



Molex's SpeedStack™ Mezzanine Connector System delivers a high-density, low-profile solution with data rates up to 56 Gbps per differential pair, ideal for OEMs of networking, telecom and medical equipment with space constraints

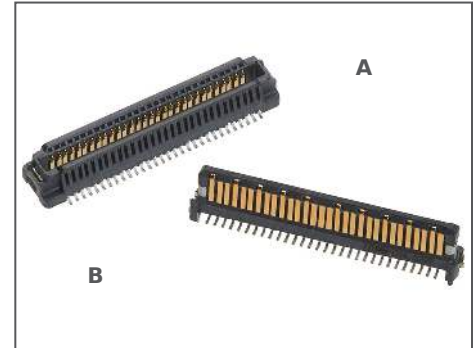
The SpeedStack™ Mezzanine Connector System is ideal for space-constrained designs with limited PCB real estate. The durable low-profile, high-density system is ideal for applications such as telecommunications, networking, military, medical and consumer.

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 82) 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 56 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.): 250V AC
 Current (max.): 1.0A per pin
 Contact Resistance: 10 milliohms
 Dielectric Withstanding Voltage: 300 VAC
 Insulation Resistance: 10 Megohms

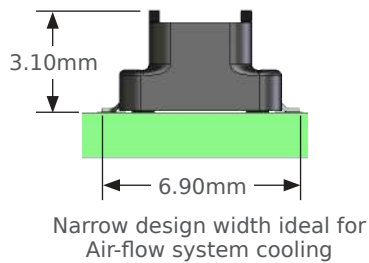
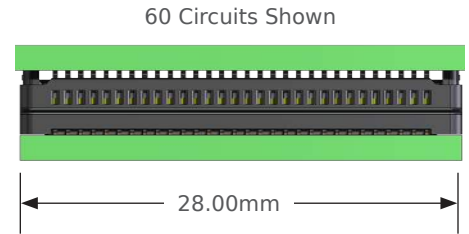
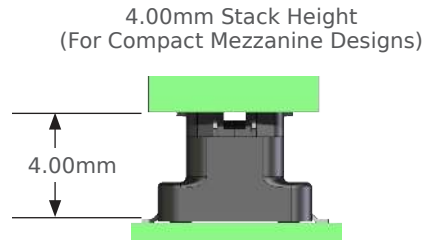
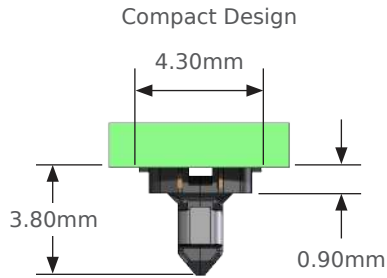
Mechanical

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

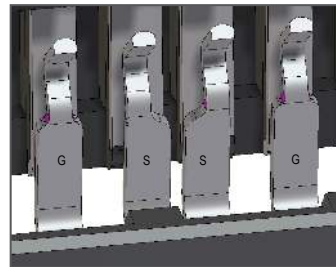
Physical

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

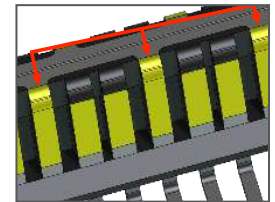
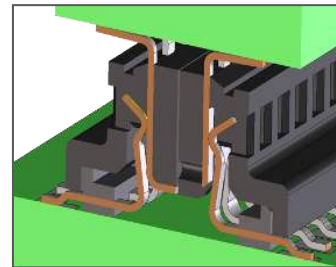
Additional Product Features



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

Series No.	Gender	Component Height	Mated Stack Height	Circuit Count
171450	Receptacle	4.10mm	4.00 to 10.00mm	22, 60, 80
171446	Plug	0.90, 1.90, 2.90, 3.90		

www.molex.com/link/speedstack.html