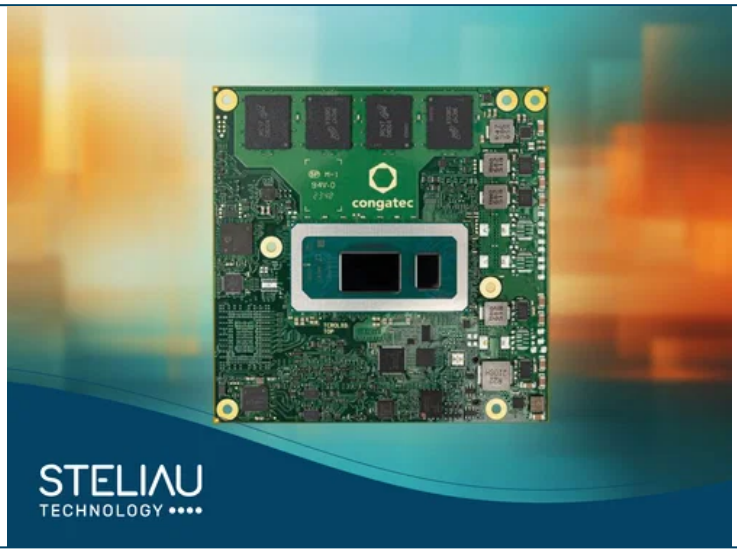
CONGATEC EXPANDS RAILWAY TESTING FOR COM EXPRESS MODULE FAMILY



conga-TC675r completes IEC 60068 testing, offering a compact, application-ready embedded module for extreme environments

With this testing, congatec proves that the compact COM Express module fulfills the stringent requirements of IEC 60068, which covers extreme cold and heat stress, humidity, shock, and vibration. The conga-TC675r also addresses the railway industry's IEC 61373 category 2 standard, which covers another layer of shock and vibration requirements. Collectively, the conga-TC675r's compliance with these standards ensures its operation in some of the most demanding environmental conditions on Earth.

conga-TC675r modules are based on the 13th generation Intel® Core™ processors (Raptor Lake) and offer maximum reliability thanks to their extended temperature range of -40 to +85 °C, soldered RAM with in-band ECC (IBECC), and operational readiness at 10 to 85 percent humidity. This makes them ideal for use in manned and unmanned rail and off-road vehicles for mining, agriculture, forestry, and other mobility applications. Critical infrastructure, security, railway, and transportation use cases also benefit from the module's robust design.

Key features:

- Intel® hybrid design combines Performance-and Efficient cores for optimized performance across different workloads.

- -40 to +85 ° C extended temperature range and soldered RAM with In-Band Error-Correcting Code (IBECC) offer highest reliability by design.
- PCI Express Gen 4 and USB 4 support latest high-bandwidth connectivity options
- Soldered-on 6400 MT/s LPDDR5x memory enables exceptional performance and power efficiency.
- congatec aReady.VT Hypervisor supports consolidation of multiple workloads — such as real-time control, HMI, AI and IoT gateway functions — on a single module.
- Available pre-configured with Bosch Rexroth ctrlX OS license and Ubuntu Pro, speeding time to deployment.
- Unique passive cooling based on heat pipes offers best-in-class heat dissipation for fanless design. For extremely cold environments, congatec's new acetone thermal management is recommended.

For full product
info and datasheet
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Congatec

Congatec is a rapidly growing technology company focussing on high-performance embedded computing products, so-called computer-on-modules and industrial single board computer.