



NEOPRESS™ HIGH-SPEED MEZZANINE SYSTEM OFFERS RELIABLE, FLEXIBLE CONNECTIONS



Molex NeoPress™ High-Speed Mezzanine System Creates Reworkable PCB Connections with High Signal Integrity

BUSINESS CHALLENGE

Printed circuit board (PCB) designers often need to rework boards, but their options are limited. Soldered SMT connectors offer good signal integrity, but cannot be reworked. Reworkable connectors may exhibit equivalent signal integrity, but with fewer routing options.

For example, it is helpful to have the option of reworking a board when performing multiple tests and verification of different module configurations. Traditional soldered SMT connectors are permanently affixed to costly PCBs, making it virtually impossible to reuse the boards. Also, when an SMT termination fails, attempting to rework it can be very labor intensive and may not succeed. The capability to efficiently reuse and rework PCBs could produce cost savings.

SOLUTION

The Molex NeoPress High-Speed Mezzanine System employs press fit/compliant-pin technology, making it a simple, reworkable PCB attachment.

The press-fit connector uses a tuned terminal design with additional ground features that help minimize near-end and far-end crosstalk. As a result, it matches the high speeds and signal integrity offered by SMT connectors. The modular 28 Gbps NeoPress system – with tunable differential pairs, low stack heights, and compliant-pin terminations – is ideal for new, space-constrained applications that demand higher speeds and smaller form factors. Its patent-pending triad wafer design includes the following triad options: high-speed differential pairs that can be tuned to 85- to 100-Ohm impedances, single-ended triads for low-speed options, and power triads. As a result, designers need only one connector for different signal speeds, freeing up space on the PCB. NeoPress is a hermaphroditic interface, with the same contact system on the plug and the receptacle, which improves cost effectiveness.

CUSTOMER BENEFITS

The NeoPress High-Speed Mezzanine System from Molex extends designers' termination options.

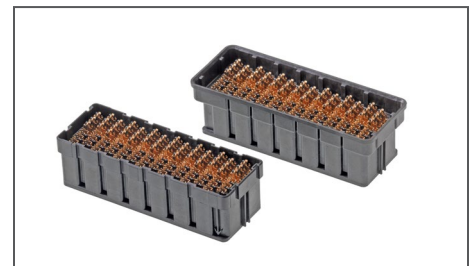
Designers can still use NeoScale SMT Mezzanine Systems where appropriate, but when the ease of using press-fit connectors is required, NeoPress eliminates the solder-and-reflow process. That option is particularly important when expensive components are used on the motherboard and a mezzanine connector needs to be upgraded with other options.

A recent demonstration of the NeoPress High-Speed Mezzanine System confirmed its signal integrity performance. In the demo, a 40mm mated-stack height solution in a 6 by 10 configuration showed that the NeoPress High-Speed Mezzanine System is capable of up to 32 Gbps in some channels. The demo sourced a signal from an oscilloscope through the connector and included a live "open eye" diagram, which indicated excellent signal integrity and low cross talk interference.

The NeoPress system is designed for high-density telecommunications and networking devices, such as hubs, servers, NAS towers

and rack-mount servers. It can also be used in industrial automation and medical applications. Customers in these industries can take advantage of the system's flexible modular design, which includes stack heights of 10 to 50mm and configurations ranging from 2 by 4 to 10 by 30.

To view a demonstration of the NeoPress High-Speed Mezzanine System, click [HERE](#).



To learn more www.molex.com/ab/neopress.html