NeoPress High-Speed Mezzanine System

Modular NeoPress High-Speed Mezzanine System enables design flexibility on space-constrained PCBs with tunable differential pairs, low stack heights and compliant-pin terminations while offering data rates up to 28 Gbps.

Features and Benefits

Patent-pending modular triad wafer design offers high-speed differential pairs that can be tuned to 85- or 100-Ohm impedances. Provides a customized system for design flexibility.

Proven Impel press-fit compliant-pin termination design with data rates up to 28 Gbps. Enables solderless termination with easy board rework without sacrificing data speed.

Options include four triad configurations, high-speed single-ended traces, low-speed single-ended lines and power contacts. Offers real-estate savings on PCB by supporting requirements for low- and high-speed signals and power within one compact connector.

High-speed triad wafers comprise three pins per differential pair (two signal pins and one shielded ground pin). Provide standalone 28+ Gbps fully shielded differential pairs with dedicated grounds.

Connectors feature a density of 76 differential pairs / triad per square inch. Offers ultra-high-density press-fit signal solution with optimal signal integrity performance.

Durable housing material delivers a robust system with mechanical stability.

Ground plate on upper and lower housings minimizes crosstalk. Provides added alignment for pin stitching.

Reliable mating interface with 1.50mm wipe. Sufficient conductive wipe for clean signal transmission and enhanced performance.

Hermaphroditic interface ensures that the receptacle beams are protected by the plug and shield contacts. Prevents terminal damage by protecting the mating contact interface.

Mirror-image triad layout simplifies PCB routing. Lowers system costs by decreasing the number of PCB layers required for signal routing.

Available in 9.00 to 45.00mm mated stack heights. Addresses engineering constraints in system envelopes.

Staggered footprint within connector ensures zero-skew routing and minimized crosstalk.
NeoPress High-Speed Mezzanine System

Applications

Telecommunication / Networking
- Hubs
- Servers
- NAS Towers
- Rack Mount Servers

Industrial Automation
- Controller Personality Cards

Medical

Specifications

REFERENCE INFORMATION
Packaging: Tray
Mates With: NeoPress 100-Ohm Vertical Plug (Series 172801) mates with NeoPress 100-Ohm Vertical Receptacle (Series 172832); NeoPress 85-Ohm Vertical Plug (Series 203341) mates with NeoPress 85-Ohm Vertical Receptacle (Series 203340)
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes

ELECTRICAL
- Voltage (max.): 30V AC RMS
- Current (max.): 1.0A
- Contact Resistance (max.): 10 milliohms
- Dielectric Withstanding Voltage: 200V AC RMS
- Insulation Resistance (min.): 1000 Megohms

MECHANICAL
- Mating Force (max.): 0.75N
- Unmating Force (min.): 0.25N
- Durability (min.): 100 cycles

PHYSICAL
- Housing: High-Temperature LCP
- Contact: Copper (Cu)
- Plating:
  - Contact Area — 30μ” Gold (Au)
  - Compliant Pin Area — Selective Tin (Sn) over 50μ” Nickel (Ni) Overall
- Operating Temperature: -55 to +85°C

Ordering Information

PLUG

<table>
<thead>
<tr>
<th>Series No.</th>
<th>Impedance (Ohms)</th>
<th>Plating</th>
<th>Connector Height</th>
<th>Triad Wafer Configuration (row-by-column)</th>
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<tbody>
<tr>
<td>172801</td>
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<tr>
<td>203341</td>
<td>85</td>
<td>0.762μ (30μ”) Gold</td>
<td>4.50 to 22.50mm</td>
<td>Easily support grids 2-by-4 to 10-by-30</td>
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RECEPTACLE

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www.molex.com/link/neopress.html

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