



# NANO-PITCH I/O FOR DATACOM/NETWORKING



**The Nano-Pitch I/O Interconnect System from Molex Provides Industry Leading Speed and Size for Next Generation Server and Storage Systems**

## BUSINESS CHALLENGE

**As businesses strive to reduce their data center footprints, equipment/system suppliers are challenged to reduce the physical sizes of their packaging solutions while increasing their speed and performance.**

Implementation of high-performance computing solutions is inevitable for mainstream businesses as they look to deploy financial and business analytics, software as a service (SaaS), and participate in cloud architectures. Once used primarily to solve complex computational problems in scientific and engineering applications, today's supercomputers are becoming ubiquitous. More core business functions including sales and marketing; customer service and support; finance and operations and human resources are finding it necessary to migrate to the higher power solutions offered today.

As demand rises, enterprise data centers are making the necessary moves to be competitive while seeking out smaller packaging solutions that provide added cost and space benefits. Technology such as Solid State Drives (SSDs) is helping propel storage performance forward by providing the speed and efficiency needed for next generation systems. But building a solid and scalable infrastructure to meet today's high-speed network requirements takes more than just fast storage. It requires interconnects that can rise to the challenge. And, with the growing number of protocols and physical interfaces required to support modern storage systems, including Serial Attached Storage (SAS), Serial ATA (SATA) and Peripheral Component Interconnect Express (PCIe), smaller, multi-protocol cables and connectors are more important than ever.

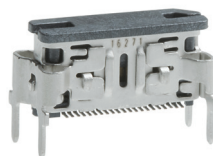
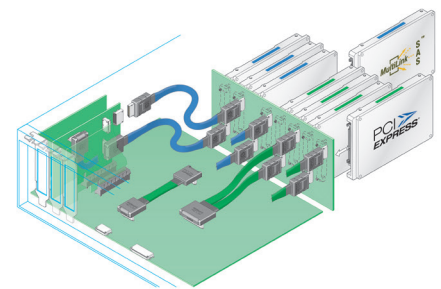
## SOLUTION

**The Molex Nano-Pitch I/O Interconnect System System benefits new high-performance applications by delivering robust, small form factor, high-speed and multi-protocol interconnects ideal for internal storage and server applications.**

The Nano-Pitch I/O Interconnect System offers a high-density, high-performance, extremely low-profile (4.00mm) connector solution that supports SAS-3/SAS-4 and PCIe Gen 3 (OCuLink 1.0) and Gen 4 interfaces. It offers either four or eight transmit and receive lanes plus sidebands for control management. The 4X (42 circuit) and 8X (80 circuit) connectors have a 0.50mm pitch and come in right-angle and vertical versions with a variety of SMT and reflow options. The mating cable products are offered with either a positive active or passive detent latch for straight, right-angle and side-exit styles.

The Nano-Pitch I/O has been selected as the OCuLink connector solution by the

PCI Special Interest Group (SIG) and was voted into the INCITS T10 specifications under development for next generation SAS-4 internal interfaces.





## CUSTOMER BENEFITS

**The Nano-Pitch I/O Interconnect System helps maximize next generation PCIe, SAS and SSD benefits while minimizing space utilization and cost to deliver the most value to the end user.**

Many high-speed implementations benefit from the small form factor, high data rate, low-profile packaging and improved air-flow offered by the Nano-Pitch I/O Interconnect System. The economical connectors deliver seamless connectivity with faster speeds and smaller ports while its multi-protocol capability provides inventory and manufacturing assembly efficiencies. Additionally, the reduced cable size provides more effective cable management translating into enhanced airflow for better thermal management within the enclosure. Multiple sources for the Nano-Pitch I/O form factor are available due to a licensing program offered to the industry on RAND terms.

**To learn more please visit, [www.molex.com/ab/nanopitch.html](http://www.molex.com/ab/nanopitch.html)**

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