

# BergStak HS™ 0.50mm

**FINE PITCH/WIDE RANGE/ ANTI-VIBRATION/HIGH SPEED BOARD-TO-BOARD CONNECTOR**

## FLEXIBLE SOLUTION FOR HIGH SPEED APPLICATIONS

Amphenol's FCI Basics BergStak HS™ connector family is known for its fast data transmission, high signal quality, and time-proven reliability under extended periods of application. BergStak HS™ 0.50mm connector family with 0.50mm pitch enables high-speed data applications with up to PCIe® Gen 5 32Gb/s.

- Fine pitch of 0.5mm
- Support from 5mm to 20mm stack height, 20-120 positions
- Polarization feature and self-alignment feature to improve mating performance
- Side walls to protect the contacts during mating
- High Speed performance



### TARGET MARKETS



### FEATURES

- 0.5mm double-row contacts
- High-speed performance up to 32Gb/s
- 40 and 80 positions, with options from 20 to 120
- 12mm stack height, with options for 5mm and 20mm
- Open pin design, available in single GND and double GND
- Self-alignment feature
- RoHS compliant, halogen and lead free
- UL94V-0 high temperature LCP material

### BENEFITS

- High-density connector, suitable for applications with space constraints
- Meets SAS 4.0 and PCIe® Gen 5 standards
- Application flexibility
- Design flexibility
- Supports blind mating and automatic assembly cost-effectively
- Meets health, safety and environment requirements
- With-stand harsh environment

## TECHNICAL INFORMATION

### MATERIAL

- Housing: High temperature thermoplastic LCP, Black (UL94V-0)
- Terminal: Copper Alloy
- Plating: Gold flash, 15µin GOLD/GXT®, 30µin GOLD/GXT®

### ELECTRICAL PERFORMANCE

- Current Rating: 0.5A per contact (all contacts powered)
- Insulation Resistance: 100mΩ min.
- Voltage Rating: 100VAC/VDC
- LLCR: 50mΩ max.
- Data rate: 32Gb/s

### MECHANICAL PERFORMANCE

- Mating and Un-mating Force: 0.5N max. & 0.02N min./contact
- Durability: 100 cycles
- Mechanical Shock : SAE/USCAR-2 V2
- Vibration: SAE/USCAR-2 V2

### ENVIRONMENTAL

- Operating Temperature: -55°C to +125°C
- Thermal Shock: SAE/USCAR-2, 100 cycles
- Temperature Life: USCAR2-7, 125C, 500 hours

### APPROVALS & CERTIFICATION

- UL E66906

### SPECIFICATIONS

- Product Specification: GS-12-1727

### PACKAGING

- Tape & Reel

### TARGET MARKETS/APPLICATIONS



Advanced Driver Assistance Systems (ADAS)



Server  
Storage  
Artificial Intelligence (AI)

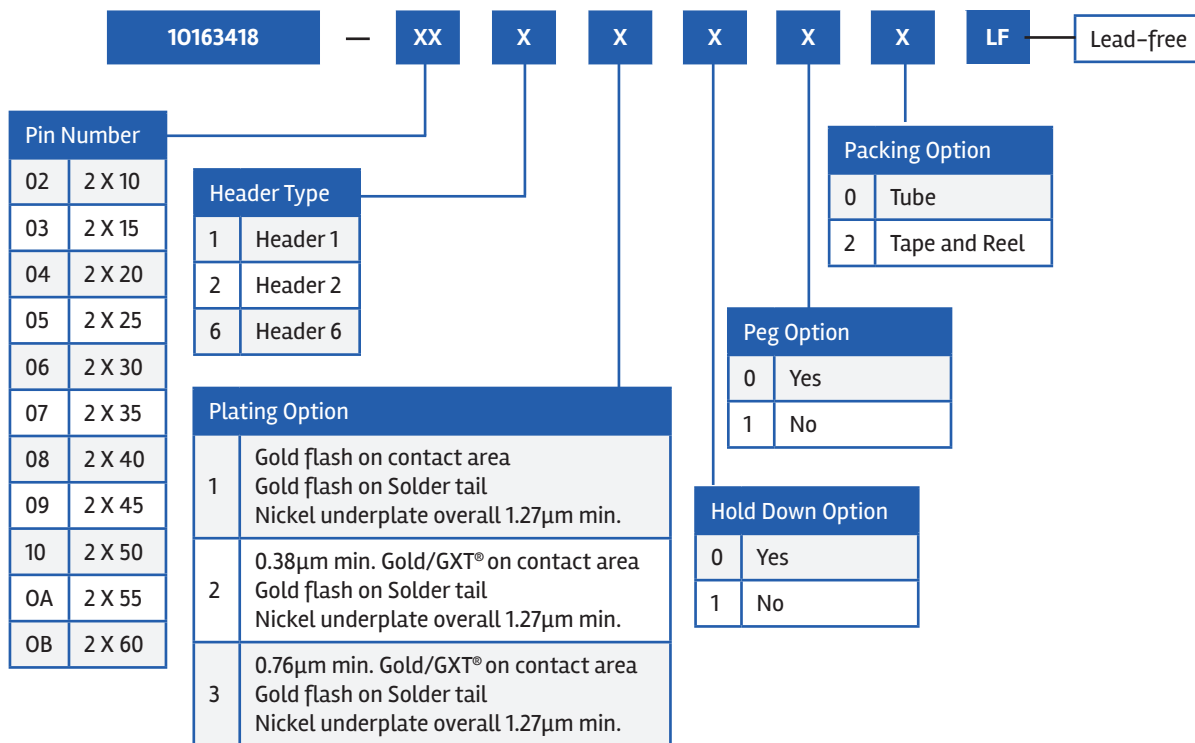


Embedded Computer



Server  
Storage

## PART NUMBER SELECTOR



## PART NUMBERS

| Description  | Part Numbers       |
|--|--------------------|
| BergStak HS™ 0.50mm, 40position, Header, 12mm stack height                                   | 10163418-0422002LF |
| BergStak HS™ 0.50mm, 80position, Header, 12mm stack height                                   | 10163418-0823002LF |
| BergStak HS™ 0.50mm, 40position, Receptacle, 12mm stack height                               | 10163419-0442002LF |
| BergStak HS™ 0.50mm, 80position, Receptacle, 12mm stack height                               | 10163419-0843002LF |
| BergStak HS™ 0.5mm board-to-board, Vertical Header, 50 positions, Single GND, 25Gb/s version | 10138650-058202SLF |
| BergStak HS™ 0.5mm board-to-board, Vertical Header, 50 positions, Double GND, 32Gb/s version | 10138650-058202DLF |
| BergStak HS™ 0.5mm board-to-board, Vertical Receptacle, 50 positions                         | 10138651-051202LF  |