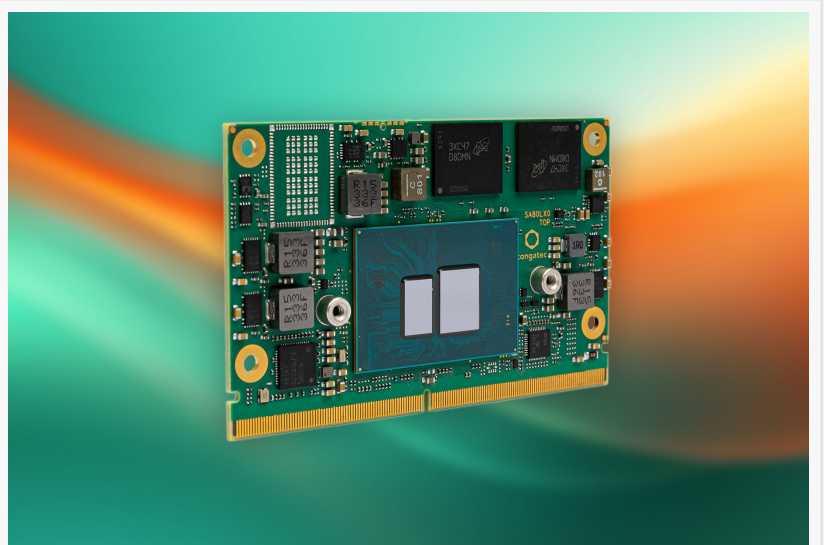


# More AI and graphics performance for low-power SMARC modules

*Update for congatec SMARC modules:  
new Intel Core 3 processors for improved  
performance*

SAN DIEGO, CA, UNITED STATES,  
January 9, 2025 /EINPresswire.com/ --  
[congatec](#) – a leading provider of  
embedded and edge computing  
technology – is updating its [conga-SA8  
SMARC](#) modules: The low-power  
Computer-on-Modules (COMs) are now  
available with the latest Intel Core 3  
processor generation. This new CPU  
technology delivers a significant  
performance boost, making the  
energy-efficient, credit-card-sized  
SMARC modules ideal for performance-hungry edge applications and low-power system  
consolidation.



New Intel Core 3 processors for improved  
performance

With the new conga-SA8, all edge computing applications operating within the extended temperature range of 0°C to +60°C can now achieve higher performance and improved energy efficiency. These modules support clock frequencies of up to 3.9 GHz and feature a configurable TDP of 9 W or 15 W. As with the previous versions, the AI instruction sets, Intel AVX2 (Advanced Vector Extensions 2) and Intel VNNI (Vector Neural Network Instructions) ensure fast processing of deep learning inferences. The integrated Intel Graphics further supports INT8 inference with up to 32 execution units (EUs), significantly improving object recognition and graphics processing compared to previous generations.

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With up to 8 cores, a low power SMARC module can host a variety of different applications that previously required multiple dedicated systems.”

*Florian Drittenthaler, Product  
Line Manager at congatec*

Users benefit from accelerated AI-supported workloads which, in combination with system consolidation, contribute to significant increases in the efficiency and productivity of their applications.

“The virtualization-ready modules with firmware-integrated hypervisor facilitate the consolidation of multiple application-specific workloads, each with their own operating systems, which are operated in isolation from each other on the conga-SA8. With up to 8 cores, a low power SMARC module can host a variety of different applications that previously required multiple dedicated systems. This allows users to significantly reduce the number of devices and make their solutions much more reliable, cost-effective and sustainable,” explains Florian Drittenthaler, Product Line Manager at congatec.

Typical areas of application include low-power applications such as point-of-sales, industrial PCs, AI-accelerated edge systems, automated guided vehicles (AGVs) and semi-autonomous vehicles in logistics. The many connection options and high energy efficiency also predestine the conga-SA8 modules for use in handheld medical devices and in medical diagnostics such as blood analyzers.

The feature set in detail

The conga-SA8 SMARC modules are available in five different processor variants with up to 16 GByte LPDDR5-4800 memory with in-band ECC for high data security. 2 x 2.5 GbE with TSN support and the optional wireless module for Wi-Fi 6E and Bluetooth 5.3 enable comprehensive horizontal and vertical networking. 4x PCIe Gen3 lanes, i2x USB 3.2 Gen2, 6x USB 2.0, SATA Gen3.2, I2C, UART, DP and 12x GPIO ensure extensive connectivity. In terms of operating systems, congatec supports Windows 11 IoT Enterprise, Windows 10 IoT Enterprise 2021 LTSC and LTS Linux.

congatec also offers the conga-SA8 SMARC module as an application-ready [aReady.COM](https://aready.com/). It can be pre-configured, for instance, with pre-installed and licensed ctrlX OS from Bosch Rexroth, Ubuntu Pro and Real-Time Hypervisor for integrated tasks such as HMI, AI, IIoT data exchange, firewall functionality, and maintenance/management features. In addition, a congatec's comprehensive ecosystem with evaluation and production-ready application carrier boards, customized cooling solutions, as well as documentation, comprehensive design-in services and high-speed signal integrity measurements simplify application development.

For further information about the conga-SA8 SMARC Computer-on-Modules, the congatec ecosystem, and the company's implementation services, visit:

<https://www.congatec.com/en/products/smarc/conga-sa8/>

Further information about the SMARC standard is available at:

<https://www.congatec.com/en/technologies/smarc/>

Further information about aReady.COM is available at: <https://aready.com/>

Visit congatec in Hall 3 at Stand 241.

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Please make a note of the press conference on all the latest news about congatec on March 11th from 2 - 2:30pm in the NCC east. An invitation will follow shortly. Please contact us directly if you are interested in joining the press conference and/or a one-to-one meeting at the stand.

## About congatec

congatec is a leading global provider of high-performance hardware and software building blocks for embedded and edge computing solutions based on Computer-on-Modules (COMs). These advanced computer modules drive systems and devices across industries such as industrial automation, medical technology, robotics, telecommunications, and more. congatec's high-performance aReady. ecosystems simplify and accelerate the solution development, from COM to cloud. This application-ready approach combines COMs with services and customizable technologies that enable cutting-edge advancements in system consolidation, IoT, security, and artificial intelligence. Supported by its majority shareholder, DBAG Fund VIII – a German mid-market fund focused on driving growth for industrial enterprises – congatec has the financial backing and M&A expertise to capitalize on expanding market opportunities. For more information, visit [www.congatec.com](http://www.congatec.com) or follow us on LinkedIn and YouTube.

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