New PXI MultiComputing™ Specification Enables Multi-Controller Systems with High Performance Communication

Utilizes High Bandwidth, Low Latency PCI Express Communications Bus and Maintains Backwards Compatibility

The PXI Systems Alliance (www.pxisa.org) today announced the release of the PXI MultiComputing (PXImc) Specification which supports a high performance, communication architecture for multi-controller PXI and automated test systems. The new hardware and software specifications, PXI-7 and PXI-8 respectively, continue the innovation of the PXI standard while ensuring backwards compatibility with the more than 1,500 PXI products available today.

Based on PCI Express and its cabled derivative, PXImc provides vendor interoperable communication between multiple controllers or systems via a high throughput and low latency communications link. In addition to connecting multiple chassis or controllers within a PXI based system, the standard also supports communication between laptops, high performance computers, and standalone instruments. Unlike some communication protocols, PXImc preserves the high bandwidth and low latency performance associated with the PXI architecture.

PXImc also supports the use of multiple processing modules inside a single PXI chassis. Located within the peripheral slots of a PXI chassis, PXImc processor modules will offer scalable processing power inside a single PXI system as well as paving the way for additional PXI features, including enhanced system redundancy and distributed computing.

Utilizing non-transparent bridges, the PXImc specification creates a vendor interoperable standard to connect and communicate between separate PCI domains. “The non-transparent bridge technology has been used for more than a decade but only implemented in vendor specific solutions,” said Mark Wetzel, PXISA Technical Chairman. “The PXImc specification standardizes the non-transparent bridge hardware and software to ensure that multiple vendors’ products will work together.”

These latest technical developments continue to enhance the PXI standard's capabilities and further its application reach. This year, PXI has reached the milestone of more than 100,000 deployed systems since its introduction which includes an estimated 600,000 PXI modular instruments and related devices. The open, software-defined architecture of PXI based on high performance PC technology is a key industry standard for automated test. According to industry analyst Frost and Sullivan, the strong adoption of PXI systems is expected to continue with a projected compounded annual growth rate of 17.6% through 2014.

Companies interested in viewing the latest specifications or obtaining more information about joining the PXISA should visit www.pxisa.org.

About the PXI Systems Alliance

Formed in June 1998, the PXISA is a group of 59 companies that share a common commitment to end-user success with open, multivendor CompactPCI systems for applications in test and measurement, industrial automation and data acquisition. The primary goal of the PXISA is to improve the effectiveness of CompactPCI-based solutions in measurement and automation through use of the PXI specification. PXISA membership is open to vendors who share the PXI philosophy and objectives, and have a desire to produce and promote products and solutions compatible with alliance goals.

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