



News Release

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FOR IMMEDIATE RELEASE

Express104™ Specification Defines Next Generation of Small, Stackable, Embedded Computing Modules

Incorporates SUMIT™ Interface for PCI Express, USB2.0 and more while enabling compatibility with legacy PC/104 modules

Embedded Systems Conference – SV, San Jose, CA, April 15, 2008 – The Small Form Factor Special Interest Group (SFF-SIG) today revealed the details of the Express104™ specification defining a new small stackable module form factor utilizing the new SUMIT™ (Stackable Unified Module Interconnect Technology) expansion interface also introduced today. Express104 specifies a 90mm x 96mm board with two 52-pin, high-speed connectors capable of supporting PCI Express™ and USB as well as other popular moderate speed interfaces for I/O expansion. It provides the basis for a stackable, I/O-centric, multi-board solution that is processor architecture and chipset independent. The specification contains support for very low power and ultra mobile processors which support “green” computing initiatives.

On a single 52-pin high-speed SUMIT-A connector, the Express104 Specification supports one x1 PCI Express™ lane, three high-speed USB 2.0 interfaces, LPC (Low Pin Count) Bus, SPI/uWire, SMBus/I²C Bus, and ExpressCard™ signals. A second identical 52-pin SUMIT-B connector supports one additional x1 PCI Express lane, one x4 PCI Express lane plus additional power, ground, and control signals. The total number of pins is 104 for both connectors and is referred to collectively as a SUMIT Type AB configuration. Actual signal integrity test results demonstrate that a stack of Express104 modules will support data rates of 5 GT/s which is required for PCI Express Generation 2.

Even though Express104 modules can be constructed with only SUMIT connectors, a special configuration has been defined to support expansion with PC/104 modules. Systems conforming to the Express104 specification can then maintain legacy support for the vast number of PC/104 stacking expansion I/O modules and enclosures available worldwide. The Express104 Specification accomplishes this by maintaining the same placement location of the legacy PC/104

connector while also maintaining the same module physical dimensions and mounting holes. Thus, the Express104 specification offers a unique upward performance migration path for this popular, proven form factor standard.

With all these features, the Express104 Specification enables the construction of small, rugged, and reliable computer systems that are powerful, easy-to-use, cost-effective, and scalable for a variety of different embedded applications. These applications include transportation, Mil/COTS, industrial automation, medical, communications, energy, and homeland security.

About the Small Form Factor SIG

The Small Form Factor Special Interest Group is an international organization devoted to identifying, creating, and promoting standards that help electronics system and device manufacturers and integrators move to small form factor technologies and building blocks in their products, and protect their investments. Benefits of small form factor products include smaller size, reduced power consumption (eco-friendly, “green” products), and greater reliability compared to larger legacy products.

For more information about the Express104, a white paper or FAQs, please visit www.sff-sig.org or e-mail info@sff-sig.org.

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