

SpeedMezz Connector Family

molex[®]

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

Receptacle shares the same footprint as the SpeedStack Receptacle

Drop-in replacement for low-profile rugged edge card connection

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

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

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 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

SpeedEdge Mezzanine Connectors

SpeedStack Mezzanine Connectors

SpeedEdge Edge Card Connectors

SpeedStack Edge Card Connectors

SpeedEdge: Longer, steeper lead-in receptacle

Improves mating to edge cards

Removal of common ground pins

Allows additional open pin field for low speed or power requirements

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

Speed: Differential pair performance rated up to 20 Gbps

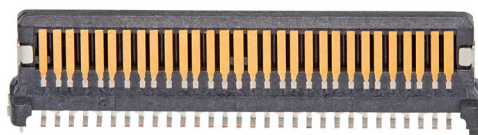
Ideal for networking, telecommunications and medical equipment applications

SpeedFlex and SpeedCable Assemblies

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

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



SpeedField Plug

SpeedMezz Connector Family



Applications

Telecommunication/

Networking

Servers

Routers

Switch

Storage

Remote Radio Antennas

Base stations

Mobile

Defense

Scanning equipment

Medical

Diagnostic Imaging

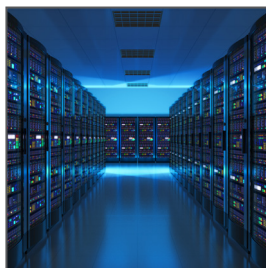
Picture Archival and

Communications (PACS)

Consumer

Camera

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
171450	SpeedStack	Receptacle	3.10 to 4.10	22, 60, 82 (dual bay: 22 and 60 circuits)
171446		Plug (Differential)	0.90 to 3.90	22, 60
171810	SpeedField	Plug, mates to SpeedStack	2.90 to 3.90	22, 60
173300	SpeedEdge	Receptacle, mates to plug or edgecard	N/A for edgecard; 7.00 to 12.00 for mezzanine	60, 82
173305	SpeedField	Plug, mates to SpeedEdge	1.4	22, 60

Custom Product	Description
Contact Molex	SpeedCable Custom Cable Assemblies
	SpeedFlex Custom Flex Assemblies

www.molex.com/link/speedmezz.html

Molex is a registered trademark of Molex, LLC in the United States of America and may be registered in other countries; all other trademarks listed herein belong to their respective owners.