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Press release

congatec launches 100 Watt ecosystem for embedded edge and micro servers

**Maximum Performance for COM Express Type 7 Servers**

**Deggendorf, Germany, 17 September 2019** \* \* \* congatec – a leading vendor of standardized and customized embedded computer boards and modules – launches its new 100 Watt ecosystem for embedded edge and micro servers at CIIF 2019 Shanghai (Hall 6.1H, Booth A112) today. The ecosystem is designed for embedded edge and micro servers that increasingly utilize 65-100 Watt COM Express Type 7 Server-on-Module performance for most cost-efficient scalability. It initially targets the recently launched conga-B7E3 modules featuring 3 GHz dual-die processors of the AMD EPYC Embedded 3000 series that supports a maximum TDP of 100 Watt, up to 16 cores and 32 threads. These world’s first 100 Watt Server-on-Modules in the COM Express Basic form factor (95 x 125 mm) can now get equipped with new heat spreaders and heatpipe adapters for an efficient heatpipe cooling even of extremely low profile 1U servers. By designing systems in such a way that does not use rotating fans, it is possible to develop extremely robust embedded servers that are suitable for numerous applications at the IoT/Industry 4.0 edge.

Use cases for the 100 Watt ecosystem for embedded edge and micro servers include 5G telecom cloudlets, Industry 4.0 servers, smart robot cell servers with collaborative robotics, autonomous robotic and logistics vehicles with high speed vision and other situational awareness sensors. The ecosystem is further suitable for virtualized on-premise equipment in harsh environments to perform functions such as industrial routing, tactile internet, firewall security and intrusion detection systems, as well as VPN technologies – optionally in combination with various real-time controls and neural network computing for Artificial Intelligence (AI).

“Embedded edge servers must meet ever increasing multifunctional performance requirements while operating in harsh environmental conditions where shocks and vibration are common. Rugged fanless system designs are thus required. Until today, this ecosystem was limited to a performance class of up to approximately 65 Watt. Now, congatec has extended the capabilities of fanless designs to conduction cooled 100 Watt systems. This enables an impressive performance boost of 53% for rugged fanless COM Express Type 7 designs,” explains Nano Chu, R&D Manager at congatec in Taipei.

In addition to the new cooling solutions, the 100 Watt ecosystem also includes starter kits with the two different application-ready server-grade carrier boards conga-X7EVAL and conga-STX7 that, among other things, execute four 10 GbE interfaces, which are server-compatible with SFP+ cages for both copper and fiber optic cables. Exemplifying edge server rack and box system designs, the kits can be modified to customer specifications. Relevant hardware engineering services for embedded edge server platforms round off the congatec 100 Watt ecosystem for Server-on-Modules.

Notable software features of the 100 Watt ecosystem include support for real-time configurations to avoid latencies caused by processor-side TDP management and, above all, support for the comprehensive RAS (reliability, availability and serviceability) features common to all AMD EPYC Embedded 3000 processors. They enable the same efficient remote system monitoring, management and maintenance capabilities to optimize the total cost of ownership (TCO) in distributed deployments as known from commercial-grade data centers. Edge applications benefit from the hardware-integrated virtualization and leading-edge security features of the AMD EPYC Embedded 3000 SoC that includes Secure Boot System, Secure Memory Encryption (SME) and Secure Encrypted Virtualization (SEV), as well as a secure migration channel between two SEV-capable platforms. Support is also provided for IPsec with integrated crypto acceleration. As a consequence, even the server administrator does not have access to such an encrypted Virtual Machine (VM). This is very important for the high security required by many edge server services, which must enable multi-vendor applications in Industry 4.0 automation while helping ward off sabotage attempts by hackers.

More information about congatec’s 100 Watt ecosystem for COM Express Type 7 Server-on-Modules can be found at <https://www.congatec.com/en/technologies/com-express/com-express-type-7/amd-epyc-embedded-3000-eco-system.html>

**About congatec**

congatec is a rapidly growing technology company focusing on embedded computing products. The high-performance computer modules are used in a wide range of applications and devices in industrial automation, medical technology, transportation, telecommunications and many other verticals. congatec is the global market leader in the computer-on-modules segment with an excellent customer base from start-ups to international blue chip companies. Founded in 2004 and headquartered in Deggendorf, Germany, the company reached sales of 133 million US dollars in 2018. More information is available on our website at [www.congatec.com](http://www.congatec.com) or via [LinkedIn](https://www.linkedin.com/company/455449), [Twitter](https://mobile.twitter.com/congatecAG) and [YouTube](http://www.youtube.com/congatecAE).

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