BergStak+™ 0.80mm Mezzanine Connector

Superior performance up to 16Gb/s

BOARD-TO-BOARD SOLUTION FOR HIGH SPEED AND HIGH DENSITY APPLICATIONS

BergStak+™ 0.80mm is designed to be the next generation PCIe 4.0 compliant mezzanine connector system. It is fully compatible with the existing BergStak® 0.80mm product recommended by the Open Compute Project (OCP).

- Backward mateable and footprint compatible with existing BergStak® 0.80mm
- Available in 80 and 120 positions. Other position options on request
- Available in 5, 8, 12 and 16mm stack heights

NEW

TARGET MARKETS

FEATURES

- Housing and terminal profile optimized to meet 16Gb/s
- Backward mateable and footprint compatible
- 80 and 120 position sizes
- 5mm, 8mm, 12mm and 16mm stack heights
- 0.8mm double-row contact pitch
- Scoop-proof feature housings
- Multiple plating options available
- Multiple packaging options available
- PCB locator pegs option available
- RoHS compliant and lead-free

BENEFITS

- Meets PCIe 4.0 industry standards
- Supports migration path from PCIe 3.0 to PCIe 4.0
- Comprehensive range of sizes and stack heights to satisfy varying needs
- High density for all electrical applications needs
- Prevents reverse mating
- Satisfies different application requirement
- Suitable for varies 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: Brass
- Solder Area Finish: Matte pure Tin over Nickel

MECHANICAL PERFORMANCE

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

ELECTRICAL PERFORMANCE

- Insulation Resistance: 1000MΩ min.
- Current Rating: 0.8A/contact
- Contact Resistance:
  - Initial: 30mΩ max.
  - After Test: 50mΩ max.
- Voltage Rating: 100VAC
- Signal Integrity (Differential pairs, connector and SMT pads only)
  - Impedance: 85Ω @30ps (20-80%)
  - Return Loss: <-10dB up to 8GHz
  - Insertion Loss: >-1dB up to 8GHz
  - NEXT: <-32dB up to 8GHz
  - FEXT: <-32dB up to 8GHz

ENVIRONMENTAL

- Temperature Range: -40°C to +125°C
- High Temperature Life: 105°C ±5°C for 1000 hours
- Humidity: 80%-98% relative humidity, 24h/cycle, total 10 cycles

SPECIFICATIONS

- Product Specification: GS-12-1354
- Application Specification: GS-20-0480
- Test Report: TBD

PACKAGING

- Tape and Reel
- Tube

TARGET MARKETS/APPLICATIONS

Datacom
Telecom

Server
Storage

Embedded Computer

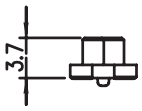
For more information,
please contact: Marketing@fci.com
or visit us at www.amphenol-icc.com

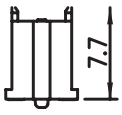
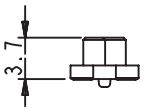
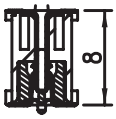
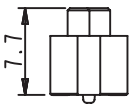
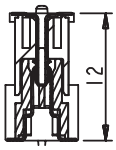
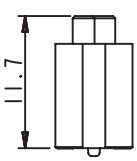
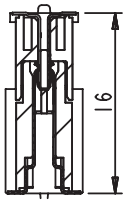
Disclaimer
Please note that the above information is subject to change without notice.

PART NUMBERS

Position	Description	Connector Height (mm)	Part Numbers
80	PCIe 4.0 Plug 1	4.7	10139085-081402LF
80	PCIe 4.0 Plug 4	7.7	10139085-084402LF
80	PCIe 4.0 Receptacle 1	3.7	10139781-081402LF
80	PCIe 4.0 Receptacle 2	7.7	10139781-082402LF
80	PCIe 4.0 Receptacle 3	11.7	10139781-083402LF
120	PCIe 4.0 Plug 1	4.7	10139085-121402LF
120	PCIe 4.0 Plug 4	7.7	10139085-124402LF
120	PCIe 4.0 Receptacle 1	3.7	10139781-121402LF
120	PCIe 4.0 Receptacle 2	7.7	10139781-122402LF
120	PCIe 4.0 Receptacle 3	11.7	10139781-123402LF

AVAILABLE STACK HEIGHTS

COMBINATION OF MATED HEIGHT 5MM		10139085 SERIES
	Plug 1	
10139781 Series	Recep 1	

COMBINATION OF MATED HEIGHT 8, 12, 16MM		10139085 SERIES
	Plug 4	
10139781 Series	Recep 1	 
	Recep 2	 
	Recep 3	 

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For more information,
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