

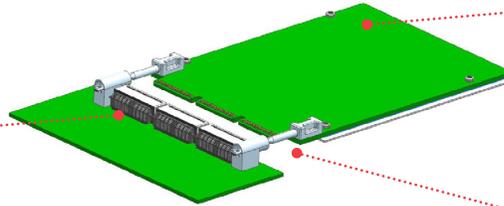
# SpeedMezz Connector Family



The SpeedMezz Connector family offers high-densities, low profiles, data rates up to 56 Gbps per differential pair and easy upgrading with common receptacle footprints to deliver versatile solutions for high-speed mezzanine, rugged edge card and lower speed applications

## Features and Benefits

**COMING SOON**  
Right-Angle SpeedEdge Edge-Card Connector



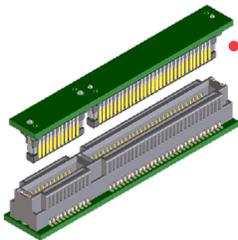
28 Gbps data rates today with roadmap to 56 Gbps NRZ  
Ideal for networking, telecommunications and medical equipment applications

**SpeedStack: Data rates up to 56 Gbps**  
Ideal for networking, telecommunications and medical equipment applications

**Receptacle shares the same footprint as the SpeedStack Receptacle**  
Drop-in replacement for low-profile rugged edge card connection

**SpeedEdge: 40 Gbps data rates with planned development for 56 Gbps**  
Ideal for networking, telecommunications and medical equipment applications

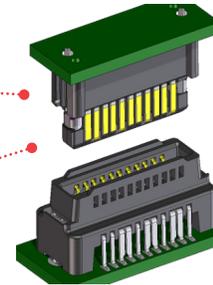
**Compatible with conventional pick-and-place equipment**  
Allows for assembly automation



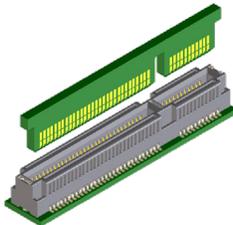
SpeedEdge Mezzanine Connectors

**SMT solder tail with pin-in-paste solder nail**  
Superior signal integrity over press fit and rugged attachment

**Multiple circuit sizes: 22, 60 and 82**  
Offers a high-density signal solution with flexible pin counts



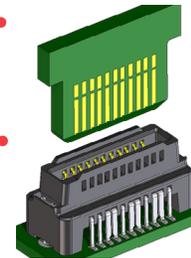
SpeedStack Mezzanine Connectors



SpeedEdge Edge Card Connectors

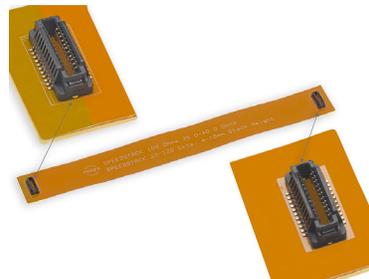
**SpeedStack Receptacle shares the same footprint as the SpeedEdge Receptacle**  
Drop-in replacement for low-profile mezzanine connection

**Capable of holding an edge card**  
Securely holds an edge card, giving system designers another connection option



SpeedStack Edge Card Connectors

**SpeedEdge: Longer, steeper lead-in receptacle**  
Improves mating to edge cards

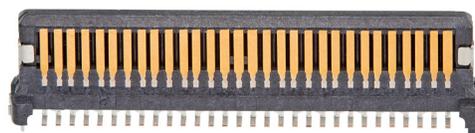


**SpeedFlex and SpeedCable Assemblies**  
SpeedFlex Assemblies accommodate short stack height requirements and complex designs. SpeedCable Assemblies deliver a complete solution for connections between distances

**Removal of common ground pins**  
Allows additional open pin field for low speed or power requirements

**Speed: Differential pair performance rated up to 20 Gbps**  
Ideal for networking, telecommunications and medical equipment applications

**SpeedField Connectors' footprint compatible with SpeedStack and SpeedEdge Plug**  
Delivers design flexibility by enabling simple change out from one connector product line to another without having to redesign the PCB



SpeedField Plug

**Ability to use single-ended half wafers**  
Enables both power and signal delivery with one connector. Example: 60 circuits could be divided between high-speed differential pairs (8 pairs = 28 circuits and 4 spares = 2 circuits) for fast data rates and single-ended (30 circuits, all spares) for power delivery

# SpeedMezz Connector Family



## Applications

<b>Telecommunication/ Networking</b>	<b>Defense</b>
Servers	Scanning equipment
Routers	<b>Medical</b>
Switch	Diagnostic Imaging
Storage	Picture Archival and Communications (PACS)
Remote Radio Antennas	<b>Consumer</b>
Base stations	Camera
Mobile	Handheld scanners



High-End Servers



Base Station



Medical Equipment

## Specifications

### REFERENCE INFORMATION

Packaging: Tape and Reel  
 UL File No.: TBD  
 Mates With: SpeedMezz Mating Plug or Receptacle  
 Use With: Edge card or SpeedMezz Receptacle  
 Designed In: Millimeters  
 RoHS: Yes  
 Halogen Free: Yes

### ELECTRICAL

Voltage (max.): 250V AC  
 Current (max.): 1.0A per pin  
 Contact Resistance: 10 milliohms  
 Dielectric Withstanding Voltage: 300V AC  
 Insulation Resistance: 10 Megohms

### MECHANICAL

Durability (min.):  
 Mezzanine (SpeedStack): 20 Cycles  
 Edgecard (SpeedStack): 5 Cycles  
 Durability (min.):  
 Mezzanine (SpeedEdge): 100 cycles Target  
 Edgecard (SpeedEdge): 20 cycles

### PHYSICAL

Housing: Glass-Filled Thermoplastic (94-V0)  
 Contact: Copper (Cu) Alloy  
 Plating:  
 Contact Area — 0.76µm Gold (Au) min.  
 Solder Tail Area — 0.76-1.52µm Tin (Sn).  
 Underplating — 1.27µm Nickel (Ni) min.

PCB Thickness: 1.58mm (0.062")  
 Operating Temperature: -40 to +105°C

## Ordering Information

Series No.	SpeedMezz Connector Subfamily	Component	Height (mm)	Circuit Count
<a href="#">171450</a>	SpeedStack	Receptacle	3.10 to 4.10	22, 60, 82 (dual bay: 22 and 60 circuits)
<a href="#">171446</a>		Plug (Differential)	0.90 to 3.90	22, 60
<a href="#">171810</a>	SpeedField	Plug, mates to SpeedStack	2.90 to 3.90	22, 60
<a href="#">173300</a>	SpeedEdge	Receptacle, mates to plug or edgecard	N/A for edgecard; 7.00 to 12.00 for mezzanine	60, 82
<a href="#">173305</a>	SpeedField	Plug, mates to SpeedEdge	1.4	22, 60

Custom Product	Description
<a href="#">Contact Molex</a>	SpeedCable Custom Cable Assemblies
	SpeedFlex Custom Flex Assemblies

[www.molex.com/link/speedmezz.html](http://www.molex.com/link/speedmezz.html)

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