

# MEZZOSTAK™ 0.5MM MEZZANINE CONNECTORS

Hermaphroditic, “mates-to-itself” design improves business

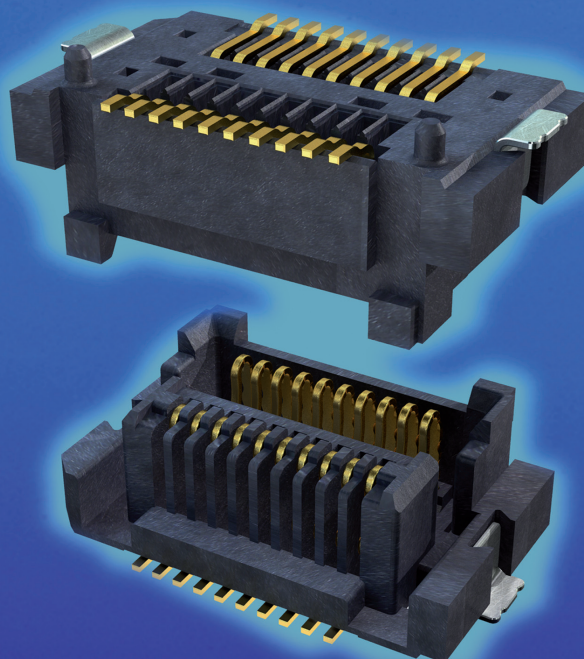
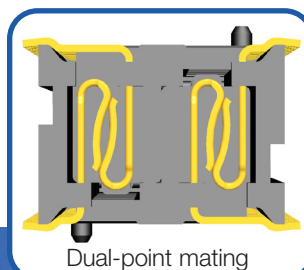
## DESCRIPTION

Robust 0.5mm fine pitch mezzanine connector suitable for a wide range of high reliability applications and demanding environments.

Innovative hermaphroditic design provides a precise mating interface with extra housing guidance.

Reduced product mix simplifies customer connector qualification, documentation and maintenance.

Two versions offer a choice between supplemental PCB hold-downs and pegs or short overall length.



## FEATURES & BENEFITS

- Hermaphroditic design “mates to itself”
  - Consolidates connector selection and documentation
  - Reduces Component Engineering costs
- Easy, Reliable Mating
  - Guidance “scoops” permit easy mating when mis-aligned
  - Polarization prevents mis-mating
  - Dual-point, long wipe contacts
- High un-mating force insures connection security
- Extreme operating temperature range assures reliable performance between -40 and 125 degrees C.
- Precise 0.08mm maximum SMT lead co-planarity eases attachment of connector leads to PCBs
- Footprint compatible with major competitors.
- High Speeds, including PCIe®G2, supported by signal integrity reports and S-parameter models
- 0.5mm high density contact pitch in two rows
  - 7 Stack heights: 4mm to 7mm (0.5mm increments)
  - 6 Sizes: 20 to 70 positions (10 position increments)

## TARGET MARKETS / APPLICATIONS

- Portable and mobile electronic equipment
- Medical and Instrumentation
- Point-of-Sale/Retail equipment
- Hand-held terminals
- Automatic Identification and Data Capture
- Sensors
- Military
- Communications and Networking
- Data and mass-storage
- Motor Vehicle
- Metering and Energy

**MEZZ**Select™

## TECHNICAL INFORMATION

### MATERIALS

- Housing: LCP, 94V-0, Color: Black
- Contacts: Copper Alloy
- Plating: Performance-based with gold
- All Materials lead-free RoHS compatible per GS-22-008

### ELECTRICAL PERFORMANCE

- Current rating per contact: 0.50 amps (de-rated)
- DWV: 500 volts
- Voltage Rating: 50 volts
- Contact resistance: 30 milliohm maximum
- Signal Integrity
  - (Differential pairs; 7mm stack height; Connectors with SMT pads and anti-pads/voids underneath)
  - 5+ Gbs capable
  - Impedance: 100 Ohms +/- 10% @ 50 ps edge
  - Insertion Loss: < 1 dB to 5+ GHz
  - NEXT and FEXT: <= 1.0% @ 50 ps edge (10-90%)

### ENVIRONMENTAL PERFORMANCE

- Operating Temperature: -40 to +125 deg.C
- Processing Temperature: 260 deg.C peak for 30 seconds

### MECHANICAL PERFORMANCE

- Durability: 50 mating cycles in environment
- Mating Force: 42g max per contact pair
- Un-mating force: 25g min per contact pair
- Wipe length: 1.0 mm minimum
- SMT lead co-planarity: 0.08mm maximum

### SPECIFICATIONS

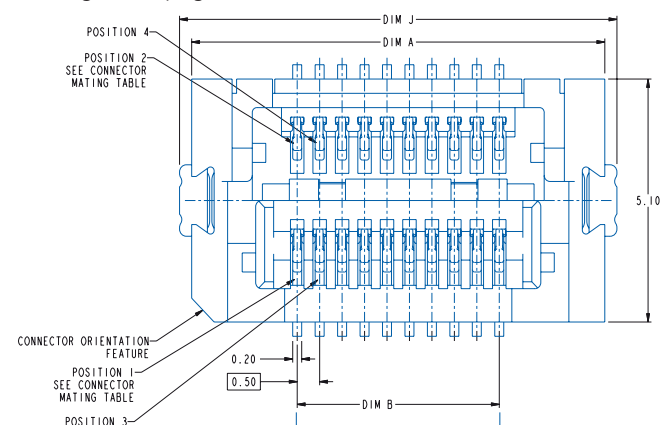
- Product Specification: GS-12-577;
- Packaging Specification: GS-14-1320
- Drawing Numbers:
  - 10106813 (Standard); 10106814 (Short Length)
- UL and CSA

### PACKAGING

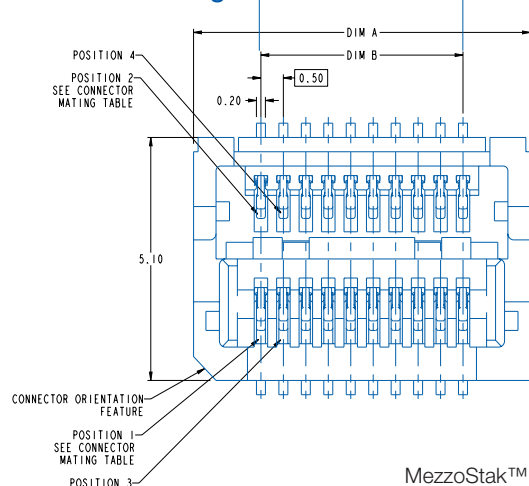
- Tape and reel, pickup cap pre-installed

### 10106813 Standard length,

with alignment pegs and metal hold-downs



### 10106814 Short length



### BASE PART NUMBER - XX X X X 2 LF

#### NUMBER OF POSITIONS

- 02 = 20 pos.
- 03 = 30 pos.
- 04 = 40 pos.
- 05 = 50 pos.
- 06 = 60 pos.
- 07 = 70 pos.

#### PRACTICAL CONNECTOR HEIGHTS

- 1 = 2.0 mm
- 2 = 2.5 mm
- 3 = 3.0 mm
- 4 = 3.5 mm

#### LEAD FREE INDICATOR

#### PACKAGING

- 2 = tape and Reel with pick-up cap

#### HOLD DOWN OPTION

- 1 = hold downs (10106813)
- 0 = none (10106814)

#### PEG OPTION

- 1 = pegs (10106813)
- 0 = no pegs (10106814)

Add practical connector heights of two mated connectors to determine final PCB stack height

For footprint dimensions and status of product release see customer drawings: [www.fciconnect.com/mezzostak](http://www.fciconnect.com/mezzostak)

mm/inch	10106813 standard length			10106814 short length	
number of positions	dim. J	dim. A	dim. B	dim. A	dim. B
20	9.74 / .383	9.20 / .362	4.50 / .177	7.50 / .295	4.50 / .177
30	12.24 / .482	11.70 / .461	7.00 / .276	10.00 / .394	7.00 / .276
40	14.74 / .580	14.20 / .559	9.50 / .374	12.50 / .492	9.50 / .374
50	17.24 / .679	16.70 / .657	12.00 / .472	15.00 / .591	12.00 / .472
60	19.74 / .777	19.20 / .756	14.50 / .571	17.50 / .689	14.50 / .571
70	22.24 / .876	21.70 / .854	17.00 / .669	20.00 / .787	17.00 / .669

MezzoStak™ is a trademark under registration of FCI  
The PCIe® mark is a registered trademark of PCI-SIG Corp

For more information please contact: [elxcommunications@fci.com](mailto:elxcommunications@fci.com)

[www.fciconnect.com/mezzostak](http://www.fciconnect.com/mezzostak)