

Press Release

embedded world 2023: Deeply Embedded via CAD Function Block

Fully integrable embedded Linux system based on Arm is available as Altium snippet. Together with various I/O and software libraries, significant cost advantages are also possible for small and medium quantities.

Hanover, January 2023. Countless industrial electronic assemblies are based on System-on-Module (SoM) concepts. The power supply is usually implemented together with the respective required I/O functions on a base board and the respective SoM is mounted in a special socket during commissioning. The SoM usually serves as the runtime environment for the entire firmware of the module. Apart from the SoM procurement costs, the dependence on the respective manufacturer is not uncritical, as the current situation of the supply chains has just made clear.

With the eDNP/8331, SSV now offers a 32-bit Arm-based SoM including Debian Linux operating system and firmware functions for headless embedded gateways under a licensing model as intellectual property. The SoM circuit is provided as a schematic and PCB snippet for the widely used PCB development environment "Altium Designer". The eDNP/8331 snippet can be extended with the required add-on and I/O functions as part of own Altium projects, and fully integrated onto a single cost-optimized base board. This significantly reduces any additional costs and EMC problems caused by connectors. The package also includes a backend function library with a Docker-based update server, digital twin and PKI security functions.

Jürgen Fitschen, the R&D manager at SSV responsible for the product concept, sees an application focus for systems with the eDNP/8331, for example, in the area of intelligent devices in building technology. In his view, decentralized energy generation, monitoring of energy flows or management of energy storage systems require not only secure communication concepts with wireless IoT sensors and actuators, but also device-internal runtime environments with intelligent algorithms that automatically optimize energy demand and use.

You will find us at the embedded world 2023 in hall 3, booth 3-528.

The SSV Software Systems GmbH:

SSV Software Systems GmbH was founded in Hanover in 1981 as a development service provider for microprocessor applications for logistics and automation. Since the early 1990s, the company has been developing and producing its own hardware assemblies and systems for industrial use. The application focus is on industrial M2M (Machine-to-machine) and IoT (Internet of Things) communication. Recent developments include complete solution modules for real-time data analysis via machine learning, full wireless sensor and network applications for predictive maintenance and condition-based monitoring. Moreover, we develop soft sensor engineering processes and remote maintenance gateways with various functions and communication interfaces.

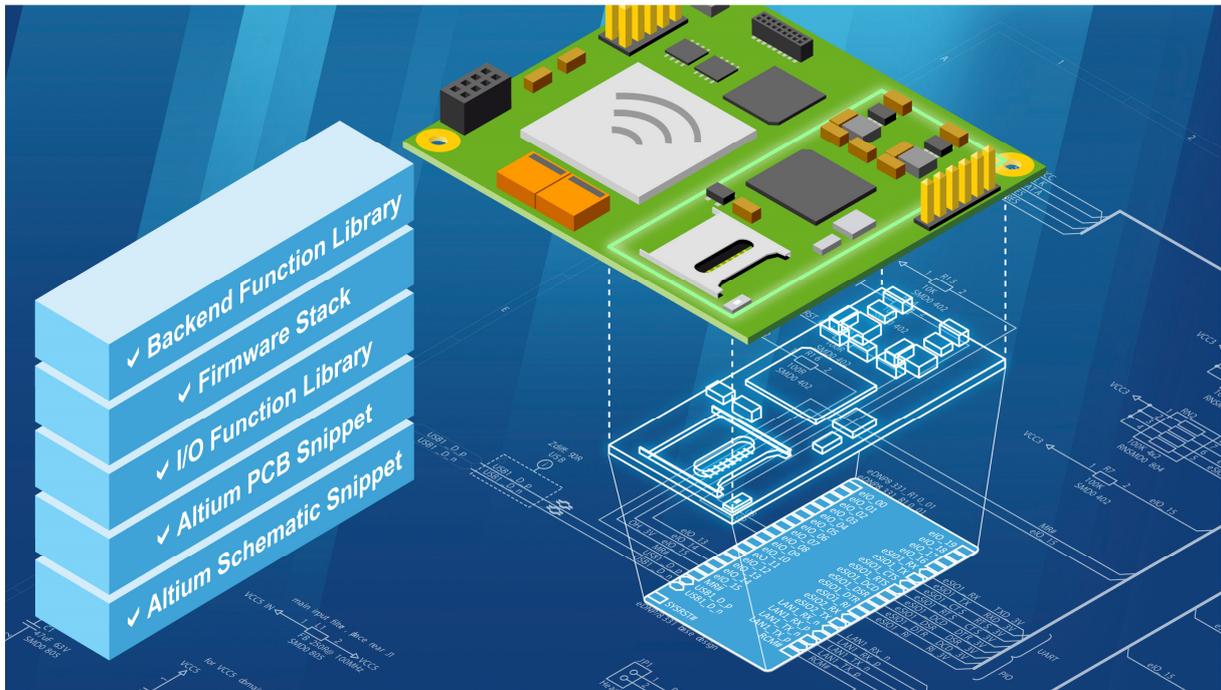
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You can find the corresponding images for this press release on our website www.ssv-embedded.de.

Image:**Image caption:**

Countless industrial electronic assemblies are based on System-on-Module (SoM) concepts. In such solutions, the individual I/O functions are implemented together with the power supply on a base board and the respective SoM is mounted in a special socket. With the eDNP/8331, SSV now offers a virtual SoM alternative. It is supplied as a fully integrable Arm-based embedded Linux system in Altium snippet format and can be integrated by the board developer into his own circuit projects. This reduces the total cost of an assembly and supplier dependencies.