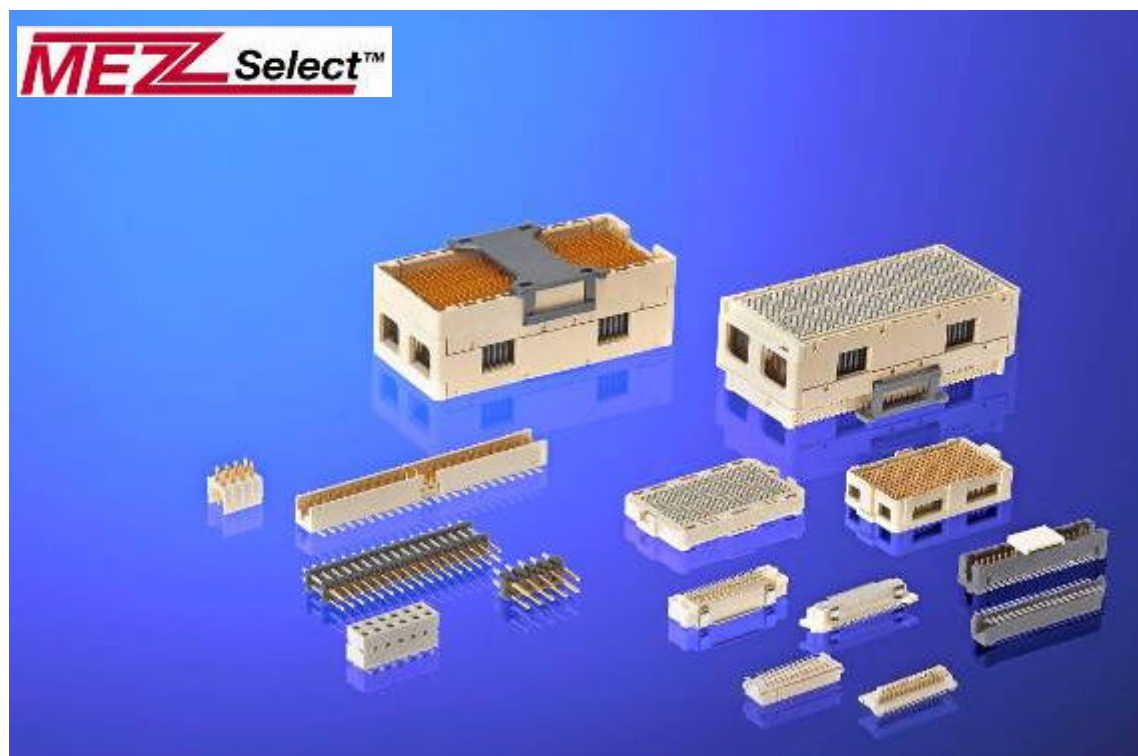




MEZZ Select™

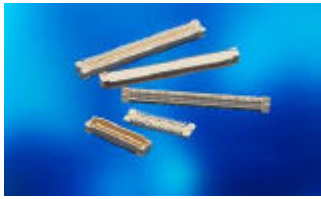
Mezzanine connectors



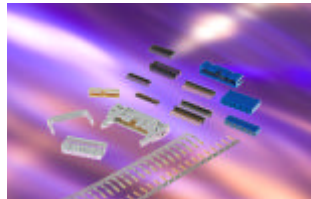
- **MezzSelect™ :**
 - A wide range of mezzanine connectors;
 - An easy to use product selector:
 - Web based;
 - Printed.

- The MezzSelect™ portfolio helps electronic equipment designers involved in electrical interconnect to complete their mezzanine designs FASTER, EASIER and with LESS RISK.

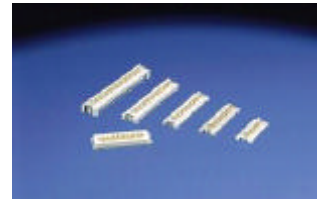
- By offering the MezzSelect™ portfolio to its customers FCI helps:
 - reduce the design lead time as it provides instant access to technical information;
 - provide mezzanine interconnect solutions suited for a wide range of applications;
 - reduce the complexity that mezzanine interconnect designs bring.



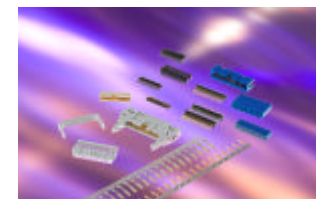
[Bergstak®](#)



[Bergstik™](#)



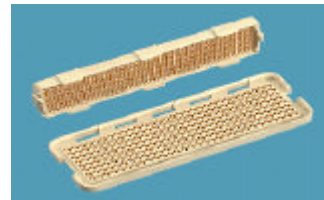
[Conan®](#)



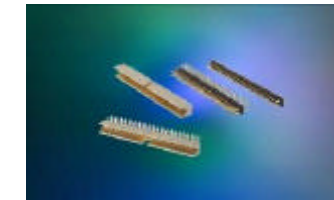
[DUBOX™](#)



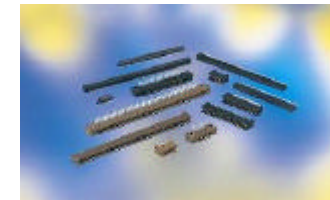
[GIG Array®](#)



[MEG Array®](#)



[Minitek™](#)



[Ribcage™](#)

- Today, eight of FCI's product families are part of the MezzSelect™ product portfolio. With a number of developments currently on going, the MezzSelect™ product portfolio will be expanded with high speed, high density and small contact pitch mezzanine connectors.
 - Future expansions include (0.5 BTB, 1.27 BTB, TwinMezz™ etc)

- FCI's MezzSelect™ product portfolio consists of a number of mezzanine connectors addressing a wide range of markets and applications, including (high speed) data- networking, industrial, instrumentation, telecommunications and medical.

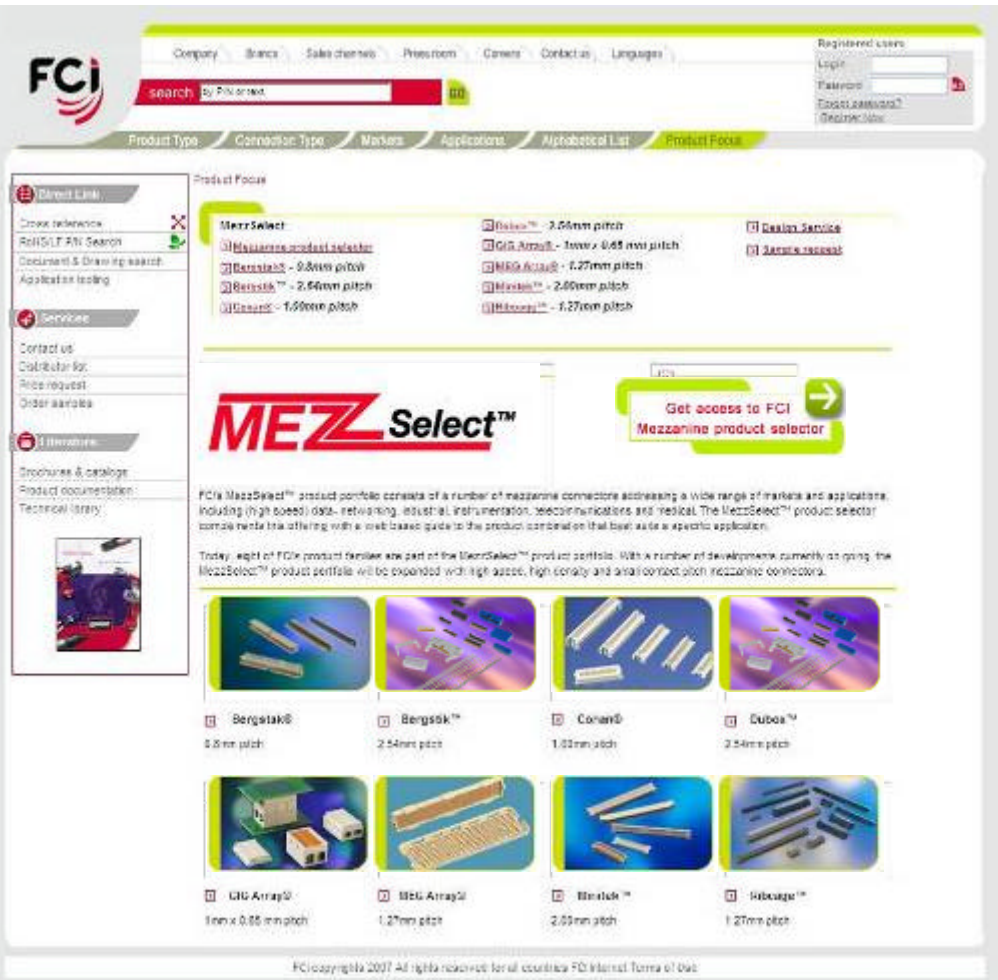
- Features:
 - Stack heights: 4-40 mm
 - # of contacts: 4- >500
 - Power rating range: 1 – 3.5 amp per contact (single powered)
 - Density: 8 – 80 signals per cm;
 - Termination styles: Surface Mount, Through Hole, Ball Grid Array, Pin In Paste;
 - Contact pitch: 0.8 – 2.54 mm;
 - Slim line and Array product styles.

- Benefits:
 - Optimized for applied cost & performance;
 - Can be used in a wide range of applications;
 - Optimizes board real estate consumption;
 - Product selector allows for faster & easier selection of the right product, helping reduce the time to market.



MezzSelect™

The product selector...



MezzSelect™ is also a (web-based) mezzanine product selector, which guides customers to the right mezzanine product for their specific application:

- stack height - number of contacts
- stack height - contact pitch
- stack height - number of rows
- stack height - termination style
- stack height - transmission speed
- stack height - linear density
- stack height – current rating

MezzSelect

[Mezzanine product selector](#)

[Berqstak® - 0.8mm pitch](#)

[Berqstik™ - 2.54mm pitch](#)

[Conan® - 1.00mm pitch](#)

[Dubox™ - 2.54mm pitch](#)

[GIG Array® - 1mm x 0.65 mm pitch](#)

[MEG Array® - 1.27mm pitch](#)

[Minitek™ - 2.00mm pitch](#)

[Ribcage™ - 1.27mm pitch](#)

[Design Service](#)

[Sample request](#)

Mezzanine Product Selector

Select one of your critical parameters

1. ▼

2. ▼

3. ▼

4. ▼

5. ▼

6. ▼

7. ▼

8. ▼

- Based on mechanical and electrical selection criteria the MezzSelect™ product selector allows for quick and easy selection of the product that best suits the application.

MezzSelect

- [Mezzanine product selector](#)
- [Berqstak® - 0.8mm pitch](#)
- [Berqstik™ - 2.54mm pitch](#)
- [Conan® - 1.00mm pitch](#)

- [Dubox™ - 2.54mm pitch](#)
- [GIG Array® - 1mm x 0.65 mm pitch](#)
- [MEG Array® - 1.27mm pitch](#)
- [Minitel™ - 2.00mm pitch](#)
- [Ribcage™ - 1.27mm pitch](#)

- [Design Service](#)
- [Sample request](#)

GIG Array®

1mm x 0.65 mm pitch



The GIG-Array® connector is a high speed BGA mezzanine system designed to meet the needs of up to 10 Gb/s.

MezzSelect™ provides immediate access to technical information including specifications, 3D models, SPICE files and other product information.

Useful Links

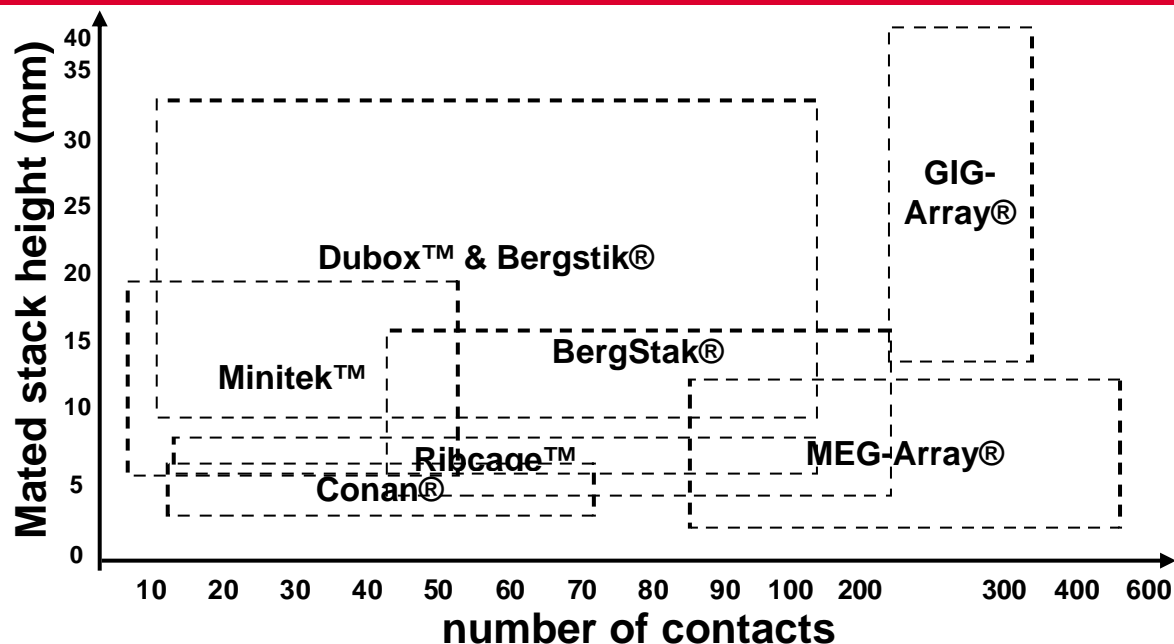
- [Partnumber Selector](#)
- [Datasheet](#)
- [Product Presentation](#)
- [Product Specification](#)
- [Stackheight Matrix](#)
- [Spice Models](#)
- [3D Models](#)

Markets & Applications

- [Communication market](#)
- [Data market](#)
- [Industrial market](#)

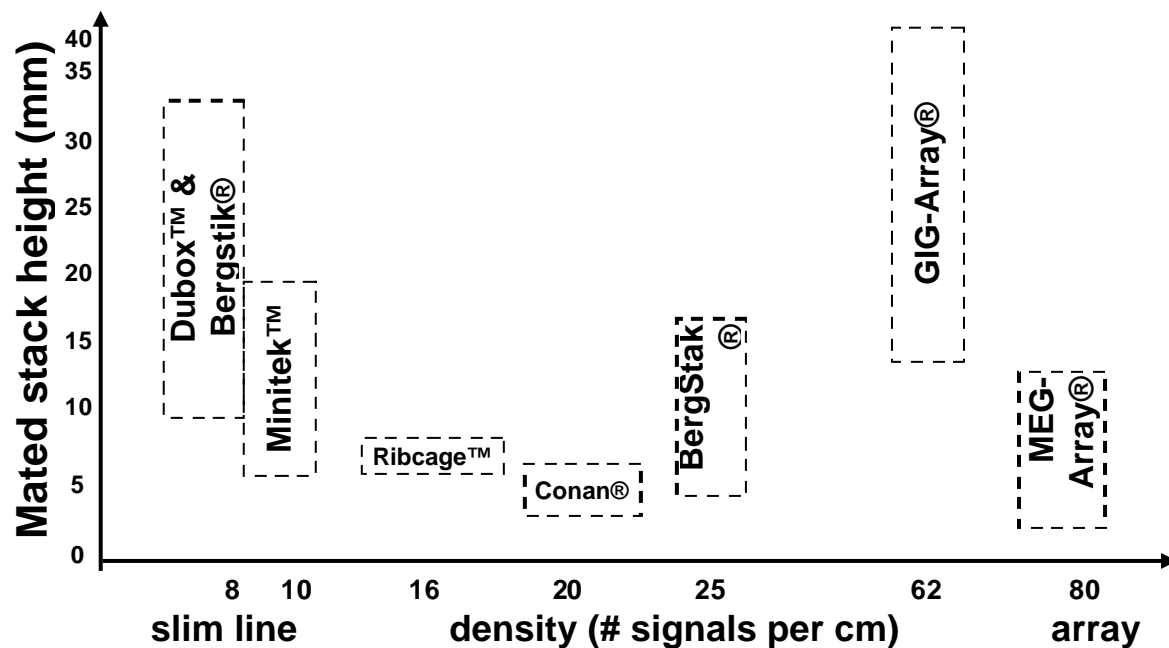
Features & Benefits

- [Ball Grid Array \(BGA\) termination for process friendly attachment](#)
- [1mm x 0.65 mm BGA interface pitch optimizes routing and electrical performance](#)
- [Stackheights available from 15 mm to 40 mm](#)
- [Connector sizes 200 and 296](#)
- [Dual beam signal contacts.](#)



Selection matrices:

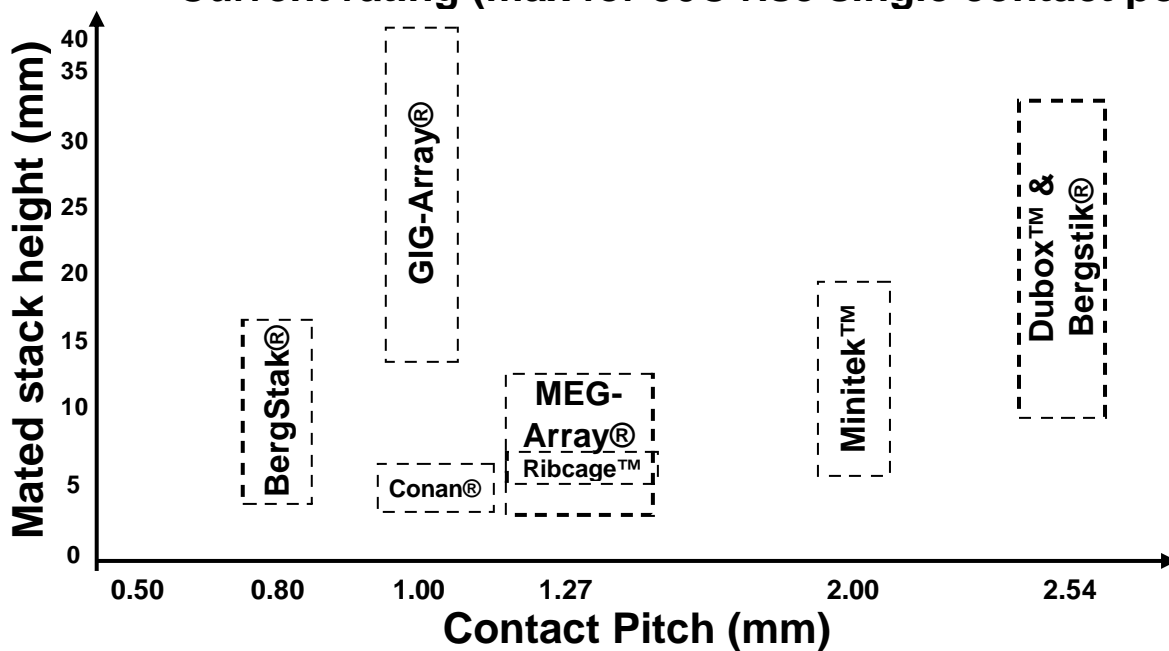
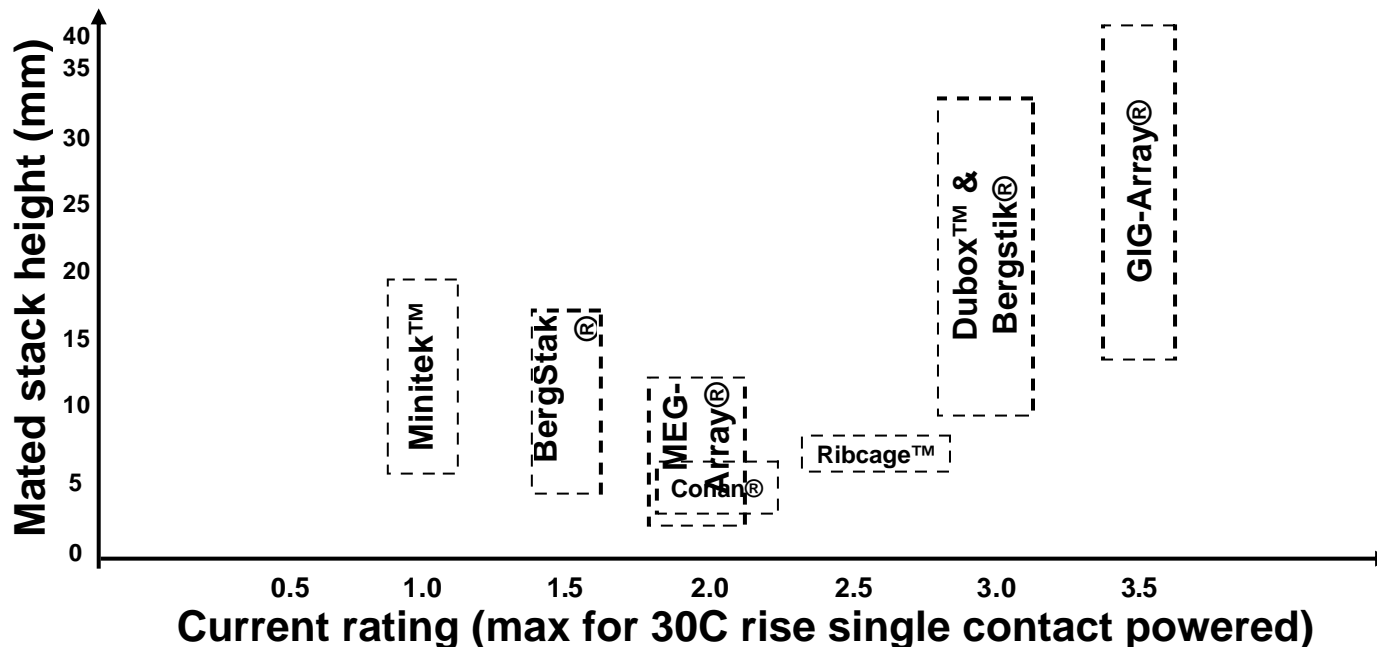
- Stack height and number of contacts;
- Stack height and linear density.

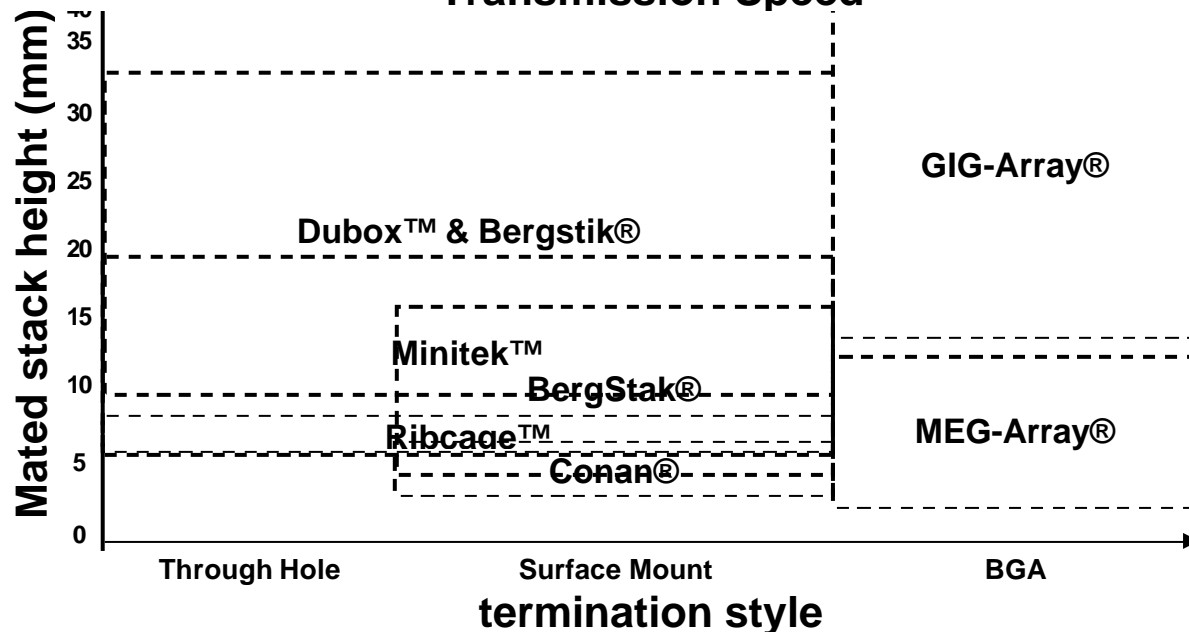
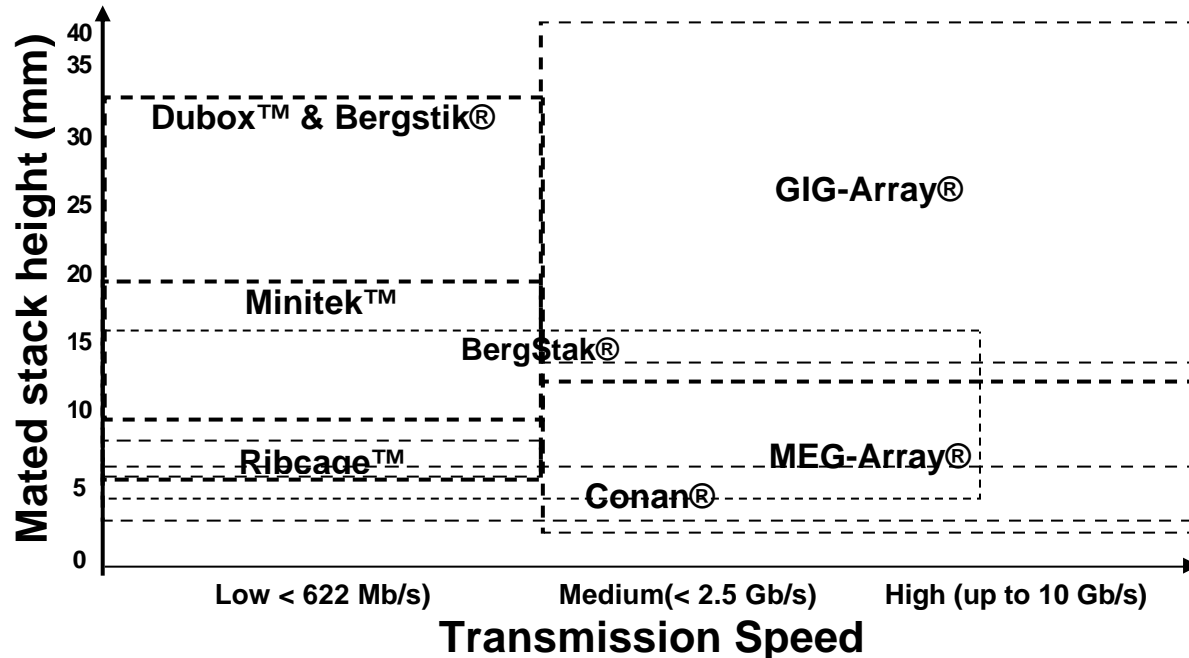


Selection matrices:

- Stack height and current rating;

- Stack height and contact pitch.





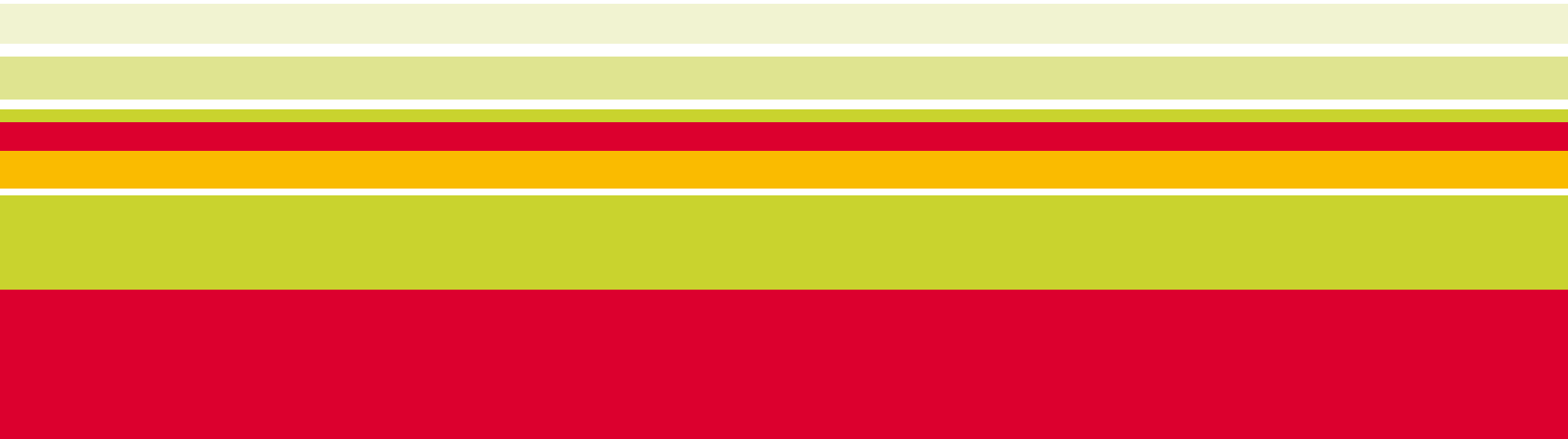
Selection matrices:

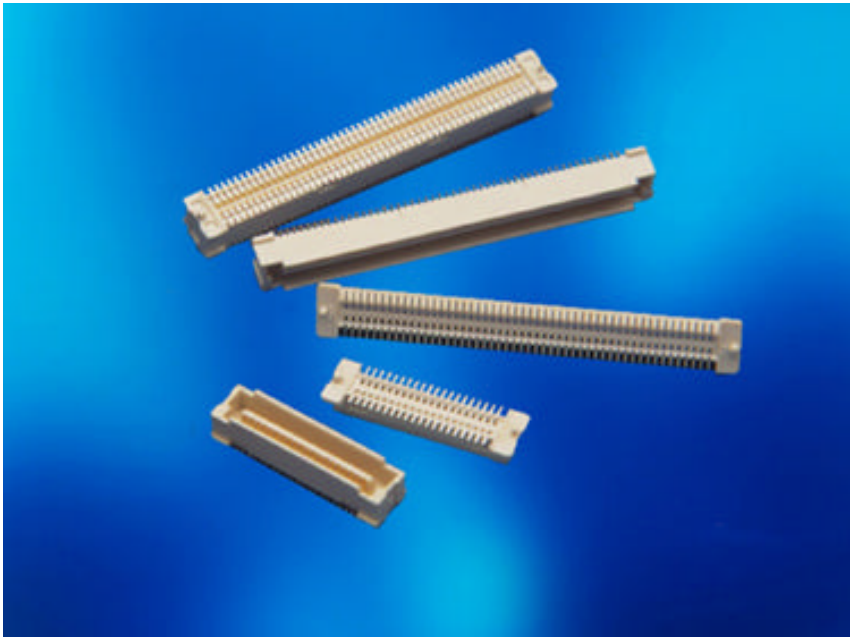
- Stack height and transmission speed;
- Stack height and termination style.



MezzSelect™

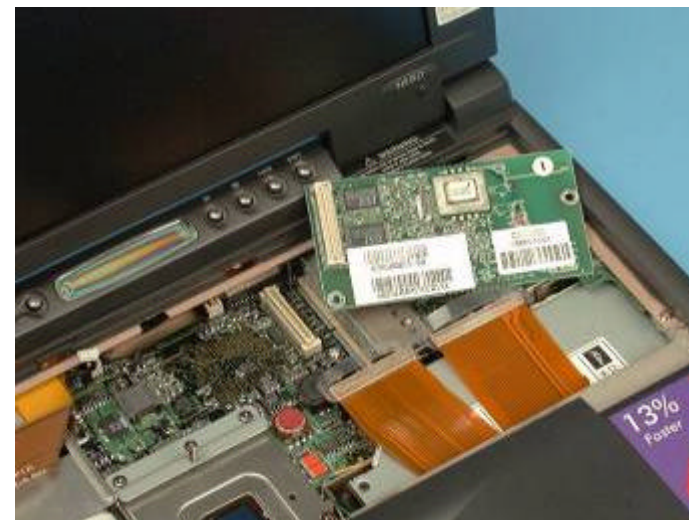
The products...



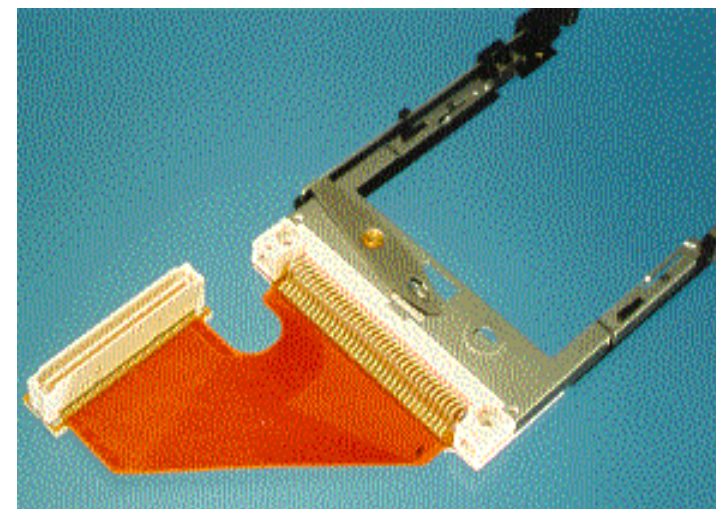


- Dual rows of contacts on 0.8mm (0.031 in.) pitch
- Part sizes span from 40 to 200 contact positions, in increments of 20 positions
- Connector combinations for 5.0mm (0.197 in.) to 16.0mm (0.630 in.) mated height, in increments of 1.0mm (0.39 in.) to accommodate designs that require wider board spacing to provide clearance for larger components or increased air flow for cooling
- Blade-on-beam contact design prevents contact damage from “peeling” during mating or unmating
- Gold or gold flash over palladium-nickel finish in the contact areas provides reliable electrical performance
- Tin-lead or pure tin over nickel plating in the solder areas provide excellent surface mount solder joint
- Connector polarization and ample lead in angles produce easy repeatable mating
- Liquid crystal polymer insulators withstand reflow soldering temperature
- Packaging tubes protect connectors from damage during handling

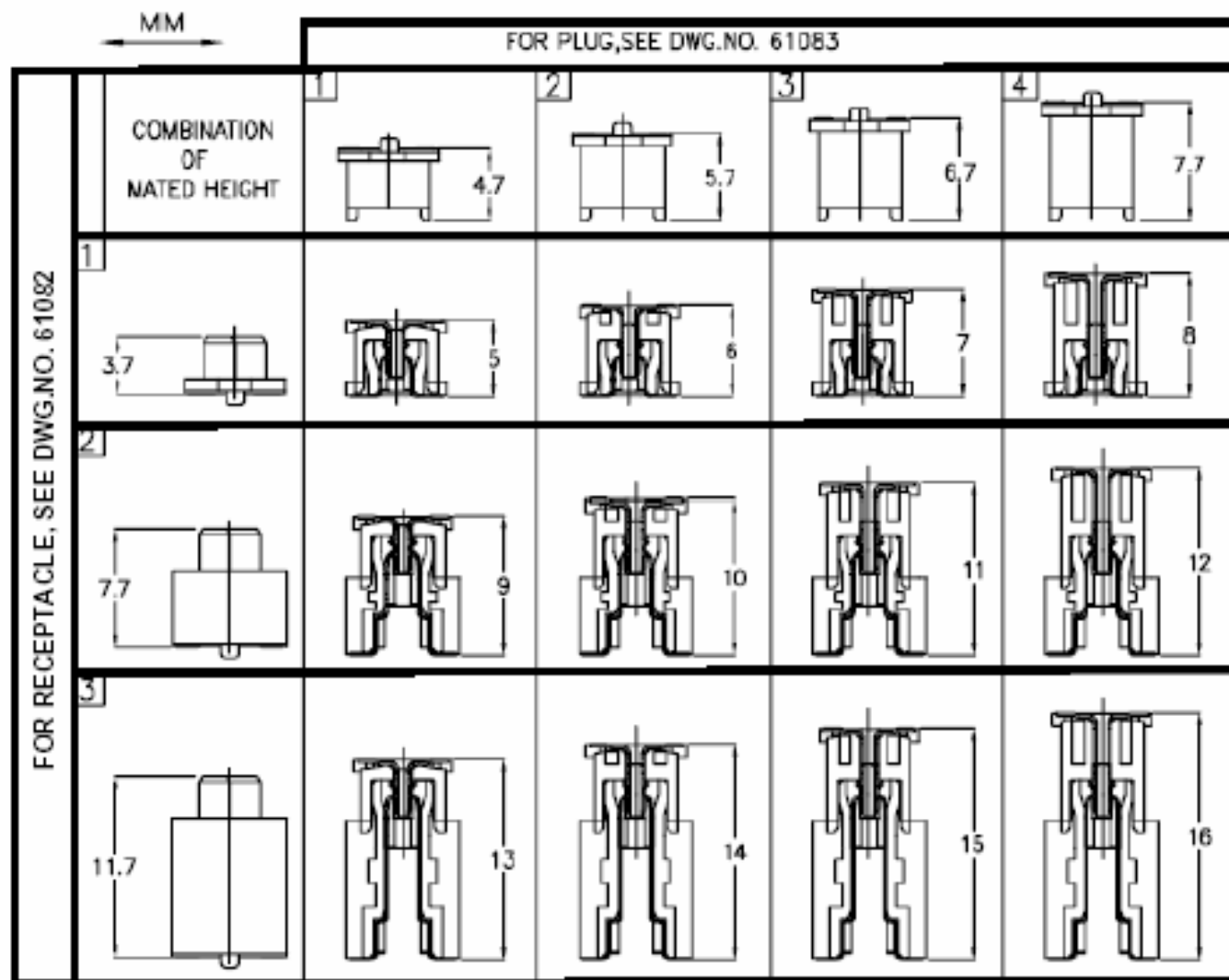
- Routers
- Servers
- Telecom/Datacom equipment
- Mobile PCs
- PDAs
- Office equipment
- IP phones



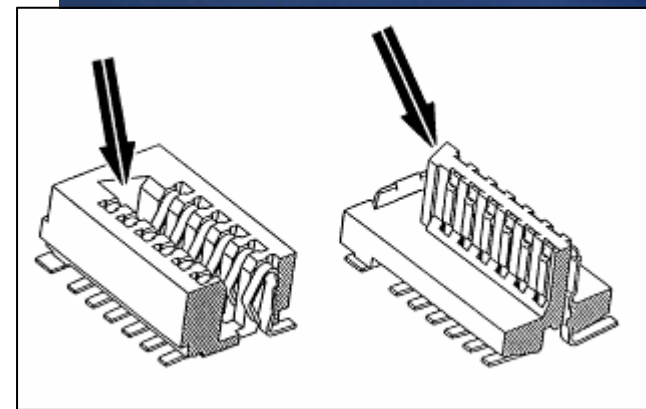
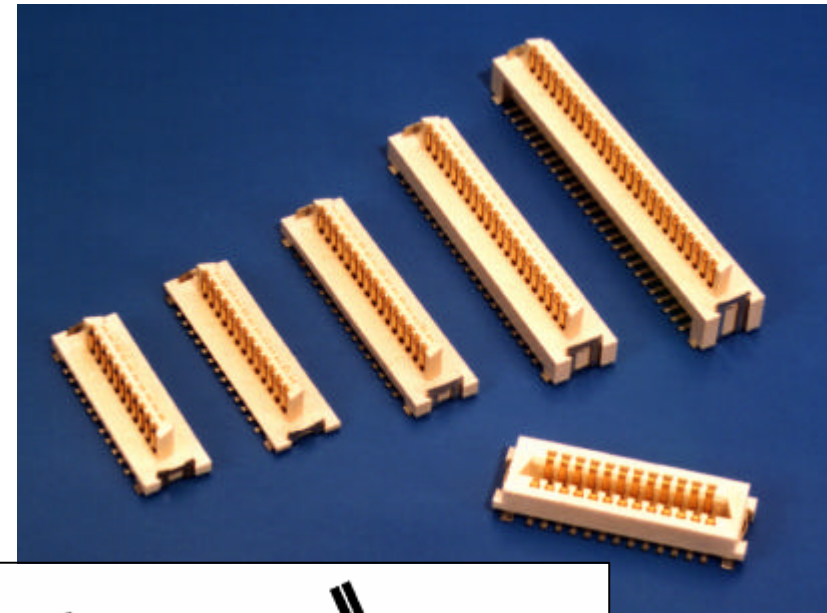
Notebook PC mezzanine board



Flexible circuit



- 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.

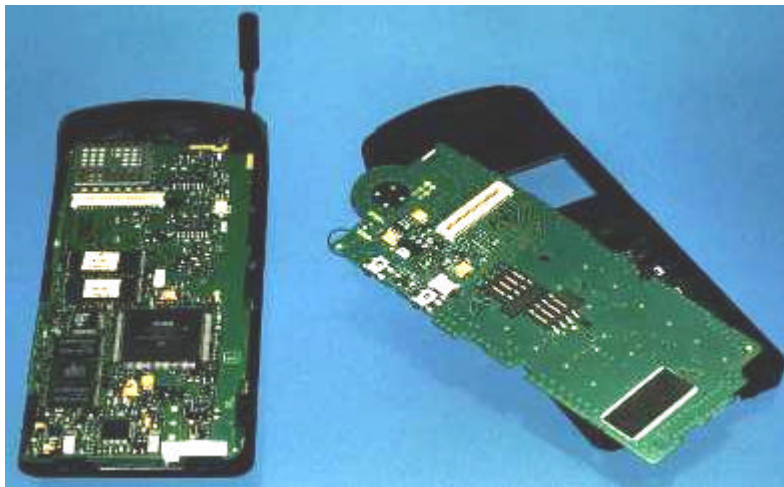


- Conan® products best satisfy designers of personal or mobile electronics, who need a rugged, sure-mating, mezzanine connector under 70 positions. Key segments include portable instrumentation and transportation. Conan out-performs competitors with its sure-mating contact feature and high unmating force.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

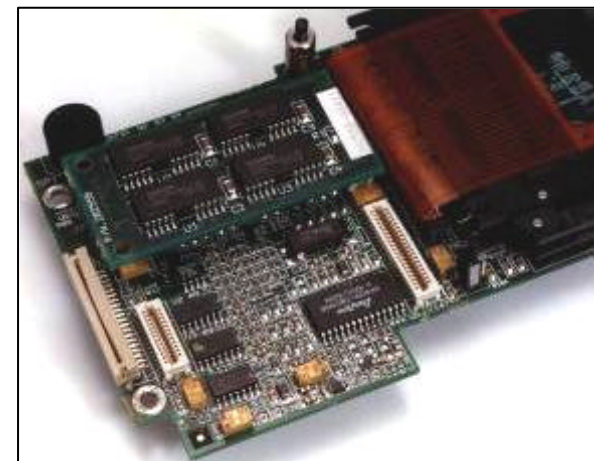
- POS Equipment
- Mobile Electronics
- High End Personal Communications
- Handheld Data Terminals
- Large Computer and Communications Systems
- Graphics Cards



Hand held data terminal

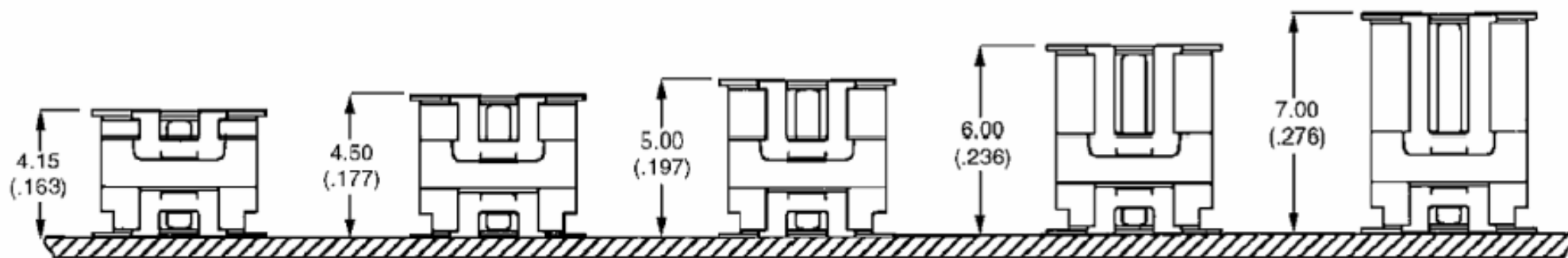


Hand set, receiver/ digital logic board



Add on memory board

Mated PCB Stack Height in mm (inches)



Header Height 1

Header Height 2

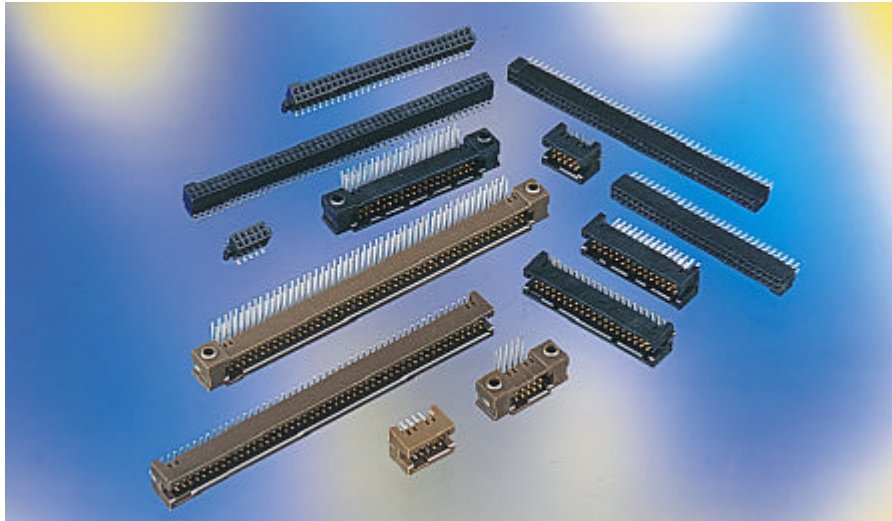
Header Height 3

Header Height 4

Header Height 5

mated to
Receptacle Height 1

Note: Mated connector maximum width is 5.59mm (0.220")

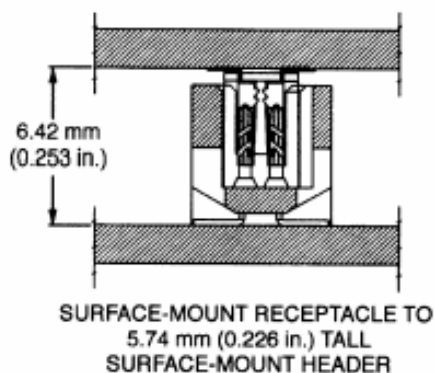


- Receptacle Contact has 3 pts of contact for reliable, fault-tolerant connections
- Contact pitch 1.27 mm;
- 100 grams normal force ensures reliable electrical contact especially for shock and vibration applications
- Variety of mating heights enable designs with multiple PCB stack heights
- Tapered lead-in pin design assists with easy mating
- Durable shroud guards against pin damage
- Surface mount design enables easy PCB assembly
- PCB Hold-downs, Locators or Polarization options also aid PCB assembly and processing speed.
- Housing Stand off provides clearance for easy cleaning
- Polarized housing design prevents mis-mating

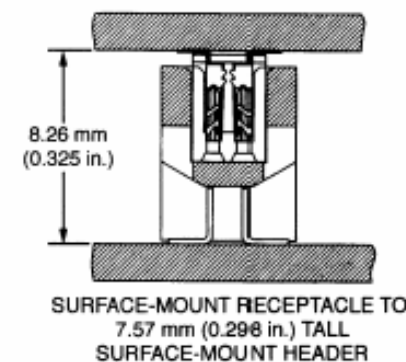
- ▶ **Ribcage™ connectors' unique features satisfy customers requiring a versatile, high density connector that will withstand vibration and mechanical shock.**
- ▶ **The Ribcage™ connector system is best suited for applications such as instrumentation, industrial electronics and electronic sub-assemblies attached to motors and fans.**

STACK HEIGHT GUIDANCE

Surface-Mount Header 5.74 mm (0.226 in.)



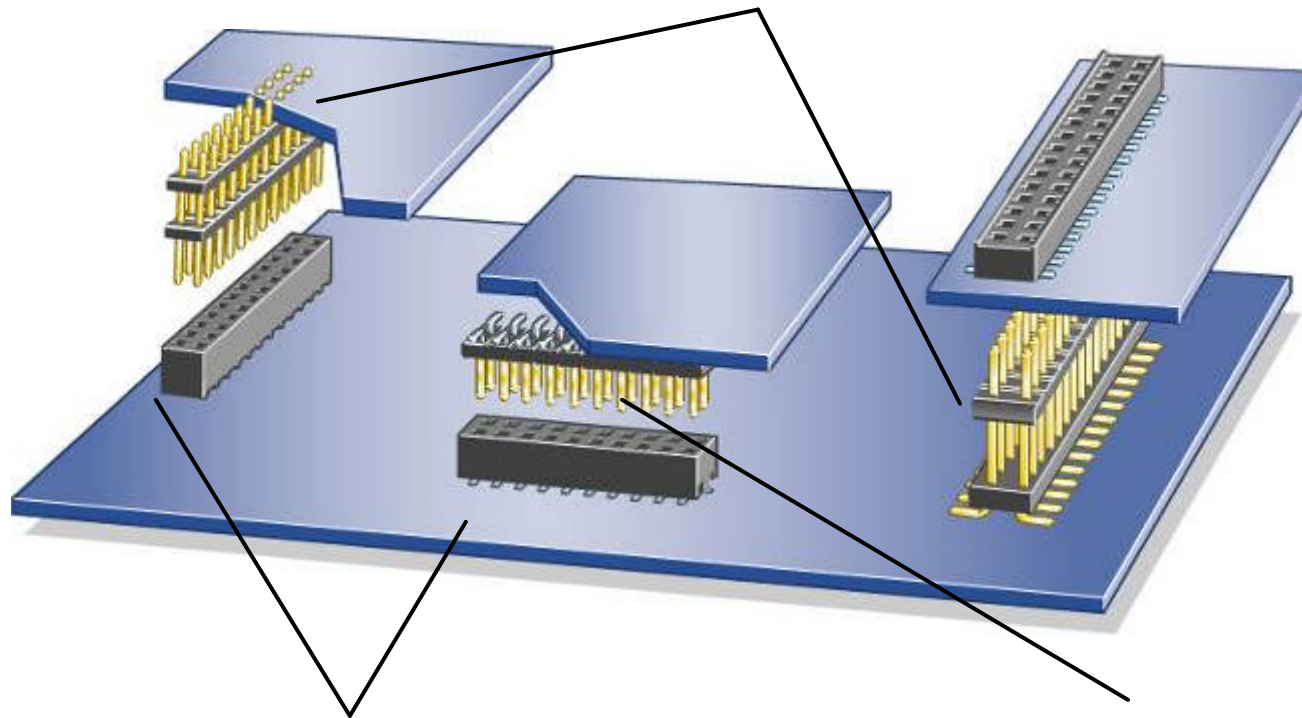
Surface-Mount Header 7.57 mm (0.298 in.)



- Board-to-Board connectors (2.00 mm pitch size)

Minitek Unshrouded Stacking Headers

(Through- & Surface Mount)



Minitek Vertical Receptacles

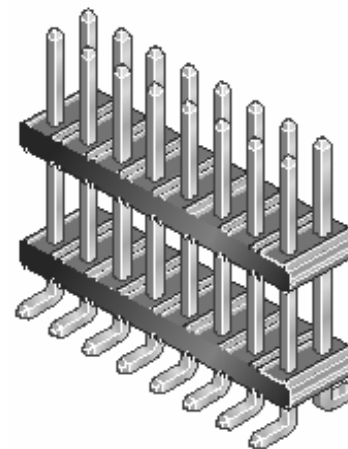
(Through- & Surface Mount)

Minitek Unshrouded Headers

(Through- & Surface Mount)

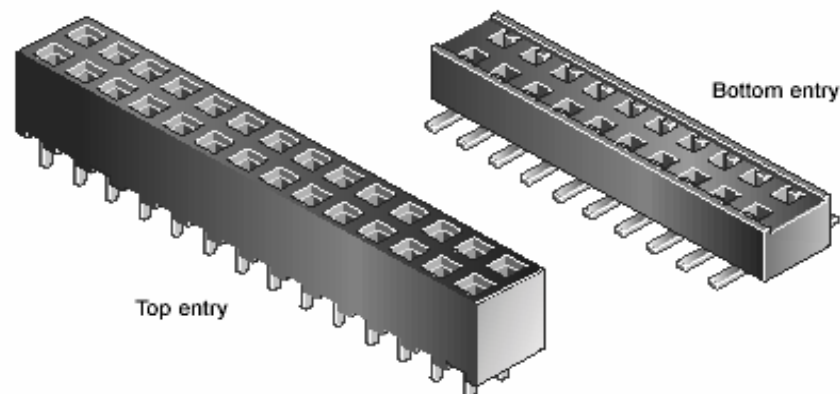
■ Unshrouded headers

- single body/ double body
- straight/ right angle
- TMT/ SMT/ PIP



■ Receptacles

- TMT/ SMT
- top entry/ bottom entry



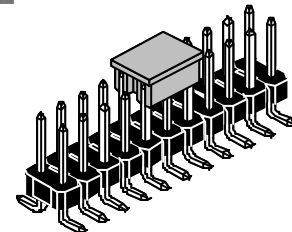
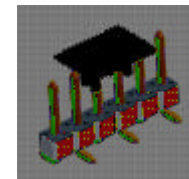
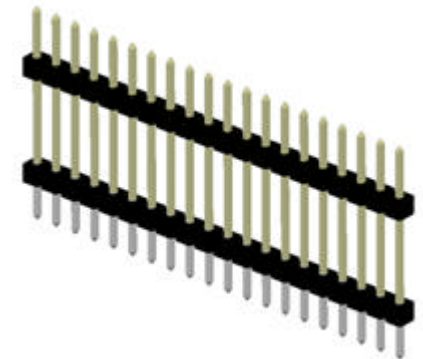
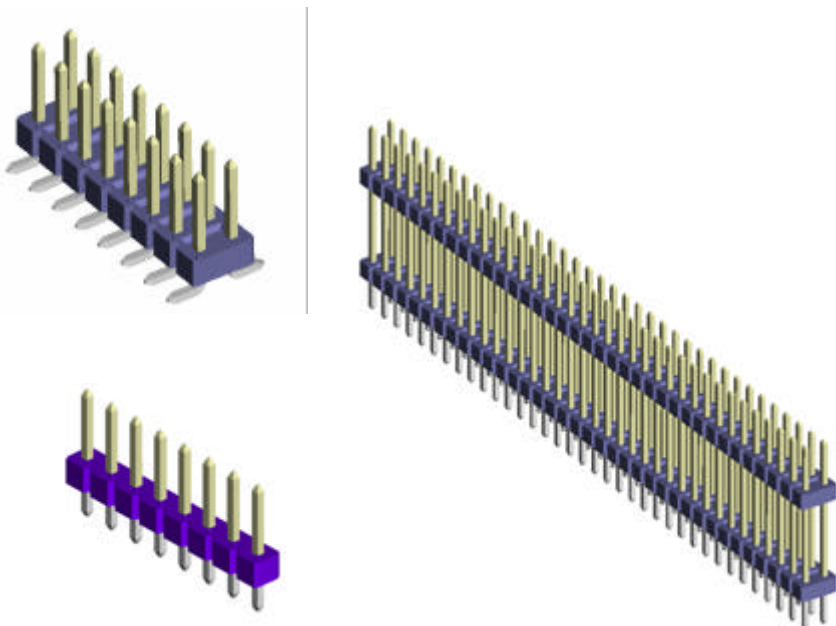
Minitek TH system

Mating height	6 mm	7mm - 20mm
Based on	standard receptacle	stacking header
Receptacles	63453	63453
Headers	57102	59112 59132

Minitek SMT system

Mating height	4.8mm	6mm	7.5mm - 20mm
Based on	low profile receptacle	standard receptacle	stacking header
Receptacles	55508	55510	55508 55510
Headers	57202	57202	59202

- 2.54 mm contact pitch
- single body/ double body
- single row/ double row
- straight/ right angle
- TMT/ SMT/ Press fit

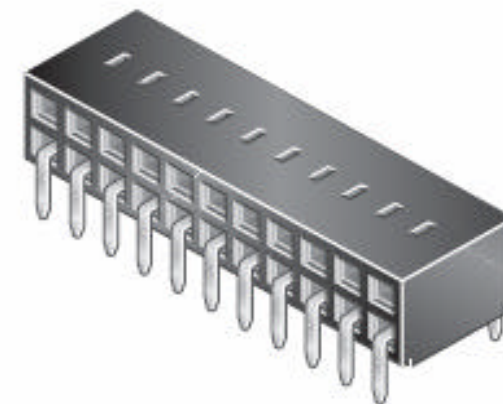
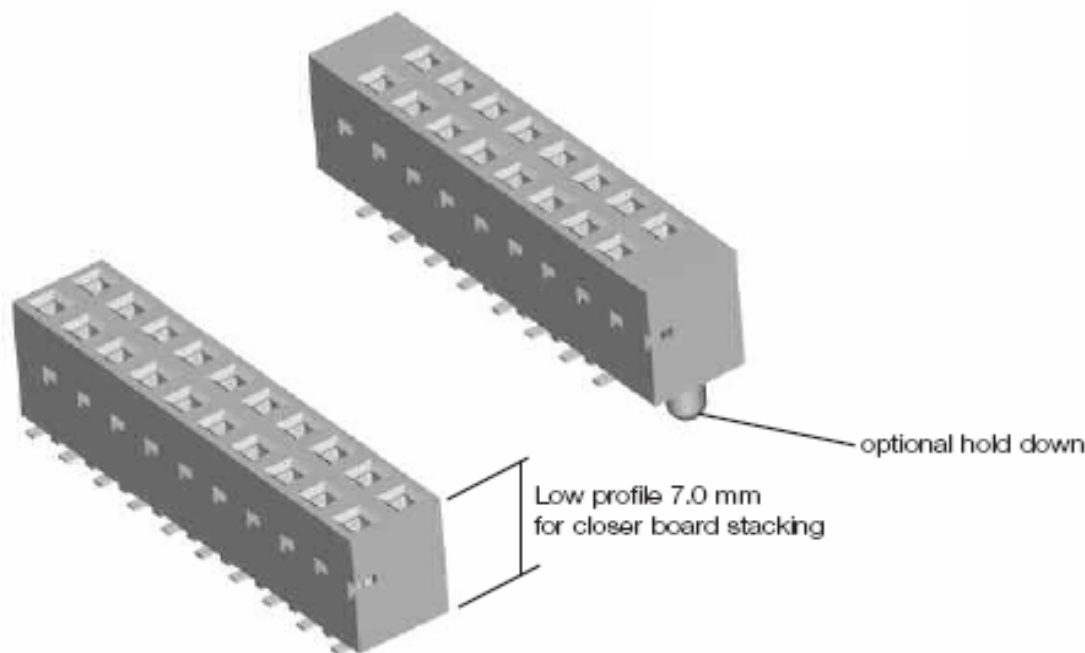
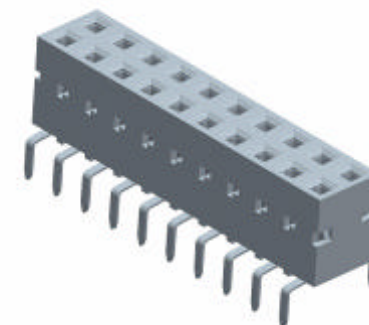
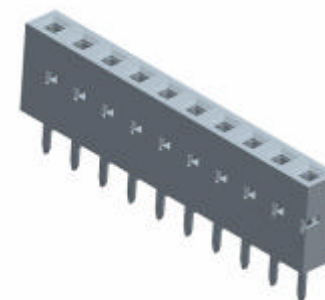
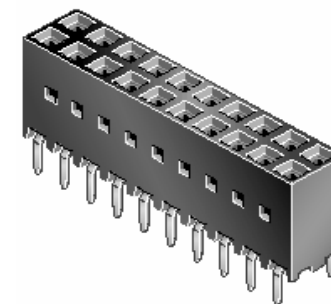


Dubox™ Receptacles - features



MEZ Select™

- 2.54 mm contact pitch
- single row/ double row
- vertical/ horizontal
- standard profile/ low profile
- top entry/ bottom entry/ dual entry
- position pegs
- TMT/ SMT



Dubox/BergStik TH system

Mating height	9.54mm	11.04mm	15mm - 33mm
Based on	low profile receptacle	standard receptacle	stacking header
Receptacles	75915 71920 87606 89891	76341 76342 71991	75915 71920 87606 89891 76341 76342 71991
Headers	77311 77313	77311 77313	54111 54112 54121 54122

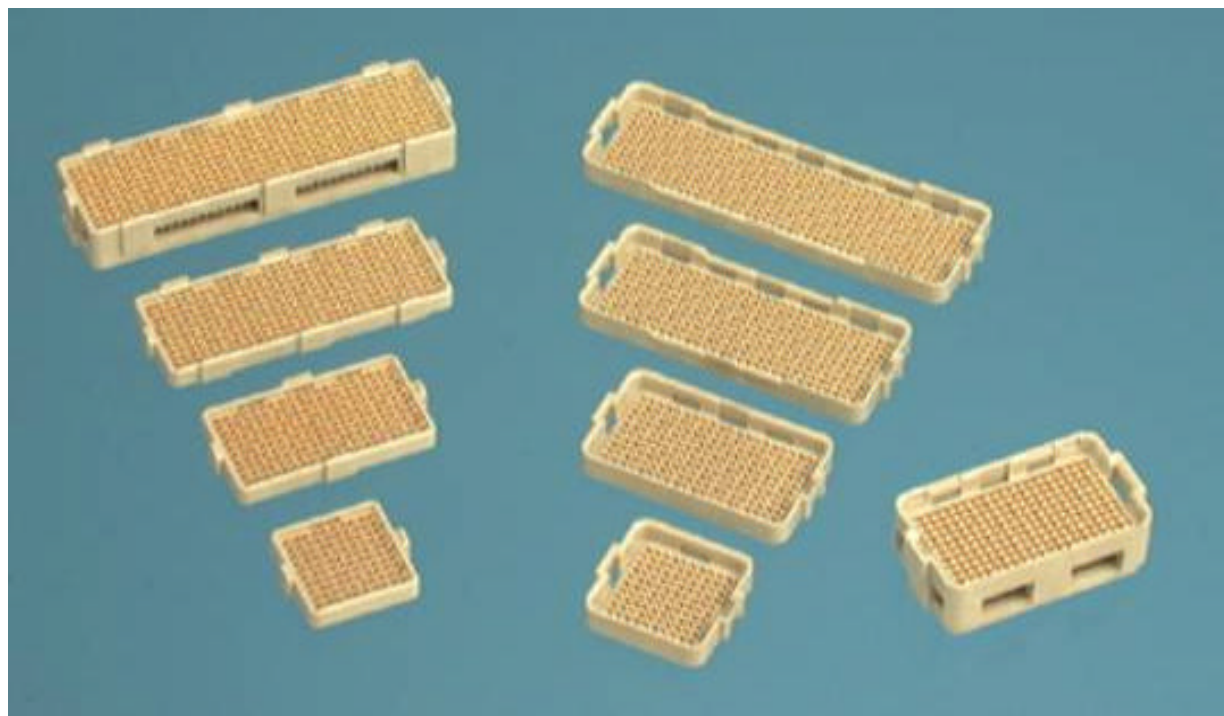
Dubox/BergStik SMT system

Mating height	10.81mm	16.5mm - 34.5mm
Based on	standard receptacle	stacking header
Receptacles	91601 91614 89898 91615 91618	91601 91614 89898 91615 91618
Headers	95293 95278 98401	54242



- **High-Density, High-Speed Mezzanine Applications**
- **Ball Grid Array (BGA) Attachment**
- **1.27mm X 1.27mm Array Grid Pitch**
- **81, 100, 200, 240, 300, 400 & 528 Positions**
- **Stack Heights of 4mm To 14mm**

- **Bandwidth Of 5Ghz (10Gb/s) for Differential Pairs**
- **Demonstrated Solder Joint Reliability Of Greater Than 22 Year (IPC-SM-785)**
- **Meets Telcordia GR-1217-CORE**

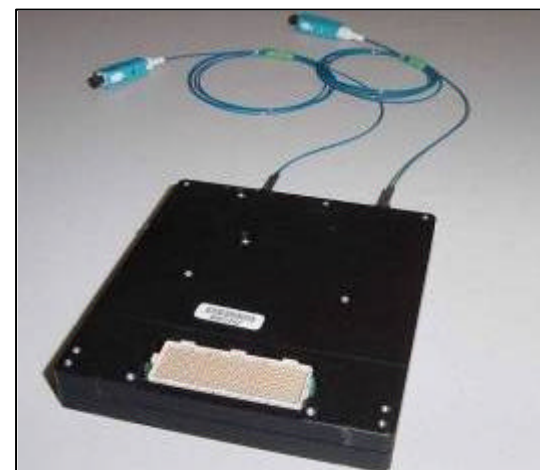
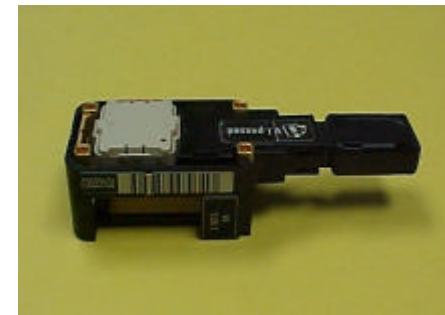




**Switches
Routers**



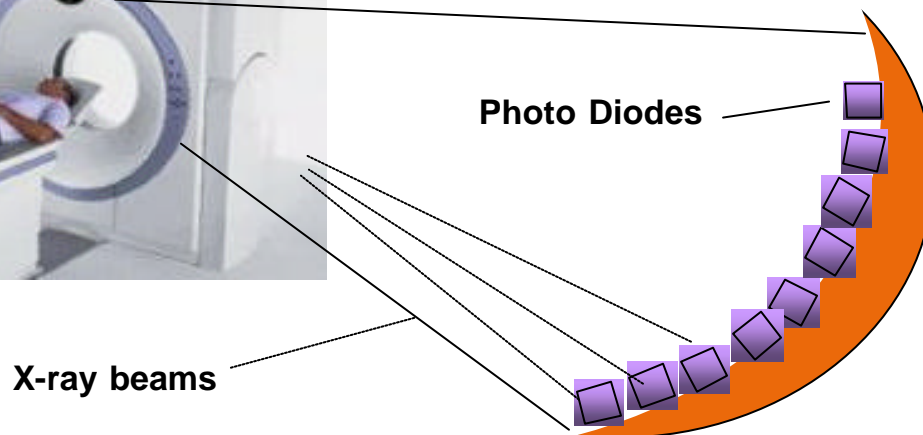
Transmission



**Optical Transponders &
Transceivers**



High End Medical Imaging



Analytical - ECG

High-End medical imaging

CT Scan

ECG

MRI

CardioVascular X-Ray

Radiation Oncology

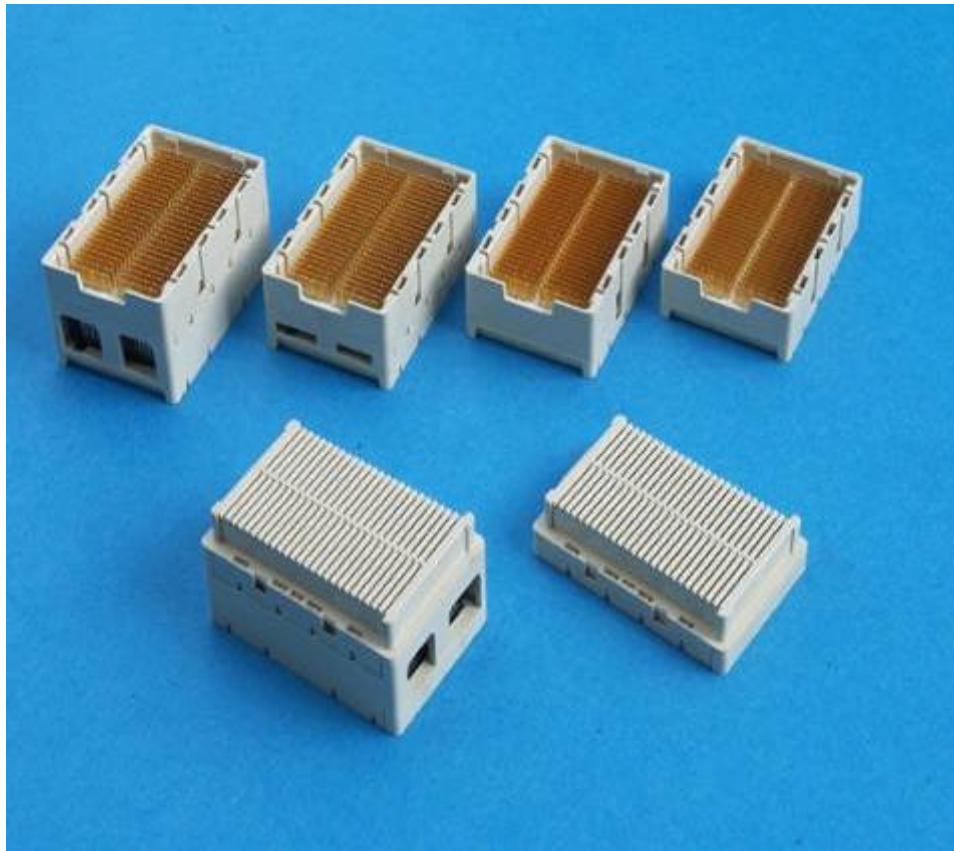


MEG-Array® connectors Capability Matrix

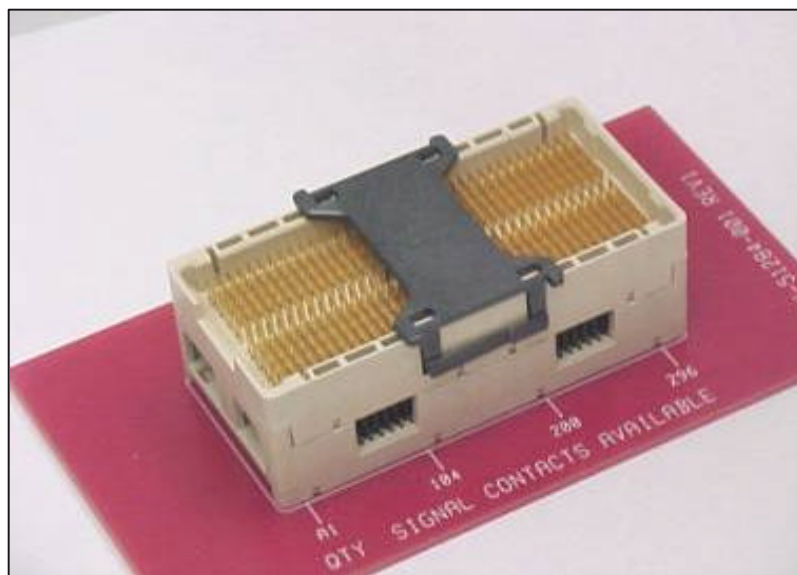
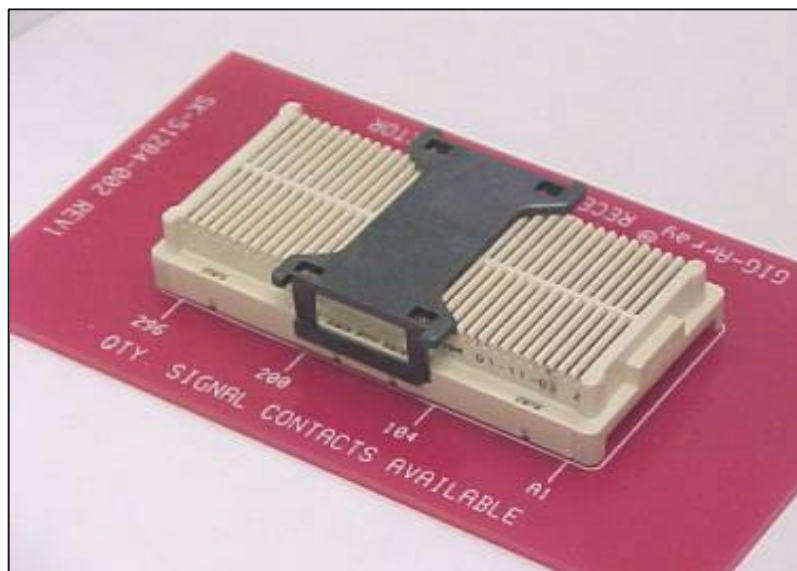


MEZZ Select™

		Total Mated Height					
Size	Type	4.0mm	6.0mm	8.0mm	10.0mm	12.0mm	14.0mm
81 position 9X9	Plug	55714					
	Receptacle	55715					
100 position 10x10	Plug	84512					
	Receptacle	84513					
200 position 10x20	Plug	84516	84516	84516	84530	84530	84530
	Receptacle	84517	55724	84535	84517	55724	84535
300 position 10x30	Plug	84500	84500	84500	84578	84578	84578
	Receptacle	84501	84502 for 5.5mm BTB	84553	84501	84502 for 11.5mm BTB	84553
400 position 10x40	Plug	84740	84740	84740	84520	84520	84520
	Receptacle	74221	74388	74390	74221	74388	74390
240 position 8x30	Plug	74213	74213				
	Receptacle	74217	55755				
528 position 12x44	Plug		10022671				
	Receptacle		10026846				



- **Optimized Design For High-Density, High-Speed Mezzanine Applications**
- **Ball Grid Array (BGA) Termination For Process Friendly Attachment**
- **1mm X 0.65mm BGA Grid Optimizes Routing And Electrical Performance**
- **200 and 296 Positions**
- **Stack Heights Of 15mm To 40mm**



- **100 Ohm Differential Pair Matched Impedance Assures Consistent High Speed Performance**
- **10 Gb/s Differential Pair Performance Supports High Speed Data Rates**
- **Near End Crosstalk (NEXT) Of Less Than 3% Preserves Signal Integrity**
- **Dual-Beam Receptacle Provides Two Points Of Contact On The Signal Contacts Increasing Product Reliability**
- **Polarized Design Assures Proper Mating Of The Connector**



Switches



Transmission

Servers



Routers

**200 & 296
Positions**

		PLUG HEIGHT (Part Number)					
		10mm	12mm	13mm	15mm	20mm	25mm
RECEPTACLE HEIGHT (P/N)	5mm	15mm	17mm	18mm	20mm	25mm	30mm
	15mm	25mm	27mm	28mm	30mm	35mm	40mm

Total Board-To-Board Mated Height in Black
All Dimensions In mm

 **New Stack Height**



MezzSelect™

What is next?

Mezzanine / Board-to-Board Roadmap



MEZZ Select™

- Available
- Development/innovation
- Future development/innovation

Density

