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*The 7th Gen Intel® Core™ processor-based Thin Mini-ITX motherboards from congatec*

*Text and photograph available at:* [*http://www.congatec.com/press*](http://www.congatec.com/press)

**Press release**

**congatec launches industrial Thin Mini-ITX motherboard with**

**7th Gen Intel® Core™ U processors for IoT connected devices**

**Low profile motherboard solution with high value!**

**Deggendorf, Germany, March 07, 2017 \* \* \*** congatec – a leading technology company for embedded computer modules, single board computers and embedded design and manufacturing services – introduces the conga-IC175, a thin industrial-grade motherboard family featuring the new 7th Gen Intel® Core™ U (Kaby Lake) processors designed for IoT connected devices. The new boards are perfectly suited for space-constrained, high-performance, low-power IoT designs. Besides all the enhancements of the new processor generation, they also offer comprehensive IoT support including a SIM card socket for 3G/4G or Narrow Band connectivity and first versions of the congatec Cloud-API that will be demonstrated at Embedded World (Hall 1, Booth 358).

The extremely low profile design of congatec’s new Thin Mini-ITX industrial motherboard family makes it perfectly suited for slim system designs such as industrial GUIs/HMIs, digital signage systems, point-of-sale terminals, and medical tablets. The boards excel through the option of ultra-fast Intel® Optane™ memory via M.2 connector, enabling extremely fast system boots, application starts, video recording and processing, and software updates. The boards further support Hyper-Threading which turns the dual-core design into a 4-in-1 system when utilizing the RTS real time hypervisor.

“Our new Thin Mini-ITX motherboards can be universally employed in all the various embedded and IoT applicationsas the new low-power versions of the high-end 64-bit Intel® Core™ processors offer a highly configurable thermal design power (TDP) of 15W, with the flexibility to scale dissipation from 7.5W cTDP to 25W cTDP for an exceptional balance of power and performance,” explains congatec Director Product Management Martin Danzer. Perfectly tailored for the embedded and rugged industrial market, the new flagship motherboard design offers at least 7 years long term availability as well as a comprehensive set of industrial interfaces and drivers. Thanks to congatec’s personal integration support, the design-in phase is highly simplified and becomes an easy job for OEM engineers.

**The feature set in detail**

The new industrial grade conga-IC175 Thin Mini-ITX motherboards ship with 4 different dual-core variants of 7th Gen Intel® Core™ U SoC processors and have a configurable cTDP from 7.5 W to 25 W. Two SO-DIMM sockets support up to 32GB DDR4-2133 memory. For non-volatile memory the boards offer 1x M.2 slot supporting the new Intel® Optane™ memory for significantly lower latency and higher data rates mass storage devices. 2x SATA 3.0 interfaces allow additional HDDs or SSDs to be connected. The new boards connect the DirectX 12 capable Intel® HD Graphics 620 with up to three independent displays in 4k resolution @ 60 Hz via 2x DP++ plus eDP or dual channel LVDS. The new hardware-accelerated 10-bit encoding/decoding of HEVC and VP9 videos offloads the CPU while HDR support makes videos more vibrant and lifelike. The industrial grade I/O set includes 2x Gigabit Ethernet and 1x SIM card socket for 3G/4G or Narrow Band M2M and IoT connectivity, 1x PCIe x4 and 1x mPCIe for generic expansions, 4x USB 3.0, 6x USB 2.0, 8x GPIO, and 2x serial COM ports – one of which can be configured as ccTalk. An integrated Board Management Controller, HDA audio including a stereo amplifier, a MIPI CSI-2 interface for direct connection of low-cost CMOS cameras as well as optional TPM 2.0 round off the feature set. The boards support the 64-bit versions of Microsoft Windows 10 and Windows 10 IoT as well as all common Linux operating systems. A comprehensive choice of add-ons for easier design-in, including cooling solutions, I/O shields and cable sets, is also available.

The new conga-IC175 Thin Mini-ITX board can be ordered with the following processors:

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| **Processor** |  | **Cores / Threads** |  | **Intel® Smart Cache [MB]** |  | **Clock / Burst****[GHz]** |  | **TDP / cTDP** **[W]** |  | **Graphics** |
| **Intel® Core™ i7-7600U** |  | **2/4** |  | **4** |  | **2.8/3.9** |  | **15/7.5/25** |  | **Intel® HD Graphics 620** |
| **Intel® Core™ i5-7300U** |  | **2/4** |  | **3** |  | **2.6/3.5** |  | **15/7.5/25** |  | **Intel® HD Graphics 620** |
| **Intel® Core™ i3-7100U** |  | **2/4** |  | **3** |  | **2.4** |  | **15/7.5** |  | **Intel® HD Graphics 620** |
| **Intel® Celeron® 3965U** |  | **2/2** |  | **2** |  | **2.2** |  | **15/10** |  | **Intel® HD Graphics 610** |

More information about congatec’s industrial grade Thin Mini-ITX board can be found on the product page <http://www.congatec.com/products/mini-itx-single-board-computer/conga-ic175.html>

**About congatec AG**Headquartered in Deggendorf, Germany, congatec AG is a leading supplier of industrial computer modules using the standard form factors COM Express, Qseven and SMARC 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, entertainment, transportation, telecommunication, test & measurement and point-of-sale. 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 entities in the USA, Taiwan, China, Japan and Australia as well as the United Kingdom, France, 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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