

Kontron nanoETXexpress-SP: First credit card sized Computer-on-Module with Intel® Atom™ processor

Power and space-saving design for next generation ultra-mobile applications

Eching, Germany, April 15, 2008 – Today, Kontron unveiled the first extremely small (55mm x 84 mm) nanoETXexpress Computer-on-Module based on the low power Intel® Atom™ processor. The “nano” form factor is designed as an extension to the COM Express™ specification.

The credit card size, COM Express COM.0 Type 1 compatible Kontron nanoETXexpress-SP Computer-on-Module with the Intel® Atom™ processor Z5xx series is the perfect fit for the next generation of ultra-mobile applications. With clock speeds between 1.1 GHz and 1.6 GHz, the Intel® Atom™ processor offers excellent performance in a small and energy-efficient design (13 x 14 mm). The Intel® Atom™ processor and single chip chipset (22 x 22 mm), now called the Intel® System Controller Hub US15W, have a TDP of < 5 watts. Compared with other low power processors, the new chipset requires only one-seventh the size and uses only one-tenth of the energy. This makes the Kontron nanoETXexpress-SP Computer-on-Module ideal for ultra-mobile and embedded applications that require x86 processor performance, high-end graphics, PCI Express, USB 2.0 and Serial ATA combined with longer battery power. These applications can include handheld devices for medical or multi-media applications, small mobile data systems and a host of new applications that prior to now have not been possible due to size or power consumption constraints.

“With the new Kontron nanoETXExpress-SP Computer-on-Module, OEMs receive one of the most innovative and future-proof Intel® Atom™ processor-based boards for extremely fast solution developments based on an extremely small COM form factor,” explains Dirk Finstel, Vice President Research & Engineering from Kontron.” The nanoETXexpress-SP Computer-on-Module underscores Kontron’s position as a leading supplier of x86 based embedded computing technology and also offers the highest degree of investment security.”

The advantages of the COM Express connector

The Kontron nanoETXexpress-SP is 100 percent compatible with the COM Express COM.0 Type 1 connector. The placement and assignment of the pins also conforms 100 percent to COM.0. Compared with, for example, card edge connectors, the COM Express connector is significantly more future proof. Since it has less electronic attenuation, it enables longer pathways on the carrier board. This is important since green IT trends will reduce the possible pathway length in the long term. In addition, it offers greater shock and vibration resistance as well as a clear advantage when it comes to EMC. This is also important since the demands on shielding are increasing due to factors such as second generation PCIe, for example, that doubles the wire speed and thereby the frequency,

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resulting in the need for greater shielding. Therefore, it makes the most sense to use Computer-on-Module designs with the COM Express Type 1 connector that clearly offers the longest lifecycle.

The feature set in brief

The Kontron nanoETXexpress-SP Computer-on-Module comes with the Z5XX series Intel® Atom™ processor from 1.1 GHz to 1.6 GHz and Intel® System Controller Hub US15W and offers up to 1 GByte of soldered DDR2 400/533 RAM and 2 GBytes of onboard Flash as a boot device. A wide array of future-focused interfaces are available via the COM Express Type 1 connector including 1 x Gigabit Ethernet, 1 x SATA port, 8 x USB 2.0 (one of which is client capable) as well as a PCI-Express x1 lane for application-specific expansions. 2 x PCIe is also possible if the Gigabit Ethernet is not required. An external PCIe to PCI bridge is also supported. In order to enable small format SD/SDIO interfaces such as SD, miniSD, MMC and DE-ATA, the Kontron nanoETXexpress-SP Computer-on-Module offers the relevant support via the GPIO pins of the COM Express compliant connector. Additionally, the 18/24 Bit LVDS single channel graphic performance offers 256MB of graphic memory, HDTV support and integrated MPG2 decoder as well as H.264 – more than mini devices require. The Kontron nanoETXexpress-SP Computer-on-Module supports Linux and VxWorks as well as Windows XP, XPe and CE. This extensive support underscores the versatility of use for this Computer-on-Module in a wide range of different markets.

Further information: <http://www.kontron.com/nanoETXexpress-SP>

About COM Express Computer-on-Modules: <http://www.kontron.com/ETXexpress>

Whitepaper on nanoETXexpress specification:

http://www.kontron.com/downloads/white_papers/nanoETXexpress_whitepaper.pdf

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About Kontron

Kontron designs and manufactures standard-based and custom embedded and communications solutions for OEMs, systems integrators, and application providers in a variety of markets. Kontron engineering and manufacturing facilities, located throughout Europe, North America, and Asia-Pacific, work together with streamlined global sales and support services to help customers reduce their time-to-market and gain a competitive advantage. Kontron's diverse product portfolio includes: boards and mezzanines, Computer-on-Modules, HMIs and displays, systems, and custom capabilities. Kontron is a Premier member of the Intel® Embedded and Communications Alliance. The company is a recent three-time VDC Platinum vendor for Embedded Computer Boards. Kontron is listed on the German TecDAX stock exchange under the symbol "KBC". For more information, please visit: www.kontron.com.

Digital text (PDF): <http://www.kontron.com/pr/Computer-on-Module-nanoETXexpress-SP-080415ENG.pdf>

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