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

Press release

congatec and RTS introduce virtualized embedded computing platform
for easy PLC and UI hardware consolidation

**congatec and Real-Time Systems make a robot play piano**

**Deggendorf, Germany / Tokyo, Japan 09 May, 2018 \* \* \*** congatec – a leading vendor of standardized and customized embedded computer boards and modules – introduces a virtualized embedded computing platform for easy PLC and UI hardware consolidation. The demo platform with a hexapod robot playing a piano is based on a standard embedded hardware platform from congatec; industry leading hypervisor technology from Real-Time Systems (RTS); IEC 61131-3 compliant CODESYS SoftPLC running on real-time VxWorks OS; and a virtualized GUI based on Microsoft Windows 10. Using standard building blocks, the platform’s logic includes everything needed for the control of motion systems in a modular and cross-platform capable format. The platform’s demo controller connects to the three servo motors of the hexapod and is programmed to press piano keys. The Graphical User Interface (GUI) is operated by Microsoft Windows and, resembling a jukebox, is used to select the music to be played by the robot. To demonstrate the independence of the real-time operating system from Microsoft Windows running in parallel, the GUI can be rebooted while the robot keeps playing piano. This impressive demonstration debuts at the IoT/M2M Expo Japan.

“The combination of congatec hardware and RTS hypervisor technology creates an embedded computing platform for smart motion controllers that OEM customers can leverage to achieve very fast time to market as both the hardware building blocks and the SoftPLC are standards based, industry proven, modular, cross-platform capable components ready for installation; plus the hypervisor supports all common RTOS and general purpose operating system (GPOS) combinations OEMs might need,” explains Martin Danzer, director of product management at congatec.

OEMs benefit from a solid and powerful foundation for their real-time control logic: The platform’s fundamental building blocks have been validated to work together smoothly. congatec’s acquisition of the hypervisor vendor RTS contributes to this optimized interaction between hardware and hypervisor.

The underlying hardware platform is built on congatec Computer-on-Modules and RTS real-time hypervisor, simplifying efforts to allocate and adapt the real-time processing power to any smart motion control or robotics demand. In a quad-core configuration with Intel® Xeon® E3-1505M V6 (4 x 3.0/4.0 GHz, 8MB Cache), the platform can support up to 8 threads to control up to 8 real-time axis drives in parallel or include smart vision and deep learning support. The design is based on the conga-TS175 COM Express Type 6 Computer-on-Modules. Equipped with the high-end dual-chip versions of the brand new Intel® Xeon® and Gen 7 Intel® Core™ processors (codename Kaby Lake), they set a new benchmark for module-based high-end embedded computers and modular industrial controls that need to process massive workloads. The modules are mounted on a conga-IT6 carrier board. Users of this new, Mini-ITX based carrier board for Computer-on-Modules can scale their applications across all relevant processor generations and manufacturers as required.

The Real-Time Hypervisor enabled hardware can be adapted to any required communication logic on a project basis. This includes multiple hardware interfaces i.e. Ethercat, MelsecNet and FINS or CC-Link, CANopen, DeviceNet and RS-232 as well as any other open Industrial Ethernet and fieldbus standards. A 60-day licensed version of the Real-Time Hypervisor is available on request.

**About congatec**congatec 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 customizing 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. Headquartered in Deggendorf, Germany, congatec currently has entities in USA, Taiwan, China, Japan and Australia as well as United Kingdom, France, and the Czech Republic. More information is available on our website at <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).

**About Real-Time Systems**Real-Time Systems is a global manufacturer of hypervisor technology specialized in real-time virtualization. The company is headquartered in Ravensburg, Germany and was founded in 2006. The company’s real-time hypervisor technology is a central part of many applications in various industries worldwide including machine & factory automation, robotics & autonomous systems, medical, test & measurement as well as broadcasting & streaming. Customers of Real-Time Systems use the hypervisor technology to consolidate deterministic real-time operating systems (RTOS) with other, less critical applications on a single hardware platform to reduce hardware costs, energy consumption, cabling and space. The RTS hypervisor allows operating systems to run in real-time, thereby avoiding any overhead from virtualization

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