



Rib-Cage[®] Board to Board Product Presentation

Basics Portfolio



Agenda



1. Value Proposition
2. Product Overview
3. Product Specifications
4. Features & Benefits
5. Markets & Applications
6. Marcomm Collaterals

Rib-Cage®



Value Proposition

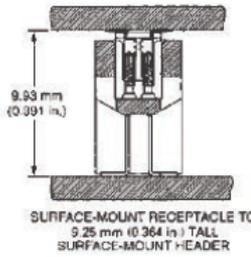
The comprehensive Rib-Cage® system includes **dual-row, pin and-socket connectors** for **right-angle** and **mezzanine connections** between printed circuit boards (PCB) or flexible printed circuits (FPC).

Thanks to his exclusive design, the Rib-Cage® multi point, gold plated receptacle contacts, provides **high reliability performances** in **high vibration** and **harsh shock** applications.

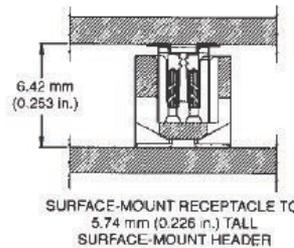
The Rib-Cage® solutions has a variety of sizes from **10 to 100 positions** and a **polarization** to prevents mis-mating.

Rib-Cage®

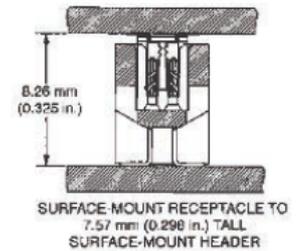
Product Overview



Surface-Mount Header 9.25mm
(0.364 in)



Surface-Mount Header 5.7mm
(0.226 in)



Surface-Mount Header 7.57mm
(0.298 in)

Rib-Cage®



Product Specifications

Product Facts

- 10 to 100 position sizes in 10 position increments
- Vertical VS vertical mating configuration
- Exclusive Rib-Cage® multi-point, gold plated receptacle contacts
- Polarization feature of housing
- PCB locator pegs option

Performance Characteristics

- Durability: 200 mating cycles
- Mating Force: 157 g per contact max
- Un-mating Force: 43g per contact min
- Shock and vibration: per MIL-STD-202 Method 204 and IEC 60512 Test 6d
 - Shock: 50g 11ms half sine
 - Vibration: +/- 20g, 10 to 2000 Hz
- Temperature range: -55°C to 130°C
- Insulation Resistance: 50,000 M Ω min. initial
- Current Rating: 1.0A DC per contact with all contacts energized (30°C Temp.Rise)
- Contact Resistance: 20 m Ω max. initial; 25 m Ω max. after environmental test
- Withstanding Voltage: 800V AC RMS 60Hz
- Capacitance: 1.0pf max. between pairs of adjacent or opposing contacts, un-mated connector

Specifications

- Product Spec. : BUS-12-087
- Application Spec. : BUS/20/052
- Application drawing : TA-901

Materials

- Housing Glass-filled thermoplastic, UL94 V0; black or natural color
- Contact Base Metal:
 - PCB receptacles: Copper alloy, High spring;
 - PCB pin headers: Phosphor bronze
- Contact plating: 30 μ (0.76 μ m) gold/GXT over nickel in contact area; 100 μ (2.54 μ m) lead-free pure tin over nickel on solder tails

Rib-Cage®



Features & Benefits

Features	Benefits
10 to 100 position sizes in 10 position increments	Comprehensive range of sizes for all needs
Vertical VS vertical mating configuration	Suitable for parallel board stacking applications
Exclusive Rib-Cage™ multi-point, gold plated receptacle contacts	Optimal reliability in high vibration and harsh shock applications
Polarization feature of housing	Prevent mis-mating
Available in UL94V-0 flammability rated LCP	High flammability rating
Multiple packaging options available	Suitable for a variety of feeding processing
PCB locator pegs option	Easy to assembly
RoHS compliance and Lead-free	Meet environmental, health and safety requirements

Rib-Cage®



Main Markets & Applications

Military communications equipment



Security systems and access control



Mechanical devices



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Marcomm Collaterals

Available on FCI

- Technical Data Sheet

- Product Specifications

- Application Specifications



BOARD/WIRE-TO-BOARD CONNECTORS

RIB-CAGE™
1.27mm (0.050") Pitch Board-to-Board Connector System for Extreme Applications

OVERVIEW

Rib-Cage™ connectors provide optimal precision and reliability at a competitive conventional cost for any applications with shock and vibration.

Rib-Cage™ connectors meet high performance standards for any applications with shock and vibration.

The versatile Rib-Cage™ system includes Dual-Row pin-to-pin connectors for high-density and connector connections between a single (single) board (PCB) or board-to-board (B2B).



FEATURES & BENEFITS

- Includes Rib-Cage™ multi-pin, gold plated receptacle contacts to provide optimal reliability in high vibration and shock severe applications
- 100% 100% tested B2B
- 96 AWG flat tail
- High density 1.27mm (0.050") x 1.27mm (0.050") double row contact pitch system and 2.54mm (0.100") contact pitch system
- Available in high speed applications for maximum connector density
- Available in high speed applications for maximum connector density
- Multiple PCB positioning and PCB attachment options suit customer assembly requirements
- Available in 10 through 100 total positions
- Lead-free, hand compatible plating suitable for environmental applications

TARGET MARKET APPLICATIONS

- Handheld test and diagnostic equipment
- Defense test and measurement devices
- Military communications equipment
- Security systems and access control
- Train-to-war systems
- Electronic sub-systems used in conjunction with cars, meters and mechanical devices

ORDER NUMBER	REV	PRODUCT SPECIFICATION	FILE	REVISION	DATE
BUS-12-887				1 of 21	05/13
RibCage™ II Printed Wiring Board Connector System					
C: Customer					
27 File of 27					
UNRESTRICTED					

1.0 GENERAL

This specification covers gold plated Rib-Cage™ II Printed Wiring Board Connectors designed for possible parallel implementation of printed wiring boards in aerospace applications as well as lead-free product that meets the requirement of the European Union (Directive of Restriction of Hazardous Substances (Directive 2002/95/EC)).

The connector is described in Figure 1) and designed for mating with structure in Figure 2) having double rows of 118 each formed pins on BSC both sides. This specification is composed of the following sections:

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2.0 APPLICABLE DOCUMENTS

The following documents, of the issue in effect on the date of the latest revision of this specification, shall form a part of the specification for the various specified features.

SPECIFICATIONS

Feature	Doc #	Doc Title
GG-4-71	Doc #	Lead Alloy, Tin-lead Alloy, and Tin Alloy Flux used in Solder
GG-4-26	Doc #	Manual Plating, Electroplated

REFERENCES

Doc #	Doc Title
MIL-8-11000	Thin, Spacing, Copper Clad Board, Rigid
MIL-8-12418	Wiring Boards, Flexible, Polyimide, Thermally Stable
MIL-8-15200	Gold Plating, Electroplated
MIL-8-15800	Collation, Surface Mounting
MIL-8-16112	Printed Wiring Boards

ORDER NUMBER	REV	PRODUCT SPECIFICATION	FILE	REVISION	DATE
BUS-26-452				1 of 20	05/13
Application for Rib-Cage™ II Connector System					
C: Customer					
10 May 13					
UNRESTRICTED					

1.0 SCOPE

This information is provided to aid our customers in applying and processing the Rib-Cage II Connector System.

2.0 DESIGN AND APPLICATION CONSIDERATIONS

Rib-Cage II connector system is intended for use up to 100 positions maximum.

2.1 The guidelines presented here are in four sections:

- 2.1.1 Parallel board interface with a single pair of connectors.
- 2.1.2 Parallel board interface with multiple connectors.
- 2.1.3 Interface of a flex circuit to a board.

Rib-Cage®



Marcomm Collaterals

Available on FCI

- Part Numbers & Drawings

Narrow By [Expand](#) [Start > Rib-Cage™ Series >](#) [Search Again](#)

[- Gender-](#) [- Height \(Mated\)-](#) [- Mate Polarization-](#) [- Most Popular Configurat](#) [- Mounting style-](#) [- Mounting style \(Board\)-](#) [- Number of contacts \(Tot](#) [- Orientation-](#) [- Packaging \(Type\)-](#) [- RoHS Lead Free Comp](#)

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Part Number	Image	Status	Product Name
73542-615CTLF		ACTIVE	Surface Mount PCB Receptacle, 30 Positions, Holddown Mounting style
73542-640CTLF		PRE-RELEASED	Surface Mount PCB Receptacle, 80 Positions, Holddown Mounting style
73542-640LF		ACTIVE	Surface Mount PCB Receptacle, 80 Positions, Holddown Mounting style
73542-645LF		PRE-RELEASED	Surface Mount PCB Receptacle, 90 Positions, Holddown Mounting style
73542-650		ACTIVE	Surface Mount PCB Receptacle, 100 Positions, Holddown Mounting style
73546-115TRLF		PRE-RELEASED	Surface Mount Vertical Shrouded PCB Header, 30 Positions, Plain Mounting style
73547-105LF		ACTIVE	Surface Mount Vertical Shrouded PCB Header, 10 Positions, Locator Mounting style



THANK YOU

