

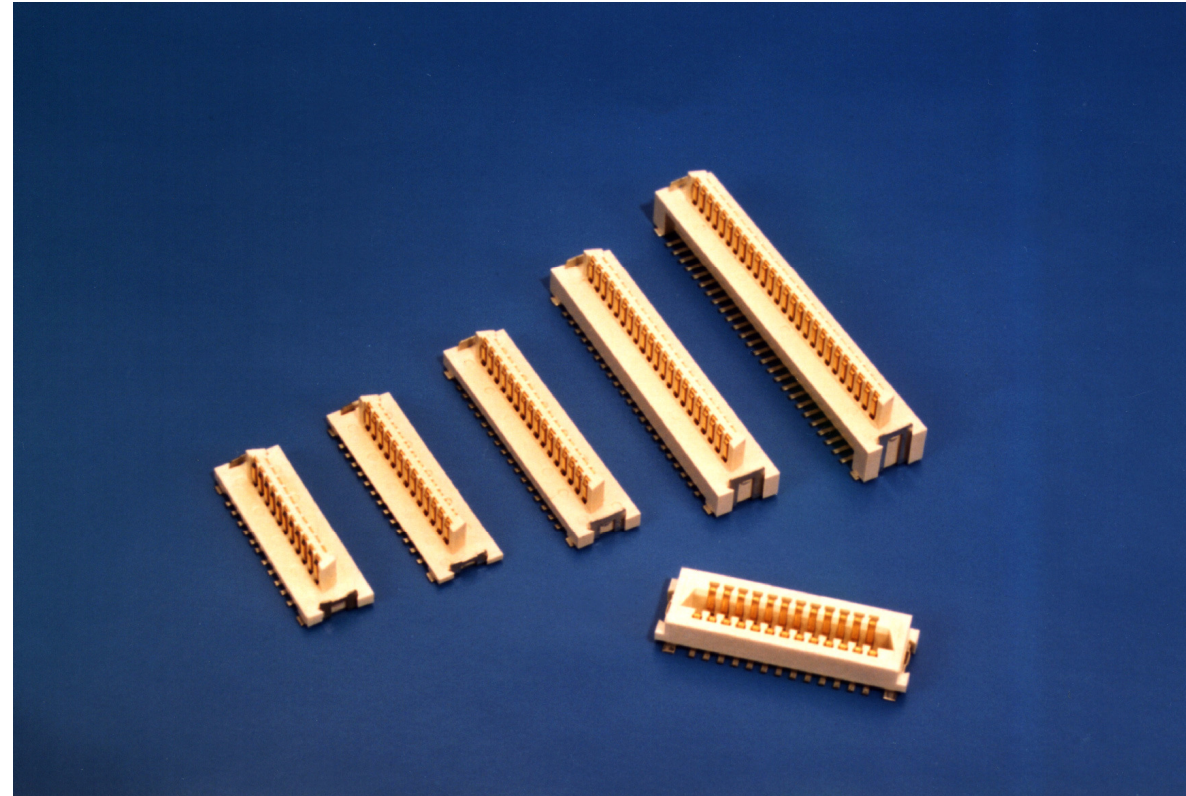


CONAN[®]
Fine Pitch Mezzanine Connector System
(1.00mm Pitch)

May 2010

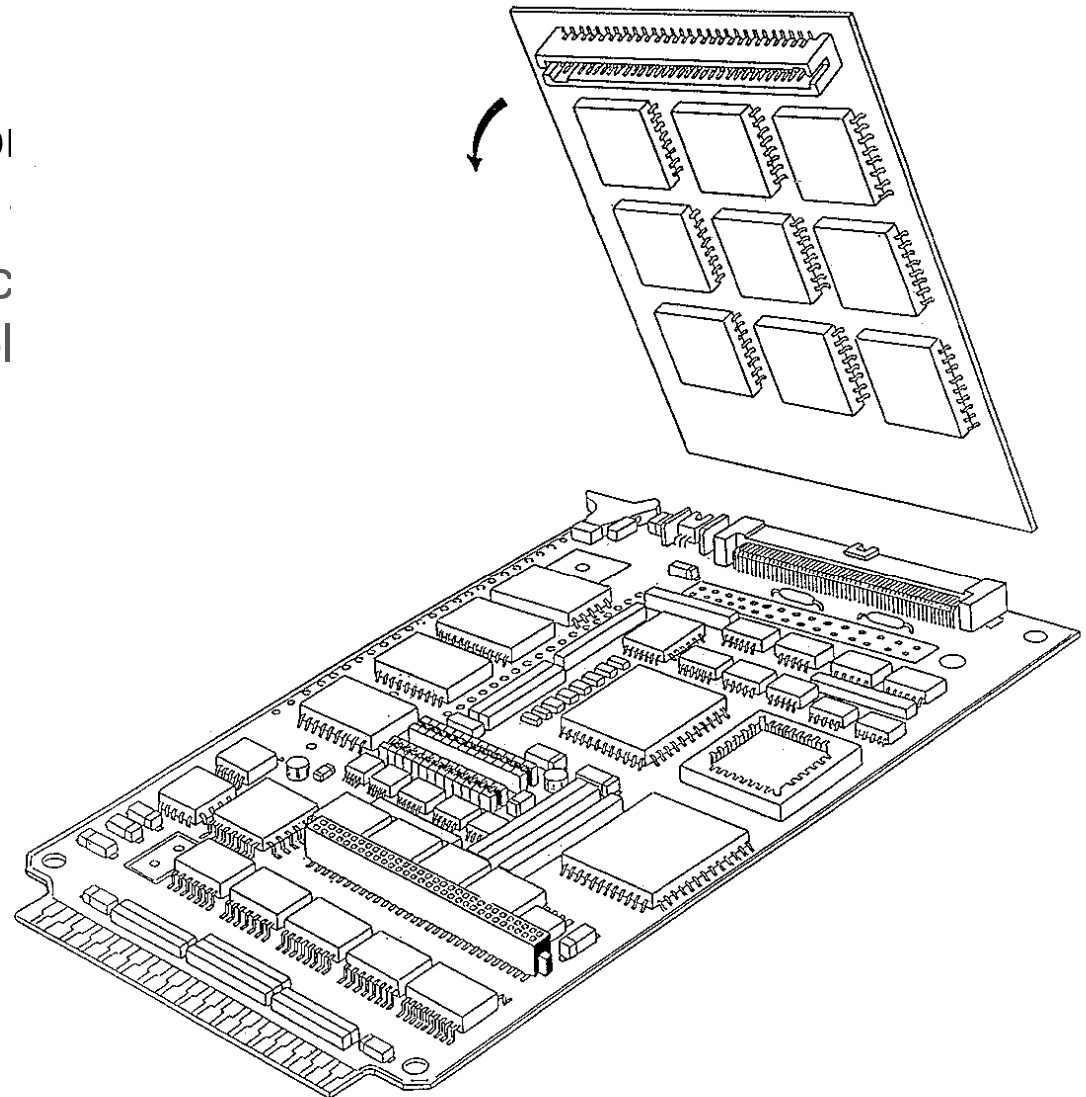
Fine Pitch, 1.00mm Mezzanine Connectors

- Mezzanine Overview
- Conan Overview
- Positioning Statement
- Applications
- Features and Benefits
- Technical Summary



Fine Pitch, 1.00mm Mezzanine Connectors

- High Density Mezzanine Definition
 - High Density (< 1.0mm pitch) connector systems for connecting printed circuit boards or flexible



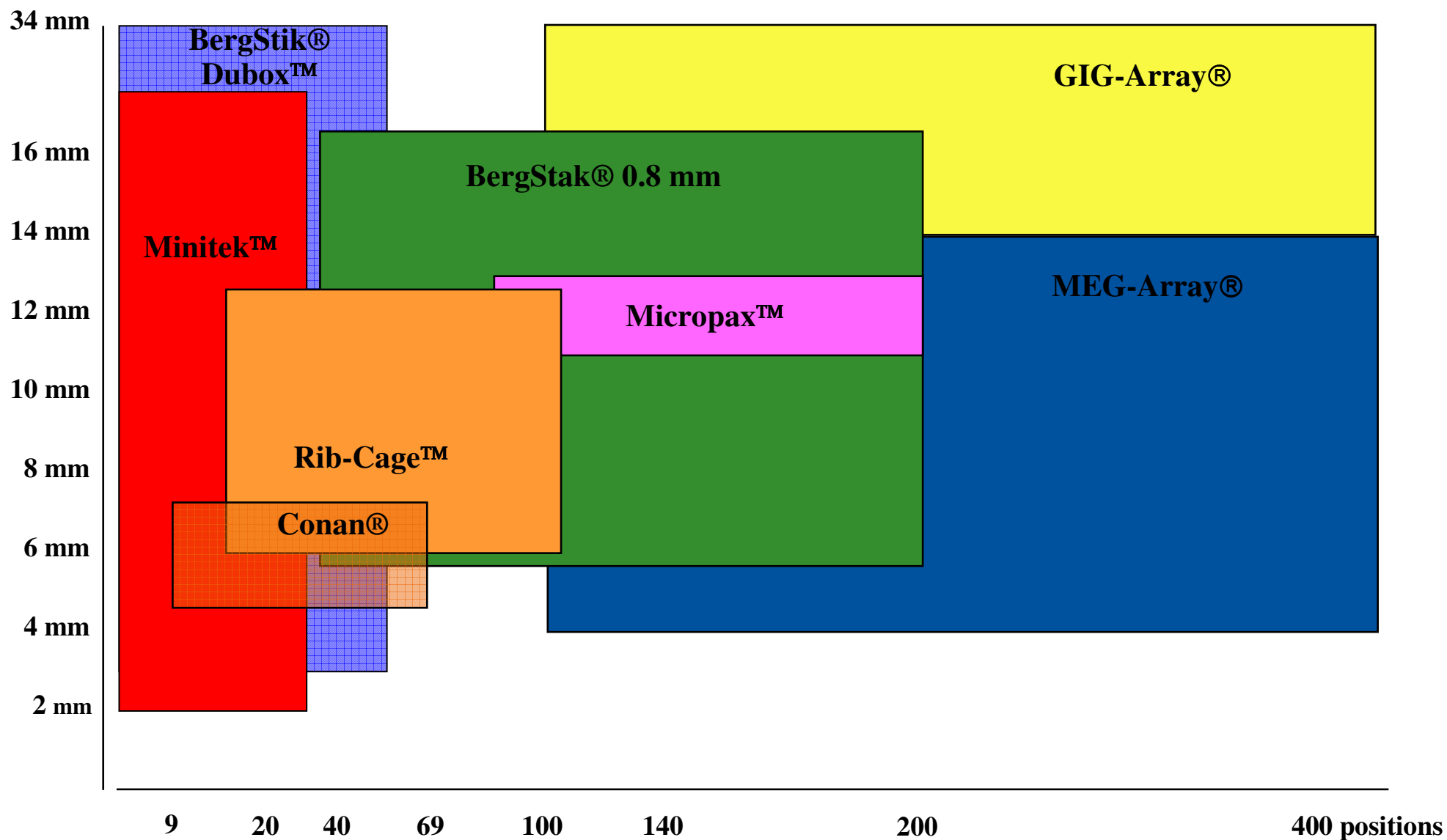
Fine Pitch, 1.00mm Mezzanine Connectors

FCI Mezzanine Portfolio

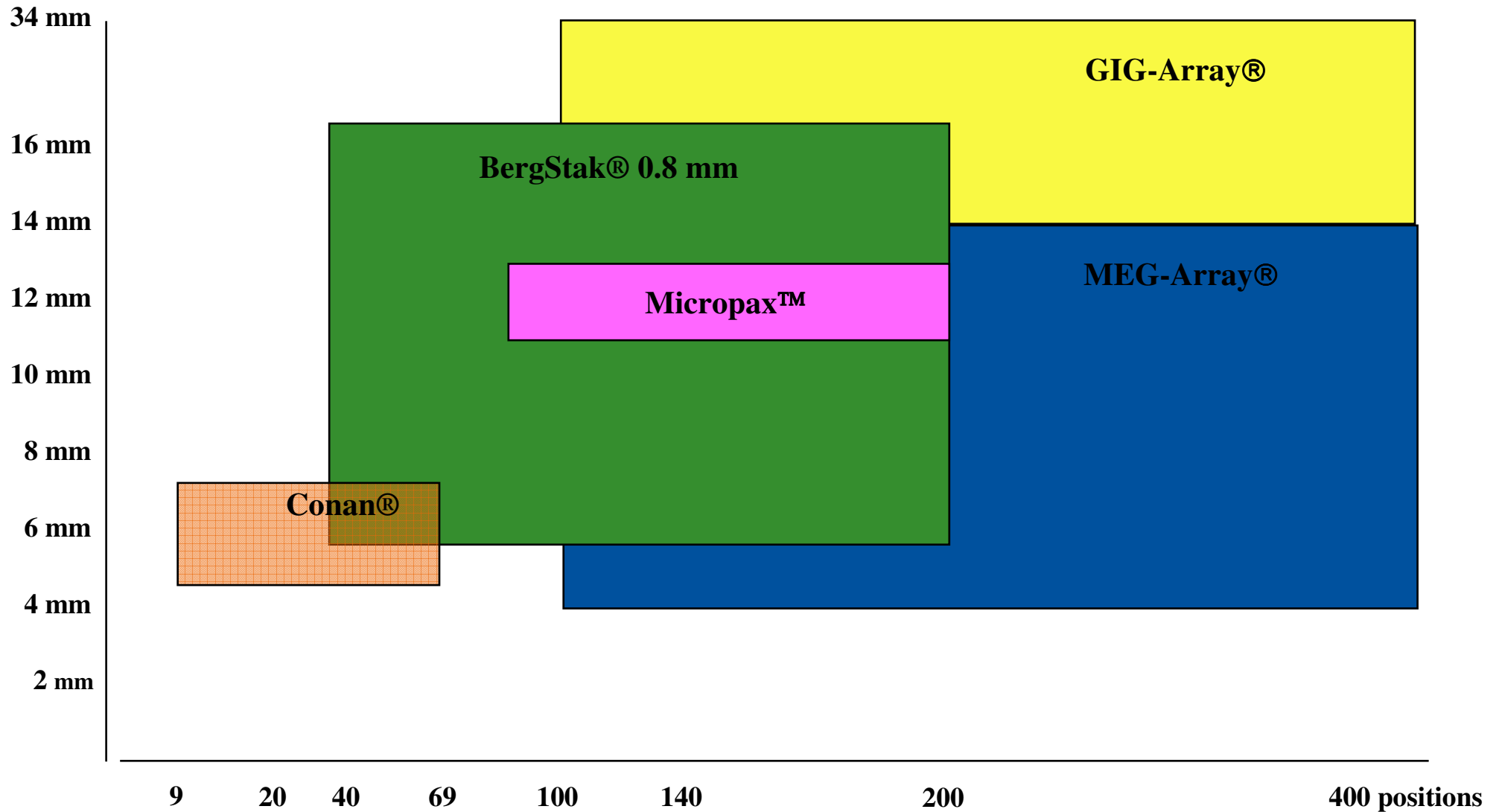
- High performance data connections inside desktop workstations, servers and communication equipment
 - GIG-Array®
 - Meg-Array®
 - TwinMezz™ (new product)
 - Micropax™

- Fine pitch data connections inside computers, communications systems and hardware, or other digital electronics.
 - BergStak® 0.8mm
 - **Conan® 1.0mm**
 - MezzoStak™ 0.5mm (new product)

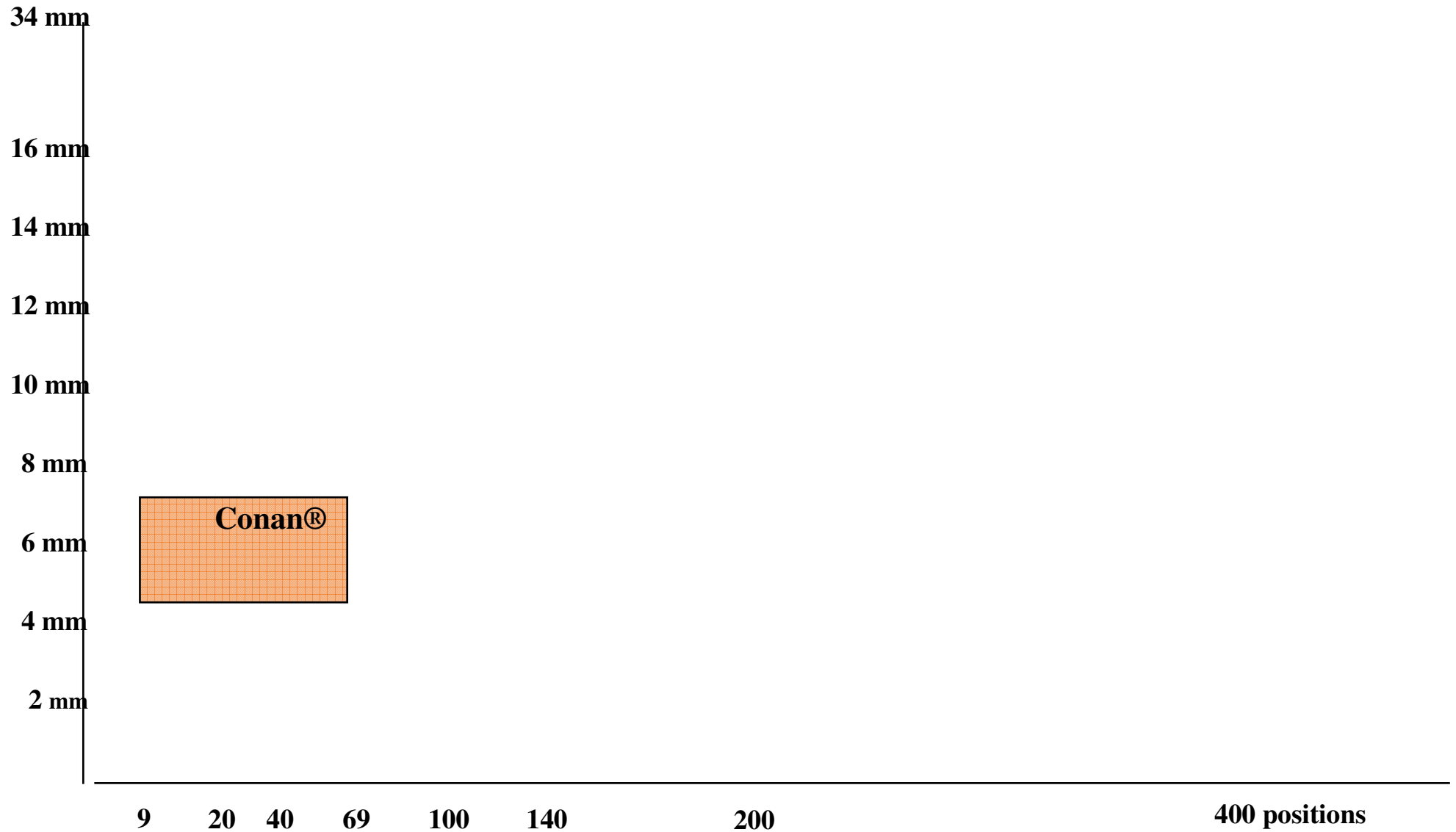
FCI Mezzanine Portfolio- Heights and Sizes



Dedicated Mezzanine Connectors

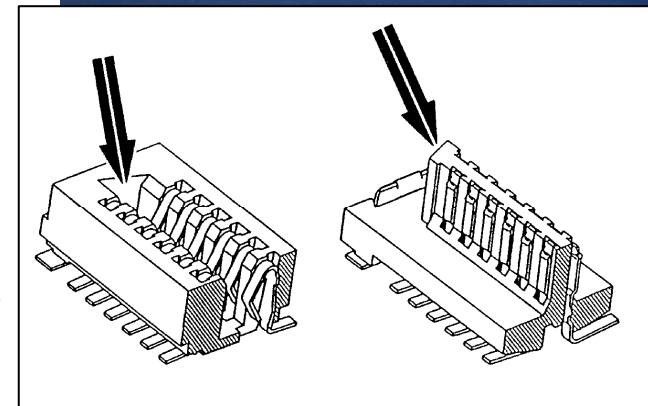
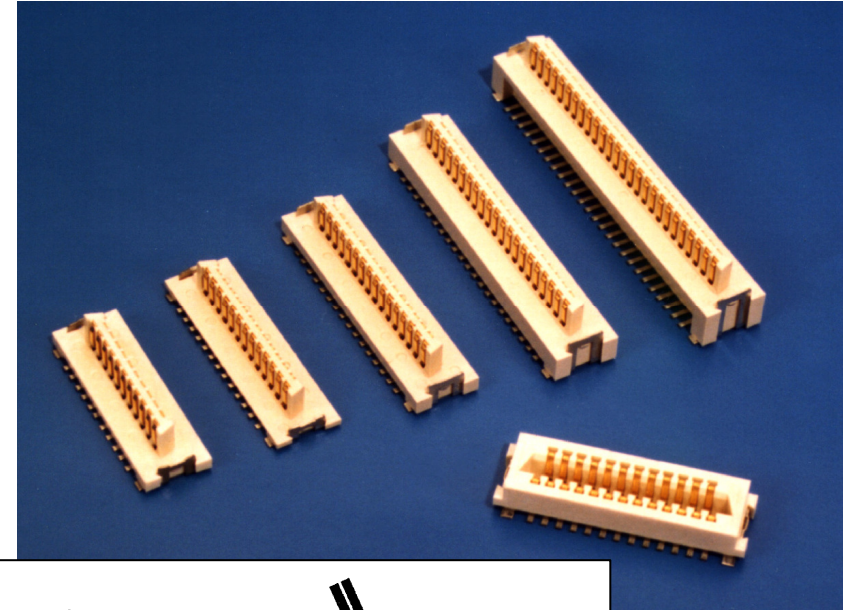


Multiple options in a very focused range



Fine Pitch, 1.00mm Mezzanine Connectors

- 4.15mm to 7.0mm PCB stacking
- 9 sizes: from 9 to 69 positions
- “Click” engagement assures secure mating.
- Blade-on-beam contacts allow “peeling” and prevent “stubbing.”
- SMT mounting with SMT hold-down for increased strength
- Mating polarization prevents backward connections
- PCB polarization prevents manufacturing errors
- Tape and reel packaging supports automated assembly.



Fine Pitch, 1.00mm Mezzanine Connectors

Positioning Statements

- Conan best satisfies designers of personal or mobile electronics, who need a rugged, sure-mating, mezzanine connector under 70 positions. Key segments include portable instrumentation and transportation. Conan out-performs competitors with its sure-mating contact feature and high un-mating force.
- Conan also serves a wide variety of standard mezzanine board-to-board applications in data, communications and office equipment.

Fine Pitch, 1.00mm Mezzanine Connectors

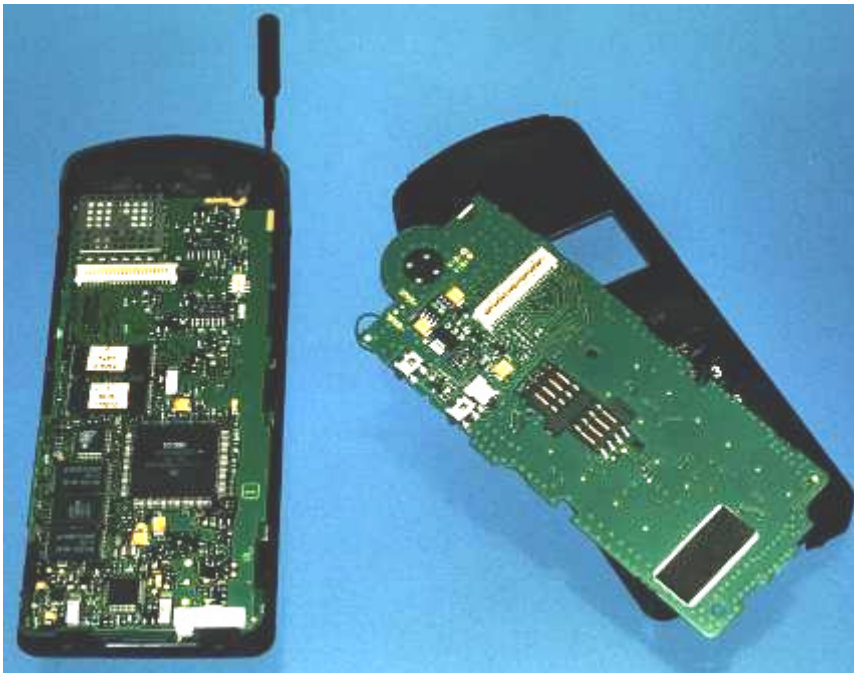
Applications

- POS Equipment
- Mobile Electronics
- High End Personal Communications
- Handheld Data Terminals
- Large Computer and Communications Systems
- Graphics Cards



Fine Pitch, 1.00mm Mezzanine Connectors

Applications



- Handset
- Receiver Board/Digital Logic Board

Fine Pitch, 1.00mm Mezzanine Connectors

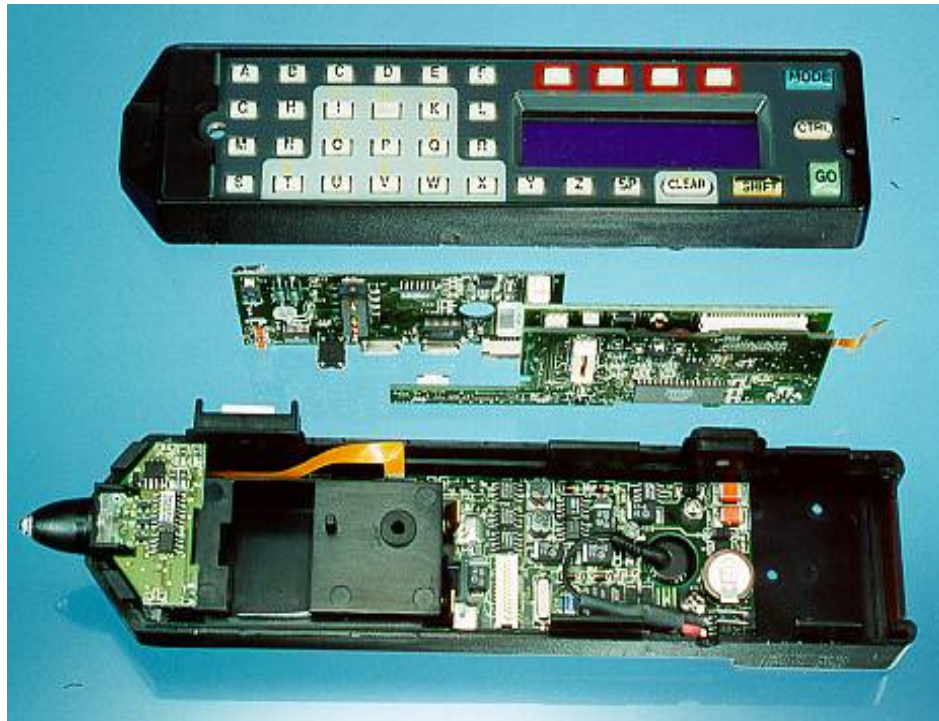
Applications



- Handheld Data Terminals

Fine Pitch, 1.00mm Mezzanine Connectors

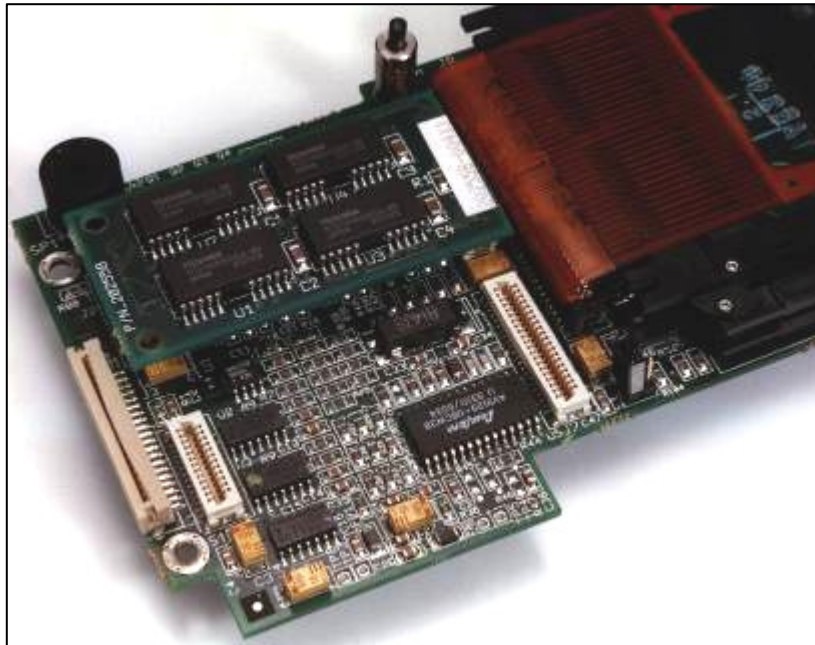
Applications



- Handheld Data Terminals

Fine Pitch, 1.00mm Mezzanine Connectors

Applications



- Memory Add-On Board

Fine Pitch, 1.00mm Mezzanine Connectors

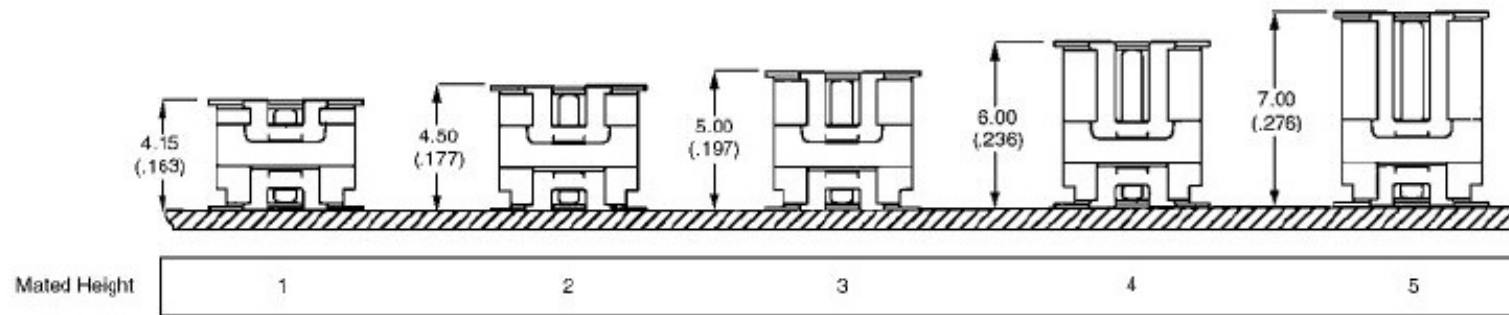
Applications



General Mezzanine

Fine Pitch, 1.00mm Mezzanine Connectors

Features for Design Flexibility



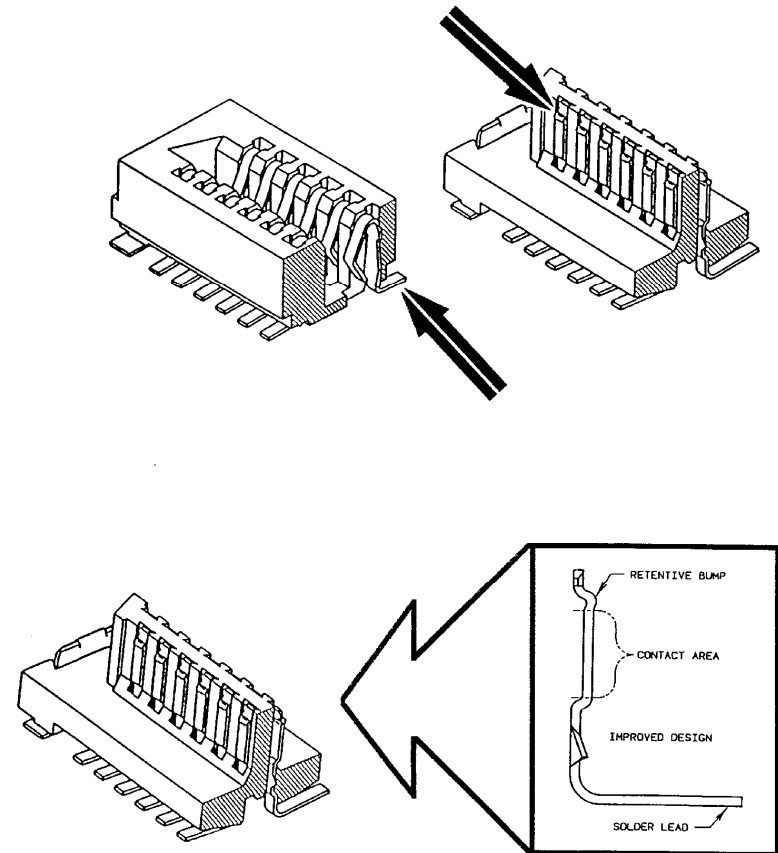
Mated connector max.width: .220" (559mm)

- Multiple Mating Height Options
 - Satisfies tight range with five standard parts
- Nine Part Sizes Span 9 To 69 Positions

Fine Pitch, 1.00mm Mezzanine Connectors

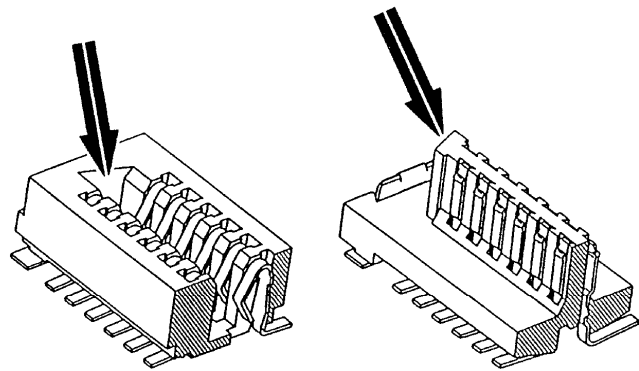
Features for Reliability

- Blade-on-beam design resists peeling damage
- Formed contacts provide smooth mating surface
- GXT™ plating in contact areas protects against corrosion and wear.
- Passive latches click to signal engagement and protect against accidental unmating

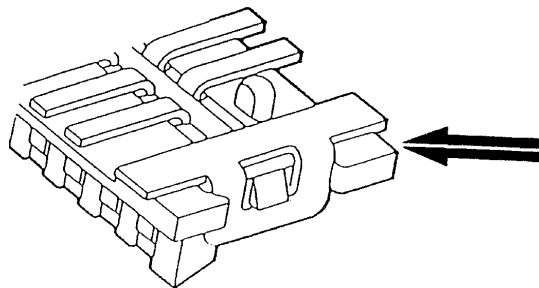


Fine Pitch, 1.00mm Mezzanine Connectors

Features for Reliability



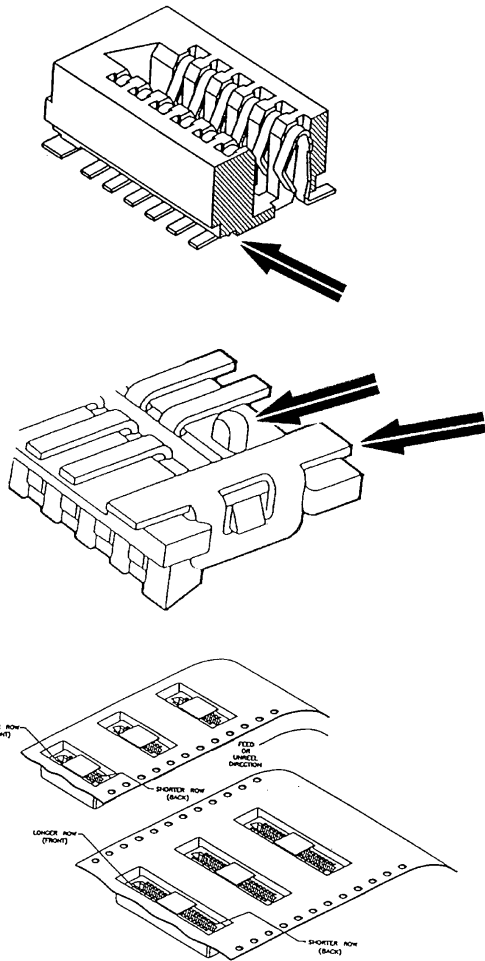
- Lead-in and polarization assist proper alignment during blind mating



- Surface mount hold-down increases mechanical strength after soldering.

Fine Pitch, 1.00mm Mezzanine Connectors

Features for SMT Compatibility



- 0.1 mm co-planarity and tin-lead over nickel in solder areas enable excellent solder joints
- LCP resin withstands reflow soldering temperatures
- Surface mount hold-down requires zero force during placement
Optional orientation posts (non-protrusive) assist hand placement
- Tape & reel packaging (per EIA 481) with vacuum pick-up caps supports cost-effective automated placement

Fine Pitch, 1.00mm Mezzanine Connectors

Electrical Characteristics

- Current rating: 1 amp per contact for fully energized connector
- Contact resistance:

Mated Height (mm)	Initial (milliohms-max)	After environmental exposure (milliohms-max)
4.15 - 5.0	20	30
6.0 - 7.0	25	35

Fine Pitch, 1.00mm Mezzanine Connectors

High Speed Performance Summary

- Signal Integrity (differential pairs, connector only)
 - Impedance: 100 ohms +/- 10% @ 50 ps edge (10-90%)
 - Insertion loss: < 1dB to 5GHz
 - NEXT: $\leq 3.5\%$ for a 50 ps edge (10-90%)
 - FEXT: $\leq 2.5\%$ for a 50 ps edge (10-90%)

Fine Pitch, 1.00mm Mezzanine Connectors

Mechanical Characteristics

■ Durability

- 15 u GXT Plating: 30 mating/un-mating cycles
- 30 u GXT Plating (special): 200 mating/un-mating cycles

■ Mating force: 125 gram/contact max.

■ Unmating force: 45 gram/contact max.

■ Approvals and Certification



■ File No. E69906



■ File No. LR46923 :

Fine Pitch, 1.00mm Mezzanine Connectors

Environmental Compliance

- RoHS lead-free product fully released for sale
- Add “ LF “ suffix to part number

Fine Pitch, 1.00mm Mezzanine Connectors

FCI Competitive Advantages

- Easy mating yet higher un-mating force
- Conan “click”
- Proven design
- Lead-times and available capacity

Fine Pitch, 1.00mm Mezzanine Connectors

BOARD TO BOARD CONNECTORS


CONAN®
High Density, Low Profile 1.00mm Connector System
Enhances Reliability for Portable Electronics

DESCRIPTION

The Conan 1.00mm mezzanine connector system provides a mechanically secure, high density electrical interface between parallel printed circuit boards.

Conan's mechanical features and palladium/ni/gold plated electrical contacts qualify it for high reliability use in portable and mobile electronic equipment.





FEATURES & BENEFITS

- "Snap" engagement contacts assure secure mating with an audible "click"
- Blade-on-beam contact design allows "peeling" disengagement and prevents contact stubbing
- Connector housings feature "lead-in" angles to assist in mating
- Surface mounted metal hold-downs reinforce connector retention to the printed circuit board
- Mating polarization prevents backward connections
- PCB polarization prevents errors during printed circuit board assembly
- Pick and place caps with tape and reel packaging support automated assembly processes
- Header height options support a range of PCB stack heights: 4.15mm to 7mm
- 9 part sizes: 9 to 69 contacts
- Lead-Free RoHS compatible products satisfy environmental regulations

TARGET MARKETS / APPLICATIONS

- Portable and mobile electronic equipment
- Medical and Instrumentation
- Office equipment
- Communications and networking equipment
- Point-of-sale equipment

Data Sheet # ELXCONAN0309ELT