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The congatec computer module with 12-35 watt AMD Embedded R-Series processor offers rich and vibrant SOC graphics and HSA 2.0 support

Text and photograph available at:<http://www.congatec.com/press>

**Press release**

**congatec integrates new AMD Embedded R-Series SOC  
 on COM Express**

**Rich and vibrant SOC graphics, full HSA 2.0 support,   
and even more performance starting at 12 watts**

**Deggendorf, Germany; October 21th, 2015 \* \* \*** congatec AG, a leading technology company for embedded computer modules, single board computers (SBCs) and embedded design and manufacturing (EDM) services, is introducing new COM Express basic modules parallel to AMD’s launch of its new generation of high-end embedded processors. The new conga-TR3 modules with dual- or quad-core AMD Embedded R-Series SOCs offer not only a much more broadly scalable TDP from 12 to 35 watts over earlier modules and a significantly improved performance per watt but two further prominent new features: the extremely high-performance AMD Radeon™ graphics as well as full support of the HSA specification 2.0.

“The AMD Embedded R-Series SOCs boast rich and vibrant graphics plus extremely wide scalability right down to 12 watts, so they can even be deployed in fanless, completely enclosed, and thus particularly robust designs. This significantly expands the range of applications for our high-end embedded modules based on this AMD platform,” explains Gerhard Edi, CTO of congatec AG.

“congatec’s new computer-on-modules greatly simplify the implementation of the AMD Embedded R-Series SOC processors supporting DDR4 memory,” said Scott Aylor, corporate vice president and general manager, AMD Embedded Solutions.” Thanks to the standardized form factor, developers are able to integrate these modules into existing applications immediately, thus directly benefitting from our new, high-end SOC graphics. The scalable TDP starting at a very low-power level of only 12 watts, and the comprehensive HSA support will also open up many new areas of application.”

The COM Express modules from congatec target applications which demand rich and vibrant SOC graphics and/or parallel computing power. These can be found in high-end gaming, such as digital pinball and arcade machines, in sophisticated digital signage installations with large-format 4k displays as well as in image and video analysis in industrial vision systems or in medical imaging. Security applications such as video surveillance with facial recognition or network firewalls with deep packet inspection and IoT systems with integrated big data analysis also benefit from the high GPGPU performance of the new congatec modules.

**The innovations in detail**

The new conga-TR3 COM Express Basic modules with Type 6 pinout are equipped with highly integrated AMD Embedded R-Series SOC processors and support up to 32 GB fast DDR4 RAM with optional ECC. The AMD Radeon™ GPU is based on AMD’s Graphics Core Next (GCN) Generation 3 architecture and provides up to three independent 4k displays with 60 Hz via eDP, DisplayPort 1.2, and HDMI 2.0. OpenGL 4.0 and DirectX 12 are also supported for especially fast, Windows 10-based 3D graphics. The integrated hardware accelerators allow energy-efficient streaming of HEVC videos in both directions.

Thanks to HSA 2.0 and OpenCL 2.0 support, workloads can be immediately allocated to the most effective processing unit. In security-critical applications, AMD Secure Processor provides hardware-accelerated encryption and decryption of RSA, SHA, and AES. Together with the optional Trusted Platform module, the conga-TR3 thus offers high security for IoT, big data, and telecommunications applications.

The new congatec computer modules support the COM Express Type 6 pinout with PEG 3.0 x8, Gigabit Ethernet, 4x USB 3.0/2.0, 4x USB 2.0, SPI, LPC as well as I²C, SDIO, and 2x UART. Operating system support is offered for Linux and Microsoft Windows 10, 8.1, and optionally Windows 7. Extensive accessories which simplify the design-in round out the offer.

The following CPU versions are available now:

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| **Processor** |  | **Cores** |  | **L2 cache** |  | **Clock speed (15 W TDP)** |  | **Max. clock speed (boost)** |  | **TDP range** |  | **Graphics card** |
| **AMD Embedded RX-421BD** |  | **4** |  | **2 MB** |  | **2.1 GHz** |  | **3.4 GHz** |  | **12/35 W** |  | **AMD Radeon™ HD R7** |
| **AMD Embedded RX-418GD** |  | **4** |  | **2 MB** |  | **1.8 GHz** |  | **3.2 GHz** |  | **12/35 W** |  | **AMD Radeon™ HD R6** |
| **AMD Embedded RX-216GD** |  | **4** |  | **1 MB** |  | **1.63 GHz** |  | **3.0 GHz** |  | **12/15 W** |  | **AMD Radeon™ HD R5** |

The data sheet and more information on the new conga-TR3 computer module are available at: <http://www.congatec.com/products/com-express-type6/conga-tr3.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 & 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).

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