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| **Reader Enquiries:** | **Press Contact:** |
| **congatec AG** | **SAMS Network** |
| Christian Eder | Michael Hennen |
| Phone: +49-991-2700-0 | Phone: +49-2405-4526720 |
| info@congatec.com[www.congatec.com](http://www.congatec.com/) | info@sams-network.com [www.sams-network.com](http://www.sams-network.com)  |

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The new COM Express compact modules from congatec with sixth generation Intel® Core™ processors (codename Skylake) have been optimized for sealed, fanless systems with a maximum configurable TDP of 15 watts.*

*Text and photo also available online at:* <http://www.congatec.com/press>

Press Release

**congatec introduces next generation COM Express compact**

**modules with 6th generation Intel® Core™ processors**

New performance levels for 15 watt class of fanless embedded systems achieved

**Deggendorf, 2nd September 2015 \* \* \*** congatec AG, a leading technology company for embedded computer modules, single board computers (SBCs) and embedded design and manufacturing (EDM) services, has introduced four new COM Express compact modules parallel to the launch of the new 6th generation Intel® Core™ processors (codename Skylake). The new modules are specially designed for challenging applications that demand high performance in sealed, fanless system designs. They feature a 15 watt configurable TDP and are equipped exclusively with the energy-saving ULV-SoC editions based on new 14nm microarchitecture. Compared to 15 watt modules with fifth generation processors (codename Broadwell), users benefit from improvements in graphics and processing performance, enhanced energy efficiency and more high-speed I/Os.

Typical fanless applications for congatec COM Express compact modules can be found in medical and industrial imaging, central control room technology, shop floor terminals, HMIs, robotics, professional gaming, infotainment, professional AV, smart video surveillance, autonomous vehicle control, computer-aided situational awareness as well as high-end digital signage applications. Graphics card free, triple-head systems – for example in the areas of retail and kiosks, where embedded systems control up to three independent cash or vending machines – present a further application example.

“We have made the new conga-TC170 COM Express compact modules available parallel to the launch of the new Intel Core processors as our customers want to get this latest technology out in the market as fast as possible“, explains Gerhard Edi, CTO at congatec.

"congatec's new Computer-on-Modules built with 6th generation Intel Core processors provide blazing fast compute and graphics performance, additional high speed I/Os for greater system flexibility, and a wide range of power, feature, and performance options to meet any IoT application", said Samuel Cravatta, product line director, Internet of Things Group, Intel.

 Users of the new computer modules will benefit from the high level of standardization and scalability of the COM Express modules combined with congatec’s extensive documentation, industry-grade driver implementations and extensive customer support, which enable OEMs to integrate the latest processor technology quickly and efficiently into their individual applications. All modules are offered with long-term availability and software support of at least seven years. The software support includes, for example, enhanced security features as well as regular UEFI/BIOS updates and BSP patches. Customers thus benefit from reliable support over the entire lifetime of their applications.

**The technical innovations in detail**

The conga-TC170 modules, with COM Express Type 6 pinout, are equipped with the ULV-SoC editions of the sixth generation Intel Core i3/i5/i7 processors. For the first time, they offer a configurable TDP (Thermal Design Power) of 7.5 to 15 watts, which simplifies matching the application to the system’s thermal design. The power supply has also been optimized, which in addition to the new microarchitecture also contributes to the energy efficiency and allows a longer turbo-boost.

Another new feature is the support of up to 32GB of fast dual channel RAM, which in the DDR4 version provides significantly more bandwidth and is much more energy efficient than the DDR3 version.

The integrated Intel Gen 9 Graphics, which is premiering with this new microarchitecture, supplies up to three independently operated 4k displays with 60 Hz via DisplayPort 1.2. Version 2.0 of HDMI is also supported for the first time as well as version 12 of DirectX for even faster, Windows 10 based 3D graphics. Now not only the decoding but also the encoding of HEVC, VP8, VP9 and VDENC is hardware-supported. Energy-efficient streaming of HD videos in both directions is possible for the first time. Additional enhancements are the number of USB 3.0 ports (now 4) SATA Gen 3 (now 3) PCIe Gen 3 (now 6) as well as AMT (now version 11.0).

Further COM Express Type 6 pinout-compliant interfaces include PEG, Gigabit Ethernet, 8x USB 2.0, LPC plus I²C and UART. Thanks to the optional MIPI camera interfaces, CSI2 camera sensors can also be connected directly. Operating system support is offered for all popular Linux distributions and Microsoft Windows variants – including Microsoft Windows 10. Extensive, design-in-simplifying options – such as heatsinks, carrier boards and starter kits as well as SMART Battery Management Modules – round out congatec’s offering.

CPU versions listed below are now available:

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| Processor  |  | Cores/Threads  |  | Smart Cache |  | Clock |  | Turbo Boost |  | TDP/cTDP |  | Graphics  |  | AMT |
| Intel® Core™ i7-6600U  |  | 2/4 |  | 4 MB |  | 2.6 GHz |  | 3.4 GHz |  | 15/7.5 W |  | GT2 520300-1050 MHz |  | 11.0 |
| Intel® Core™ i5-6300U  |  | 2/4  |  | 3 MB |  | 2.4 GHz |  | 3.0 GHz |  | 15/7.5 W |  | GT2 520300-1000 MHz |  | 11.0 |
| Intel® Core™ i3-6100U  |  | 2/4  |  | 3 MB |  | 2.3 GHz |  | - |  | 15/7.5 W |  | GT2 520300-1000 MHz |  | - |

Datasheets with additional information about the new conga-TC170 computer modules are available at: <http://www.congatec.com/en/products/com-express-type6/conga-tc170.html>

**About congatec AG**Headquartered in Deggendorf, Germany, congatec AG 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, entertainment, transportation, telecommunication, test and 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 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).

Congatec AG is an associate member of the Intel® Internet of Things Solutions Alliance. From modular components to market-ready systems, Intel and the 350+ global member companies of the Alliance provide scalable, interoperable solutions that accelerate deployment of intelligent devices and end-to-end analytics. Close collaboration with Intel and each other enables Alliance members to innovate with the latest technologies, helping developers deliver first-in-market solutions.

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