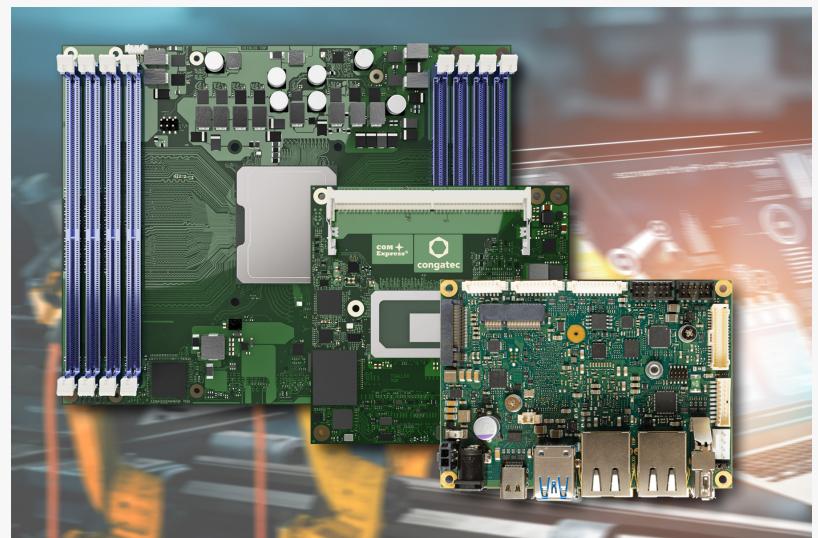


congatec presents Computer-on-Modules for collaborative 5G robots and material handling systems

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SAN DIEGO, CALIFORNIA, USA, April 6, 2022 /EINPresswire.com/ -- congatec – a leading vendor of embedded and edge computing technology – presents new Computer-on-Modules for 5G connected smart factories and industrial automation designed to simplify and accelerate the development of collaborative robotics and material handling systems. The smart mobility platforms from congatec are suitable for deployment in outdoor temperatures from -45°C to +85°C. Typical targets for these platforms range from next generation of real-time connected, functionally safe self-driving vehicles, to smart manufacturing and material handling applications ranging from collaborative and cooperative robots to substitutive solutions such as robots for THT assembly of PCB boards.



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OEM vendors of next generation smart logistics vehicles and manufacturing robots must tackle a variety of tasks when designing those new controllers. They have to integrate vision and various other sensors for gathering situational raw data, need to implement data preprocessing and artificial intelligence (AI) to improve data analytics, and design controller logic for autonomous vehicle movement and operation. In addition, they need 5G device connectivity for vehicle-to-vehicle and vehicle-to-x communication, or respectively, robot-to-robot and robot-to-x-communication. And all this needs to be implemented with real-time capabilities and functional safety.

"congatec positions itself as the embedded computing platform and ecosystem provider that supports smart logistics vehicle and manufacturing robot vendors comprehensively in all these

tasks, from TSN capable rugged Computer-on-Modules for the extended temperature ranges and real-time hypervisor technologies to application ready OEM platform building blocks provided by our constantly expanding network of solution partners," says Farhad Sharifi, general manager at congatec Americas.

Highlights of the congatec portfolio are the Intel Xeon D processor based [COM-HPC Server](#) modules for industrial edge servers and 5G campus network equipment; the 12th Gen Intel Core processor based COM-HPC Client and [COM Express](#) modules for smart vehicle/robot gateways and vehicle/robot network controllers; COM-HPC Server modules with Intel Xeon D processors

The new COM-HPC Server modules in Size E and Size D with Intel Xeon D processors are designed to accelerate the next generation of real-time microserver workloads in industrial factories and outdoor environments with extended temperature ranges. Improvements include up to 20 cores, up to 1 TB RAM, double throughput per PCIe lane compared to Gen 3, as well as up to 100 GbE connectivity and TCC/TSN support. Target use cases in smart factory applications range from servers deployed in 5G tactile internet applications to edge servers for larger machines and manufacturing equipment. More information about the new Intel Xeon D processor based Computer-on-Modules can be found at:

<https://www.congatec.com/en/technologies/intel-xeon-d-modules/>

Computer-on-Modules with 12th Gen Intel Core processors

Featuring 12th Generation Intel Core processors, the new congatec modules in COM-HPC Size A and Size C as well as COM Express Type 6 form factors offer major performance gains and improvements for the next generation of smart mobility systems and collaborative manufacturing robots. Most impressive is the fact that engineers can now leverage Intel's innovative performance hybrid architecture. With up to 14 cores on BGA variants, 12th Gen Intel Core processors provide a quantum leap in multitasking and scalability to accelerate multithreaded vehicle and robotic applications and to execute dedicated real-time tasks more efficiently. In addition, with up to 96 Execution Units, the integrated Intel Iris Xe graphics is estimated to deliver extraordinary improvements of up to 129% in GPGPU processing to accelerate parallelized workloads such as AI algorithms, as compared to 11th Gen Intel Core processors. More information about the new 12th Gen Intel Core processor based Computer-on-Modules can be found at: <https://www.congatec.com/en/technologies/intel-alder-lake-modules/>

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