

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



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

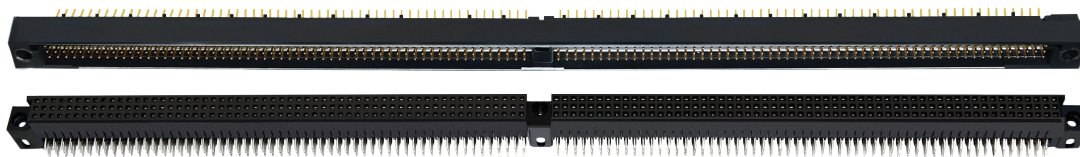
- UL94-V0: Flammability
- UL-STD-498

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-YYYYZ	50015-YYYYZ	
Vertical Pin Header with Press-fit tails	50006-YYYYZ	50009-YYYYZ	50011-YYYYZ
Right Angle Receptacle with Solder tails	50294-YYYYZ	50295-YYYYZ	
Right Angle Receptacle with Press-fit tails	50645-YYYYZ	50642-YYYYZ	50644-YYYYZ

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

BPLHPCCON0115EA4

Mouser Electronics

Authorized Distributor

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[50000-1165H](#) [50015-1160JLF](#) [50000-1096ELF](#) [50000-5033ELF](#) [50000-5042ELF](#) [50000-5060ELF](#) [50000-5063ELF](#)
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[50431-X160XLF](#) [50514-XX008LF](#)