATIONS

- Product Specification: GS-12-1479

### PACKAGING

- Tape & Reel
- Tube

### TARGET MARKETS/APPLICATIONS



Datacom  
Telecom



Server  
Storage



Embedded Computer

Test Category	25Gb/s	32Gb/s
Return Loss	-24dB @ 12.5GHz -17.5dB @ 8GHz	-12dB @ 16GHz
Insertion Loss	0.4dB @ 12.5GHz -0.37dB @ 8GHz	-1.2dB @ 16GHz
Power-summed NEXT	-65dB @ 12.5GHz -62.5dB @ 8GHz	-56dB @ 16GHz
Power-summed FEXT	-62.4dB @ 12.5GHz -63dB @ 8GHz	-42dB @ 16GHz

### MECHANICAL PERFORMANCE

## PART NUMBERS

Positions	Description	Connector Height (mm)	Stack Height (mm)	Part Numbers
50	BergStak HS™ 0.5mm board-to-board, vertical header, 50 positions, single GND, 25Gb/s version	10.67	12	10138650-058202SLF
50	BergStak HS™ 0.5mm board-to-board, vertical header, 50 positions, double GND, 32Gb/s version	10.67	12	10138650-058202DLF
50	BergStak HS™ 0.5mm board-to-board, vertical receptacle, 50 positions	3.8	12	10138651-051202LFL

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