ABOUT TTTECH INDUSTRIAL

TTTECH Industrial combines transformative technologies with more than 20 years of hands-on experience in critical real-time systems, software, hardware, and safety engineering and supports machine builders and OEMs in making machines that are software-enabled, networkable, and updatable.

TTTECH Industrial serves the industrial and energy markets with its IIoT platform Nerve and customized safe and secure software and hardware engineering solutions. Nerve is a cloud-managed edge computing platform that enables real-time data access, secure software deployment, and centralized management of industrial machines. With its IEC 62443-4-2 certification, Nerve meets modern cybersecurity requirements and supports compliance with NIS2 and the Cyber Resilience Act (CRA).

TTTECH Industrial is part of TTTECH Group, a global group of high-tech companies with more than 1,100 employees and headquarters in Vienna, Austria.

CONTACT

TTTech Computertechnik AG
Schönbrunner Strasse 7
1040 Wien, Österreich

P +43 1 585 34 34-0
E sales@tttech-industrial.com

nerve

TTTECH

TTTECH INDUSTRIAL & BENOLI TECH

Cohesive IIoT architectures that combine reliable real-time data acquisition and secure edge computing

INDUSTRIAL by TTTECH

Experience more → tttech.com/industrial | nerve.cloud

Benoli Tech is a Romanian engineering and technology company that develops embedded software, hardware, AI, and automation solutions for industrial customers. They work mainly in industries such as automotive, railway, robotics, semiconductors, and industrial automation, helping companies develop products and solve complex technical challenges.

CHALLENGE

Industrial operations increasingly rely on accurate data, fast decision-making, and secure system behavior. As machines and distributed assets become more connected, engineering teams face the challenge of capturing high-quality sensor data, processing it close to the source, and ensuring software and security requirements remain manageable over the system's lifetime.

SOLUTION

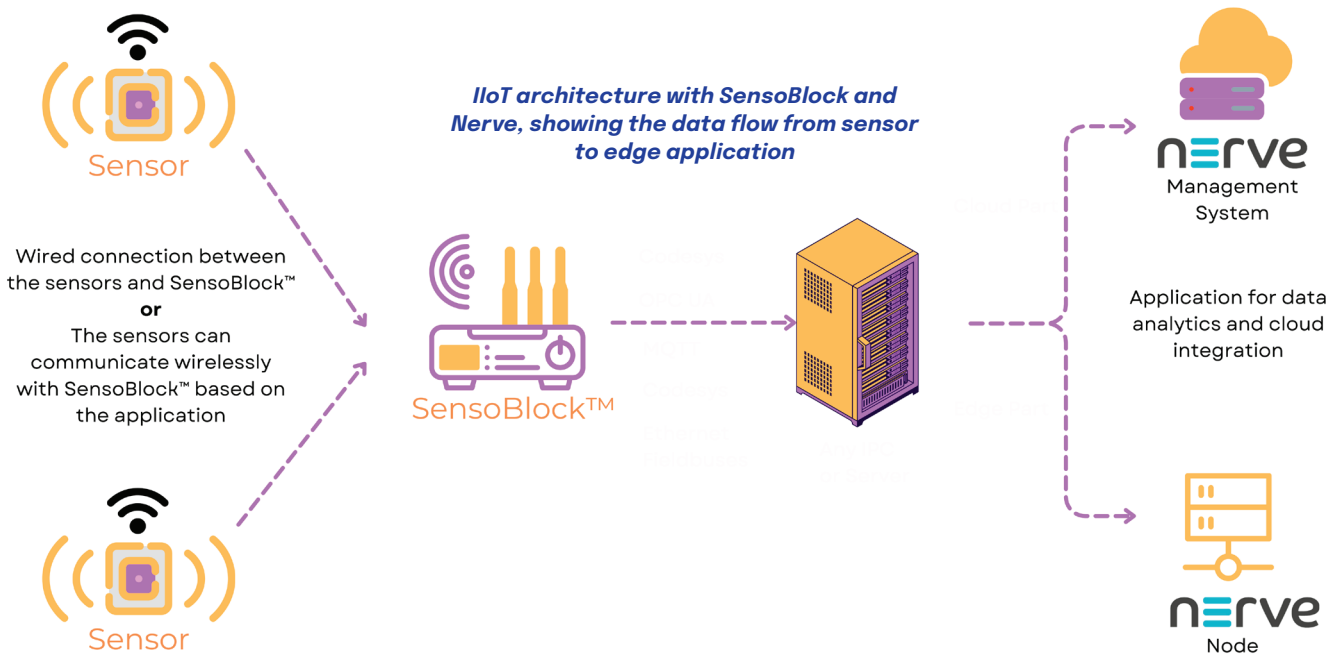
SensoBlock and Nerve together form a resilient and secure IIoT architecture capable of supporting demanding industrial applications with robust sensor acquisition, deterministic edge processing, and an IEC 62443-certified cybersecurity foundation and secure lifecycle capabilities. Engineering teams gain a strong technical foundation for advancing automation, predictive maintenance, and future digital services.

SensoBlock serves as a flexible and modular interface for a broad range of industrial sensors. It can be installed close to machines, integrated into industrial electrical cabinets, or deployed in distributed monitoring installations, providing engineers with a consistent and robust data source to enable fast decision making for a range of applications. It offers real-time data acquisition, secure communication channels, easy installation and configuration, and easy connection to a broad range of industrial sensors. SensoBlock is a modular solution, compliant with the Cyber Resilience Act (CRA) and other European directives. It can adapt to and evolve with machine requirements, making it ideal for retrofitting existing machinery without system redesign or structural changes.

Nerve is an IIoT platform for machine builders that offers secure industrial grade edge computing capabilities and operational control. It is cybersecurity certified according to IEC 62443-4-2, supporting CRA readiness and helping address NIS2-related cybersecurity requirements. Nerve enables the processing, evaluation, and implementation of actions at machine level, based on the sensor data received from SensoBlock. Users can run analytics, rules, and AI workloads at the edge but also use the Management System for visualization and machine overview. Nerve supports both containerized and virtualized workloads, enabling engineers to run everything from analytics pipelines to OEM specific automation logic on the same hardware - without compromising isolation or stability.

The combined system is flexible and scalable, from local machine diagnostics to distributed asset networks covering a variety of use cases, for example predictive maintenance, monitoring applications such as environmental or facility monitoring, asset and people tracking, or remote agriculture.

© TTTech Computertechnik AG. All rights reserved. All trademarks are the property of their respective holders.



KEY BENEFITS

The integrated solution of SensoBlock and Nerve creates a dependable platform for modern automation and digitalization initiatives. It provides tangible advantages for engineering teams, OEMs, and operators by aligning data, security, and local compute capabilities for:

- → Deterministic, low latency processing at the machine
- → High quality data through structured acquisition and preprocessing
- → CRA and NIS2 aligned secure lifecycle management
- → Reduced dependency on cloud bandwidth and connectivity
- → Scalable rollouts across machine fleets and facilities
- → A unified architecture that supports long term maintainability

WANT TO KNOW MORE?

Check out other Nerve case studies here: