

# HIGH PIN COUNT (HPC) BACKPLANE CONNECTOR SYSTEM

**0.100" (2.54mm) Pitch**

## OVERVIEW

The HPC connector is a traditional backplane interface providing rugged mechanical and electrical performance. It enables 3 and 4 row daughter cards to the backplane interface. On board connector guiding and keying are available to control and discriminate daughter-card engagement with the backplane card slot.

The HPC connector compares with competitive High Density Interface (HDI) 4 Beam and Twin Beam Connectors (TBC). The square posts and formed signal contacts provide rugged mechanical interface and excellent electrical performance, while the receptacle contacts offer high reliability and low mating force.

Even though standard connector sizes range from 30 to 600 positions, custom configurations are also available, with signal or power contacts.

Primary markets served include Communications and Enterprise Systems, Industrial and Instrumentation, Medical Systems, Military Electronics, etc.



## FEATURES

- 0.025mm square posts and formed signal contacts
- Press-fit and solder tail options
- Connector sizes range from 30 to 600 positions
- Custom signal or power configurations

## BENEFITS

- Rugged mechanical interface
- Excellent electrical performance
- Design and PCB assembly flexibility
- Satisfies a variety of applications
- Allows custom configurations



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## TECHNICAL INFORMATION

### MATERIALS

- Housings: High-Temperature Thermoplastic, UL 94-V0
- Contacts: Header: CU alloy, Receptacle: High performance CU alloy

### ELECTRICAL PERFORMANCE

- Current Rating (continuous): 1A (all contacts powered); 2.25A (one contact powered)
- Electrical: Contact Resistance <20 m ohms; Insulation Resistance: ≥ 500 M ohms
- Signal Integrity: NEXT (500ps rise time; S/G=2/1); 10% Maximum

### MECHANICAL PERFORMANCE

- Mating Force: <99 grams per contact
- Un-mating Force : >18 grams per contact
- Press fit Assembly: Seating force: <40 lbs/contact; Un-seating: >7.5 lbs/contact
- Vibration: MIL-STD-202F, Method 204D
- Mechanical Shock: EIA364 TP 27

### SPECIFICATIONS

- As per Product Specification BUS-12-090

### ENVIRONMENTAL

- Operating Temperature: -40°C to +125°C
- Thermal Shock: MIL-STD-202F, Method 107G

### APPROVALS AND CERTIFICATIONS

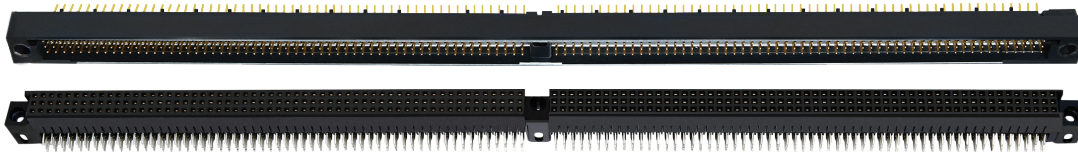
- UL94-V0: Flammability
- UL-STD-498

### PACKAGING

- Tubes
- Boxes

### TARGET MARKET / APPLICATIONS

- Communications and Enterprise Systems
- Industrial and Instrumentation
- Medical Systems
- Military Electronics



## PART NUMBERS

Description	3 Rows 0 Guides	4 Rows 0 Guides	4 Rows 2 Guides
Range of Positions	30 to 240	40 to 320	480 to 600
Vertical Pin Header with Solder tails	50012-XXXXZ	50015-XXXXZ	
Vertical Pin Header with Press-fit tails	50006-XXXXZ	50009-XXXXZ	50011-XXXXZ
Right Angle Receptacle with Solder tails	50294-XXXXZ	50295-XXXXZ	
Right Angle Receptacle with Press-fit tails	50645-XXXXZ	50642-XXXXZ	50644-XXXXZ

### NOTES

- **X**: Plating Options
  - **1** = Gold
  - **5** = GXT™
- **YYY**: Number of positions
- **Z**: Tail Length
- **LF**: Lead Free

GXT™ is an FCI Electronics patented process of palladium-nickel alloy plated with a gold flash

BPLHPCCON015EA4

### Disclaimer

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

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