

# BERGSTAK® 0.8MM MEZZANINE CONNECTORS

Extraordinary product range, Benchmark performance, Dual-source champion



## FLEXIBLE SOLUTION FOR HIGH DENSITY APPLICATIONS

FCI's BergStak® 0.8mm is a flexible solution designed for high speed and high density, parallel board-to-board connector system with 16 PCB stack heights in 9 sizes up to 200 positions.

- Housing and terminal profile guarantees support of up to 12Gb/s
- Vertical versus vertical mating configuration
- 40 to 200 position sizes in 20 position increments
- 5mm to 20mm stack heights in 1mm increments



### TARGET MARKETS



### FEATURES

- Housing and terminal profile guarantees support of up to 12Gb/s
- Vertical versus vertical mating configuration
- 40 to 200 position sizes in 20 position increments
- 5mm to 20mm stack heights in 1mm increments
- 0.8mm double-row contact pitch conserves printed circuit board space
- Scoop-proof feature housings
- Multiple plating options available
- Multiple packaging options available
- PCB locator pegs option
- Available in UL94-V0 material
- RoHS compliant and lead-free

### BENEFITS

- Compatible with PCIe Gen 2/3 and SAS 3.0 high speed performance on selected stack heights
- Suitable for parallel board stacking applications
- Comprehensive range of sizes and stack heights to satisfy all 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
- High flammability rating
- Meets environmental, health and safety requirements

## TECHNICAL INFORMATION

### MATERIAL

- Housing: Glass filled LCP, UL94V-0
- Contact Base Metal
  - Receptacle: Copper Alloy, High Spring
  - Plug: Brass
- Contact Area Finish: Gold or Gold flash over Palladium–nickel (GXT) over Nickel
- Solder Area Finish: Matte pure Tin over Nickel

### MECHANICAL PERFORMANCE

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

### ELECTRICAL PERFORMANCE

- Insulation Resistance:
  - Initial: 1000M $\Omega$  min.
  - After Test: 100M $\Omega$  min.
- Current Rating: 0.8A/contact
- Contact Resistance:
  - Initial: 30m $\Omega$  max.
  - After Test: 50m $\Omega$  max.
- Voltage Rating: 100VAC
- Signal Integrity (Differential pairs, connector and SMT pads only)
  - Impedance Range: 81 to 108 $\Omega$  @ 50 ps edge (10–90%)
  - Return Loss: < 10dB up to 5GHz
  - Insertion Loss: < 1.5dB up to 5GHz
  - NEXT:  $\leq$  4.0% for a 50 ps edge (10–90%)
  - FEXT:  $\leq$  2.4% for a 50 ps edge (10–90%)

### ENVIRONMENTAL

- Temperature Range: –40°C to +125°C
- High Temperature Life: 105°C  $\pm$  5°C for 1000 hours
- Humidity: 90–95% relative humidity for 96 hours
- Mixed Flowing Gas Class 2a (30 GXT)

### APPROVALS AND CERTIFICATIONS

- UL E66906
- File no. LR46923

### SPECIFICATIONS

- Product Specification: GS–12–547
- Test Report: DGS–29–010

### PACKAGING

- Tape & Reel
- Tubes

### TARGET MARKETS/APPLICATIONS



Router  
IP Phone



Server



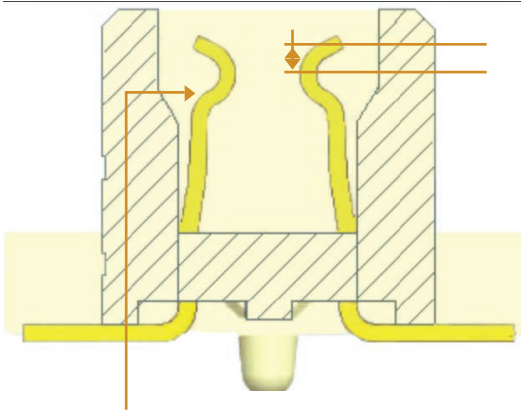
Industrial and Instrumentation  
Office Equipment  
Test and Measurement  
Point-Of-Sale Terminal  
Portable Industrial Terminal



Diagnostics System

## ▶ BERGSTAK® 0.8MM MEZZANINE CONNECTORS

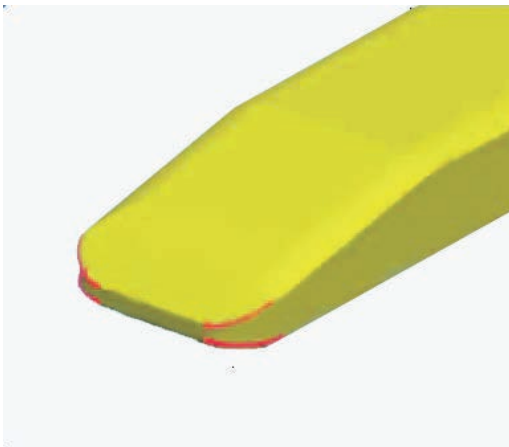
### RECEPTACLE



Early-contact point allows early engagement/ late disengagement and increases mating wipe

Precision-tapered contacts control mating stress while providing reliable, high normal force

### HEADER



Coined contact tips assure smooth, safe wiping action during connector mating

#### Disclaimer

## PART NUMBER SELECTOR

XXXXX		XX		X	X	X	X	X
BASE PART NUMBER		TOTAL POSITIONS		HOUSING HEIGHT	PLATING CODE	PEG OPTION	PACKAGING OPTION	LF
Receptacle	61082							
Plug	61083							
40 pos	04							
60 pos	06							
80 pos	08							
100 pos	10							
120 pos	12							
140 pos	14							
160 pos	16							
180 pos	18							
200 pos	20							

Tube without metal cap	0
Tape & Reel with metal caps	2
Tape & Reel without metal cap (with Kapton tape)	6
Tube with metal caps	9

Includes polarization pegs	0	Lead-free, RoHS compatible	LF
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Gold 0.2um min./Pure Tin 2um min. (Lead-free) Nickel underplate overall 1.27um min.	4
Gold 0.38um min./Pure Tin 2um min. (Lead-free) Nickel underplate overall 1.27um min.	5
Gold Flash (0.1um min.) over Palladium-Nickel 0.76um min./Pure Tin 2um (Lead-free) Nickel underplate overall 1.27um min.	6

X	FOR PLUG, SEE DWG. NO. 61083			
COMBINATION OF MATED HEIGHT	Plug 1	Plug 2	Plug 3	Plug 4
Recep 1				
Recep 2				
Recep 3				
Recep 4				

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