



**Molex's SpeedStack™ Mezzanine Connector System delivers a high-density, low-profile solution with data rates up to 40 Gbps per differential pair, ideal for OEMs of networking, telecom and medical equipment with space constraints**

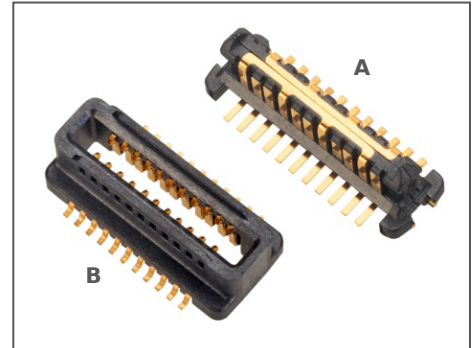
The SpeedStack™ Mezzanine Connector System is ideal for space-constrained designs with limited PCB real estate. The durable low-profile, high-density system is ideal for applications such as telecommunications, networking, military, medical and consumer.

**Features and Benefits**

Mated stack heights 4.00 to 10.00mm with a 0.80mm pitch	Provides design flexibility to address PCB space constraints
Multiple circuit sizes (22, 60 and 120) with a range of 6 to 32 differential pairs	Offers high-density signal solution with flexible pin counts
Split-pad PCB design	Allows for electrical tuning performance to reach data rates up to 40 Gbps per differential pair. Provides edgecard compatibility
100 Ohm impedance design	Provides superior impedance control
85 Ohm impedance versions in development	Will support PCIe Generation (Gen) 3.0 and Intel QuickPath Interconnect (QPI) requirements for next-generation I/O and memory signaling
Robust insert-molded wafer design with protected shrouded housing	Provides support to the terminal location to improve electrical balance within the signals for low-profile, high-density systems
Low-profile, ergonomic narrow housing design	Minimally obstructs airflow to promote system cooling
Shielding Ground Pins	Improves electrical performance and minimizes cross-talk

**SpeedStack™ Mezzanine Connector System**

- 171446** Dual-Row Plug
- 171450** Dual-Row Receptacle



A. SpeedStack™ Dual-Row Plug  
B. SpeedStack™ Dual-Row Receptacle

**Specifications**

**Reference Information**

Packaging: Tape and reel  
 UL File No.: TBD  
 CSA File No.: N/A  
 Mates With: Mating plug or receptacle  
 Use With: Edge card for receptacle  
 Designed In: Millimeters  
 RoHS: Yes  
 Halogen Free: Yes

**Electrical**

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

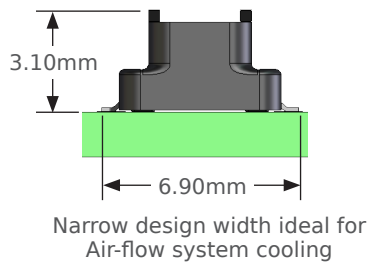
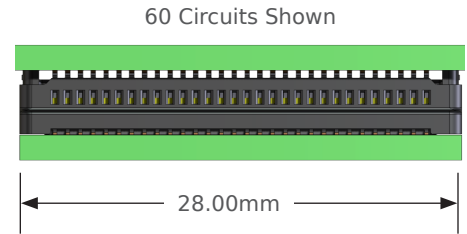
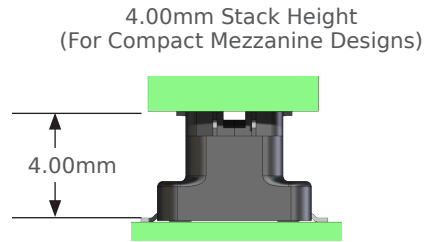
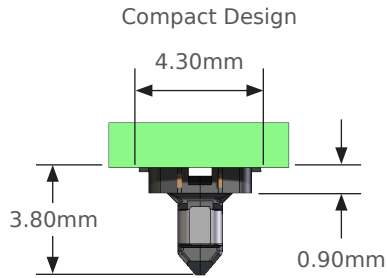
**Mechanical**

Durability (min.):  
 Mezzanine — 100 cycles  
 Edge card — 20 cycles

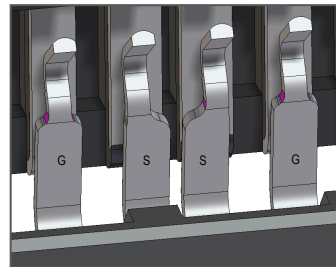
**Physical**

Housing:  
 Glass-Filled Thermoplastic (94-V0)  
 Contact: Copper (Cu) Alloy  
 Plating:  
 Contact Area —  
 0.76µm Gold (Au) min.  
 Solder Tail Area —  
 0.76 to 1.52µm Tin (Sn)  
 Underplating —  
 1.27µm Nickel (Ni) min.  
 Operating Temperature:  
 -40 to +105°C

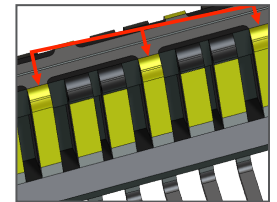
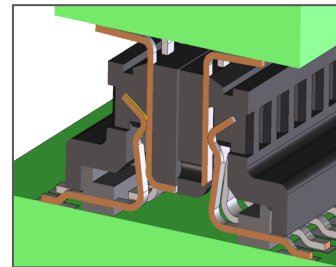
### Additional Product Features



Edge coupling allows flexible  
impedance matching



Terminal geometry technology  
is used from the zQSFP™ high-  
speed connector system



Shielding ground pins  
improve electrical  
performance and  
minimizes cross-talk

### Applications

#### Telecommunication Applications

- Remote Radio Antennas
- Base Stations
- Mobile

#### Networking

- Servers
- Routers
- Switch
- Storage

#### Military and Medical

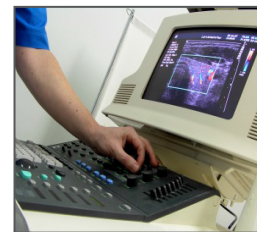
- Scanning Equipment

#### Consumer

- Camera
- Handheld scanners



High-End Servers



Medical Equipment



Portable Ultrasound  
Equipment

### Ordering Information

Order No.	Gender	Component Height	Mated Stack Height	Circuit Count
<a href="#">171450-0106</a>	Receptacle	4.10mm	7.00mm	60
<a href="#">171446-0115</a>	Plug	2.90mm		

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