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Press Release 18/2014

**Robust all-rounder – the Intel**® **Atom™ Mini-ITX from congatec**

**Munich, electronica, November 11, 2014 \* \* \*** congatec AG, a leading technology company for embedded computer modules, single board computers and EDM services, is expanding its successful product range with an industrial Mini-ITX motherboard based on the new Intel® Atom™ E3800 series (codenamed Bay Trail).

The conga-IA3 is an extremely low-power, high-performance single board computer (SBC) with embedded qualities. Customers can now order rugged computer boards in the popular Thin Mini-ITX form factor that are predestined for 24/7 operation, support the extended industrial temperature range and also have a guaranteed long-term availability of at least 7 years. They benefit from the years of experience that congatec has gained as a manufacturer of high-quality computer modules. Synergy effects reduce development time and cost, while existing know-how and infrastructures make it possible to outsource custom designs and solutions to the manufacturer if necessary.

The flat design – measuring 25mm in height with I/O shield – allows space-saving installation in display and panel PCs, making the realization of digital signage and control solutions for industry and business applications a quick and easy task. An extended industrial temperature range in the "Industrial-Line" version, real-time capability plus support for multiple operating systems ensure reliable operation even in demanding industrial applications such as mechanical engineering or automation and control. Thanks to their very low power consumption, 3rd generation Atom-based systems are ideal for passively cooled and hermetically sealed systems that can be used in harsh environments. The powerful integrated graphics eliminates any need to compromise on ease-of-use, something that is particularly important for POS (Point of Sales) and retail applications such as kiosk systems. Two independent displays with high resolutions make it possible to realize even sophisticated user interfaces such as touch solutions.

The conga-IA3 Mini-ITX system is based on Intel® Atom™ SoC processors; its two SODIMM sockets can be equipped with up to 8 GB of onboard DDR3L memory. For semi-embedded applications Intel® Celeron™ versions are available that offer even higher performance.

The integrated Intel® Gen7 graphics supports DirectX 11, OpenGL 3.2, OpenCL 1.2 plus high-performance, flexible hardware decoding to decode multiple high-resolution full HD videos in parallel. The processor natively supports up to 2,560 x 1,600 pixel resolution with DisplayPort and 1,920 x 1,200 pixels with HDMI, and it is possible to connect up to two independent display interfaces. A DisplayPort (DP ++) and a VGA port are provided on the back of the board; an additional embedded DisplayPort (eDP) and 2x24 Bit LVDS can be realized via an internal DISP connector.

Native USB 3.0 support ensures fast data transmission with low power consumption. A total of three USB 3.0 SuperSpeed ports (two of them USB 2.0 backwards compatible) and four additional USB 2.0 ports are available. Two 5 Gb/s PCI Express 2.0 lanes can be used as 1x mPCIe Half Size, 1x PCIe Full Size (shared with PCIe x1 and mSATA) and 1x PCIe x1 (shared with mSATA/mPCIe). Two SATA 3.0 interfaces with up to 6 Gb/s (one of them also available as mSATA) allow quick and flexible system extensions. Two Intel I211 Gigabit Ethernet controllers each provide one Gigabit Ethernet LAN access via the two RJ45 sockets. ACPI 5.0, I2C bus and LPC bus allow easy integration of legacy I/O interfaces. An optional security module (TPM), real-time clock (RTC), Intel high-definition audio and a universal power source with 12 to 24 volts complete the feature set.

Supported operating systems include Microsoft® Windows® 7 (32bit and 64bit), Windows® 8.X, Windows® Embedded Standard 7 (WES7), Windows® Embedded Standard 8 (WES8), Windows® Embedded Compact 7 (WEC7), Windows® Embedded Compact 2013 (WEC2013) and Linux; for more operating systems, particularly real-time systems, congatec offers support for the development of specific driver BSPs (Board Support Packages).

The board supports the following processor variants:

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| --- | --- | --- | --- | --- | --- |
| **COM/Processor** | **Cores** | **Cache [M]** | **Clock [GHz]** | **TDP [W]** | **Brand** |
| **conga-IA3/J1900** | **4** | **2** | **2.42** | **10** | **Intel® Celeron™** |
| **conga-IA3/N2930** | **4** | **2** | **2.0** | **7.5** | **Intel® Celeron™** |
| **conga-IA3/E3845** | **4** | **2** | **1.91** | **10** | **Intel® Atom™** |
| **conga-IA3/E3827** | **2** | **1** | **1.75** | **8** | **Intel® Atom™** |
| **conga-IA3/E3826** | **2** | **1** | **1.46** | **7** | **Intel® Atom™** |
| **conga-IA3/E3825** | **2** | **1** | **1.33** | **6** | **Intel® Atom™** |

**About congatec AG**congatec AG has its head office in Deggendorf, Germany and is a leading supplier of industrial computer modules using the standard form factors Qseven, COM Express, XTX and ETX, as well as single board computers and EDM services. congatec’s products can be used in a variety of industries and applications, such as industrial automation, medical technology, automotive supplies, aerospace and transportation. Core knowledge and technical know-how includes unique extended BIOS features as well as comprehensive driver and board support packages. Following the design-in phase, customers are given support via extensive product lifecycle management. The company’s products are manufactured by specialist service providers in accordance with modern quality standards. Currently congatec has 177 employees and entities in Taiwan, Japan, China, USA, Australia and the Czech Republic. More information is available on our website at [www.congatec.com](http://www.congatec.com) or via [Facebook](http://www.facebook.com/Congatec), [Twitter](https://mobile.twitter.com/congatecAG) and [YouTube](http://www.youtube.com/congatecAE).

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