

## Press Release

### Embedded World 2024: Wireless IoT-Retrofit via vSoM

**Wireless connections can be found in practically all IoT applications. During product development, however, the influence that these elementary functional components have on the successful marketing of an IoT application is sometimes overlooked. The first version is therefore rarely optimal. With the eDNP/8331 concept, SSV offers the important building blocks for an optimisation retrofit.**

**Hanover, February 2024.** The first product version of an IoT solution in the field of sensor data and cloud connections is often derived directly from the proof of concept prototypes. A maker board with a suitable housing then frequently forms the link between the local wireless interfaces of the sensors and actuators and a cloud platform on the internet. In terms of time-to-market, this approach is entirely justifiable. However, the ramp-up to a successful market launch often requires cost optimisation in the bill of materials (BoM), functional enhancements for simple deployment and professional cybersecurity. This is why it sometimes makes sense to redesign important technology components at an early stage.

With the eDNP/8331, SSV offers a concept for virtual System-on-Module (vSoM) solutions including various wireless IoT components. This allows circuits of a 32-bit embedded Linux computer to be integrated together with various wireless interfaces into own application circuits in a cost-optimised manner. The results are, for example, sophisticated IoT gateway functions for Wireless-2-LAN (W2L) or Wireless-2-Wireless (W2W) applications with integrated cloud connections based on IEEE 802.15.4, 6LoWPAN, 4G or LEO satellite communication.

The complete hardware and software data of the eDNP/8331 is available as a CAD function block and open source software stack. The CAD data is integrated into the in-house circuit development as part of an Altium PCB design. Once finished assemblies are available, the software stack can be transferred as a binary image to a microSD card or an eMMC memory module and then booted.

As an accessory, SSV offers a template for W2L or W2W vulnerability assessments for analysing the final assembly. This uses a vulnerability scanner to generate a list of critical software components plus the corresponding version numbers. This can then be used to query information on known vulnerabilities in vulnerability databases in order to obtain so-called CVE ID numbers (CVE = Common Vulnerability and Exposure). These CVE IDs can be used to create a risk assessment and prioritisation for own modules in order to initiate appropriate protective measures, such as an AI-based embedded intrusion detection system (IDS).

R&D manager Jürgen Fitschen from SSV explains: "The cybersecurity of the eDNP/8331 is an important milestone to us. In addition to OTA software updates and automatic cyber attack pattern recognition in IoT data streams, we can now also generate a software bill of materials (SBoM) for eDNP/8331 applications. This fulfils one of the main requirements of the EU Cyber Resilience Act."

**You will find us at embedded world in hall 3 // booth 633a (M2M Area).**

**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.

**For further questions, please contact:**

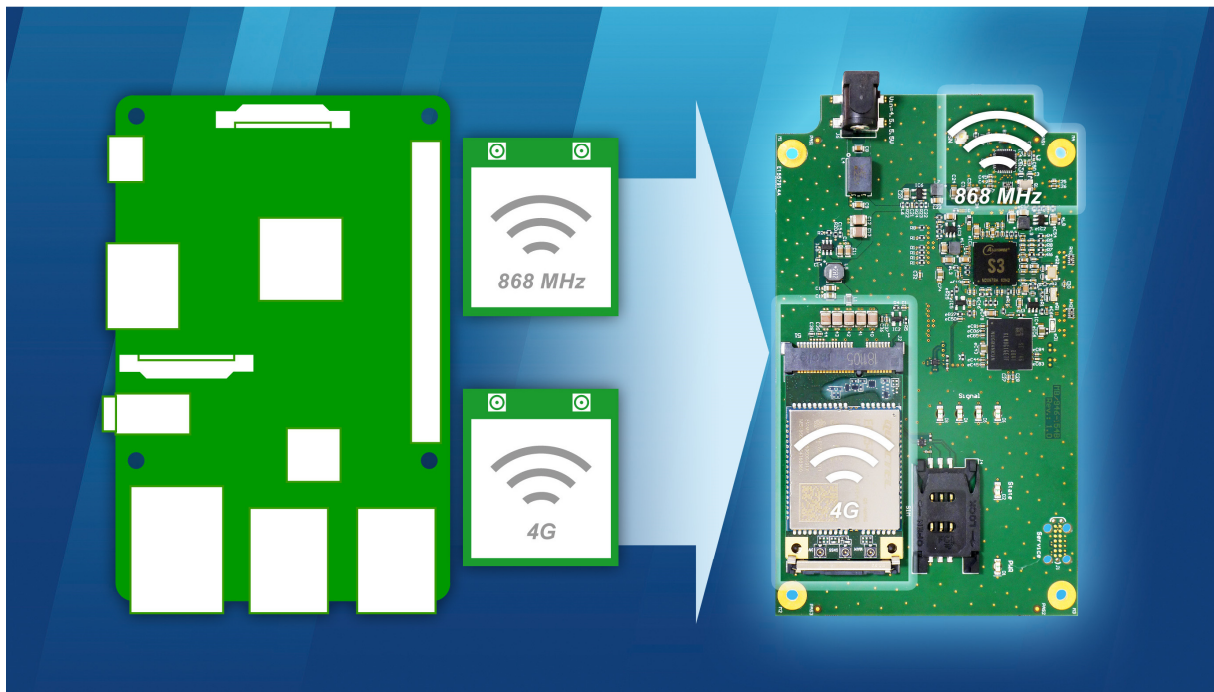
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You can find the corresponding images for this press release on our website [www.ssv-embedded.de](http://www.ssv-embedded.de).

**Image:****Image caption:**

The first product version of an IoT solution in the field of sensor data and cloud connections is often derived directly from the proof of concept prototypes. A maker board with a suitable housing then frequently forms the link between the sensor/actuator wireless interfaces and a cloud platform on the internet. Wireless functionality and security have a significant impact on the successful commercialisation of an IoT solution. With the technology components of the eDNP/8331 concept, SSV supports sophisticated solutions for competitive IoT products.