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*congatec COM Express Compact module conga-TC175 with Gen 7 Intel® Core™ SoC processor*

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

**New Product Introduction**

**congatec presents new COM Express modules with
Gen 7 Intel® Core™ processors (codename Kaby Lake)**

**congatec's new modules are simply better**

**Deggendorf, Germany, January 3, 2017 \* \* \*** congatec – a leading technology company for embedded computer modules, single board computers (SBCs) and embedded design and manufacturing (EDM) services – has released new COM Express Compact modules in time with the launch of the 7th generation of Intel® Core™ SoC processors (codename Kaby Lake). The new conga‑TC175 Computer-on-Modules (COMs) with Intel's Skylake successor –the second variant of the current 14nm microarchitecture – are simply better than their predecessors. Compelling features include greater CPU performance, more dynamic HDR graphics thanks to 10-bit video codec, and support of the optional, super-fast 3D Xpoint-based Intel® Optane™ memory.

Thanks to its compatibility with the previous generation, the widely improved microarchitecture can be integrated in existing embedded systems without additional design effort. The standardized COM Express form factor, congatec's extensive industrial driver implementations as well as personal integration support and individual Embedded Design & Manufacturing services make it particularly easy for developers to integrate this new generation. Target applications are found wherever fanless and completely sealed systems must offer high performance at 15 Watt TDP.

“The four current 15 Watt versions of the 7th generation of Intel® Core™ processors on Intel’s IOTG embedded roadmap provide the performance required by many of the new application fields of embedded computing. Demand is found virtually everywhere: from industrial, medical and transportation applications to infotainment and retail as well as in building and home automation. They will also drive the move towards the latest operating systems like Windows 10 IoT, which boasts enhanced security and locking options for IoT connected appliances,” explains Martin Danzer, Director Product Management at congatec. Of course, all other current operating systems such as Linux 3.x / 4.x, Yocto and VxWorks are supported as well.

**Intel® Optane™ memory**

The new COM Express computer modules from congatec support Intel® Optane™ memory which is based on 3D XPoint technology. Compared to NAND SSDs, it offers significantly lower latency yet is capable of handling the same size of data packets. With a latency of just 10 µs – about a thousand times lower than that of standard HDDs – the boundaries between main memory and storage are becoming fluent. congatec’s evaluation carrier boards already support this fast memory technology, which is especially suited for big data processing, high-performance computing, virtualization, data storage, cloud, simulation, medical imaging and many other applications, in September 2016.

**The feature set in detail**

The new conga-TC175 COM Express Compact modules are equipped with 15 Watt dual-core variants of Gen 7 Intel® Core™ SoC processors. Specifically, these are the 2.8 GHz Intel® Core™ i7 7600U, the 2.6 GHz Intel® Core™ i5 7300U and the 2.4 GHz Intel® Core™ i3 7100U processors as well as the Intel® Celeron® 3695U processor with 2.2 GHz. The TDP of all variants is configurable from 7.5 to15 Watts, which makes it easier to adapt the application to the energy concept of the system. All modules support up to 32 GB dual channel memory which for DDR4 provides significantly more bandwidth and better energy efficiency than current conventional DDR3L implementations. The Intel® Gen 9 HD Graphics 620 offers high graphics performance with latest DirectX 12 capabilities and supports up to three independent displays with up to 4k @ 60 Hz via eDP 1.4, DisplayPort 1.2 and HDMI 2.0a. Thanks to hardware-accelerated 10-bit encoding/decoding and high dynamic range of HEVC and VP9, HD streams are becoming more vivid and lifelike in both directions. The new computer modules from congatec support the COM Express Type 6 pinout with PCI Express Gen 3.0, USB 3.0 and 2.0, SATA Gen 3, Gigabit Ethernet, and low-speed interfaces such as LPC, I²C and UART. Customized integration support, a comprehensive range of accessories and optional Embedded Design & Manufacturing services for application specific carrier board and system designs are also available.

congatec’s new COM Express Compact modules are available in the following CPU versions:

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| **Processor** |  | **Cores / Threads** |  | **Intel® Smart Cache [MB]** |  | **Clock / Burst****[GHz]** |  | **TDP** **[W]** |  | **Graphics** |
| **Intel® Core™ i7-7600U** |  | **2/4** |  | **4** |  | **2.8/3.9** |  | **15/7.5** |  | **Intel® HD Graphics 620** |
| **Intel® Core™ i5-7300U** |  | **2/4** |  | **3** |  | **2.6/3.5** |  | **15/7.5** |  | **Intel® HD Graphics 620** |
| **Intel® Core™ i5-7442EQ** |  | **2/4** |  | **3** |  | **2.4** |  | **15/7.5** |  | **Intel® HD Graphics 620** |
| **Intel® Celeron® 3695U** |  | **2/2** |  | **2** |  | **2.2** |  | **15/10** |  | **Intel® HD Graphics 610** |

For more information about the new conga-TC175 computer module visit:

http://www.congatec.com/en/products/com-express-type6/conga-TC175.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 in 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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