

EMERSON[™]

netX 90 – IoT Solution Firmware

IIoT communication for pneumatic components

Emerson, the world's leading provider of automation technology and software, has enabled integrated OPC UA in their AVENTICS[™] valve systems, simplifying IIoT integration and analysis capabilities with netX.

OPC UA in industrial environments

Emerson is a global technology and software company that provides innovative solutions to the world's major industries. Through its leading automation portfolio, including its majority stake in AspenTech, Emerson helps hybrid, process and discrete manufacturers optimize their operations, protect their employees' privacy, reduce emissions, and achieve their sustainability goals. With its AVENTICS™ product brand, Emerson is one of the world's leading manufacturers of pneumatic components and systems. The Emerson team from Laatzen stands for innovative pneumatic drive solutions in machine and factory automation. AVENTICS™ products include pneumatic cylinders, air supply management equipment and valve systems.

For Emerson and its customers, digital transformation is playing an increasingly important role. Modern industrial communication solutions and standardized IIoT protocols such as OPC UA hold enormous potential. They interconnect countless components, aggregate previously unused data and enable the optimization of key processes. Emerson has identified three areas of potential:

- **Optimized Overall Equipment Effectiveness (OEE)**
- **More efficient and sustainable industrial processes**
- **Improved interoperability, integration, and security**

“With the Hilscher netX-90 communication controller, engineers don't need to change a whole system or architecture to access valve data. This gives users maximum flexibility.”

Nils Beckmann
Director Product Marketing Intelligent Automation
Emerson



Valve system with preliminary data analysis

Emerson's AV series enables data to be analyzed in the valve system for direct processing for upstream systems. **Without impacting the controller, the solution already provides time measurements, event counts and sensor data.** Compared to previous data analysis solutions, there's no need for any additional hardware such as serial interfaces or gateways. Only if more in-depth analysis or local dashboards are needed do these become necessary. When employed, the gateway will mostly run computing processes such as data crunching to prepare the data for applications.

By enabling OPC UA for the first time for both PROFINET and EtherNet/IP bus protocols, Emerson has

set the stage for more efficient analytics and easy adoption of IIoT. **Users thus maintain system flexibility while saving on integration costs and benefiting from faster time-to-market.** In the future, end users will benefit even more from AVENTICS™ AV systems, as Simon Fischer, Product Manager at Hilscher, explains: “We stay in touch with Emerson on a regular basis and have several innovations we're working on together. Some of these are compatibility with other bus protocols, wider data throughput and deeper analysis capabilities, for example, in conjunction with machine learning and predictive maintenance. These innovations will transform the valve systems into even more flexible, powerful and smarter automation components.”

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From PROFINET and EtherNet/IP to OPC UA without additional hardware

Simplifying IIoT adaptation

By employing Hilscher's netX technology, Emerson is the first supplier of pneumatic valve systems to offer integrated OPC UA without any additional hardware. **The AVENTICS™ Advanced Valve (AV) valve system with Advanced Electronic System (AES) already has preinstalled OPC-UA functionality for PROFINET and Ethernet/IP with the netX 90 IoT solution firmware.** As a fieldbus module, AES solves interoperability challenges, while the integration of the Digital Twin increases productivity and efficiency. That means device information is stored in the OPC UA structure and IIoT data can be assigned to a device more quickly.

“The AVENTICS™ AV Series with OPC UA is a notable leap forward in the flexibility and integration of valve systems because it makes the transition to IIoT significantly simpler for engineers,” says Nils Beckmann, Director Product Marketing Intelligent Automation at Emerson. “With the Hilscher netX-90 communication controller, engineers don't need to change a whole system or architecture to access valve data. They now have the flexibility to continue using their own cloud systems and software to gain easy access to data and analytics without disrupting or modifying the PLC.”



Advantages of the AVENTICS™ valve system with netX and the IoT solution firmware:

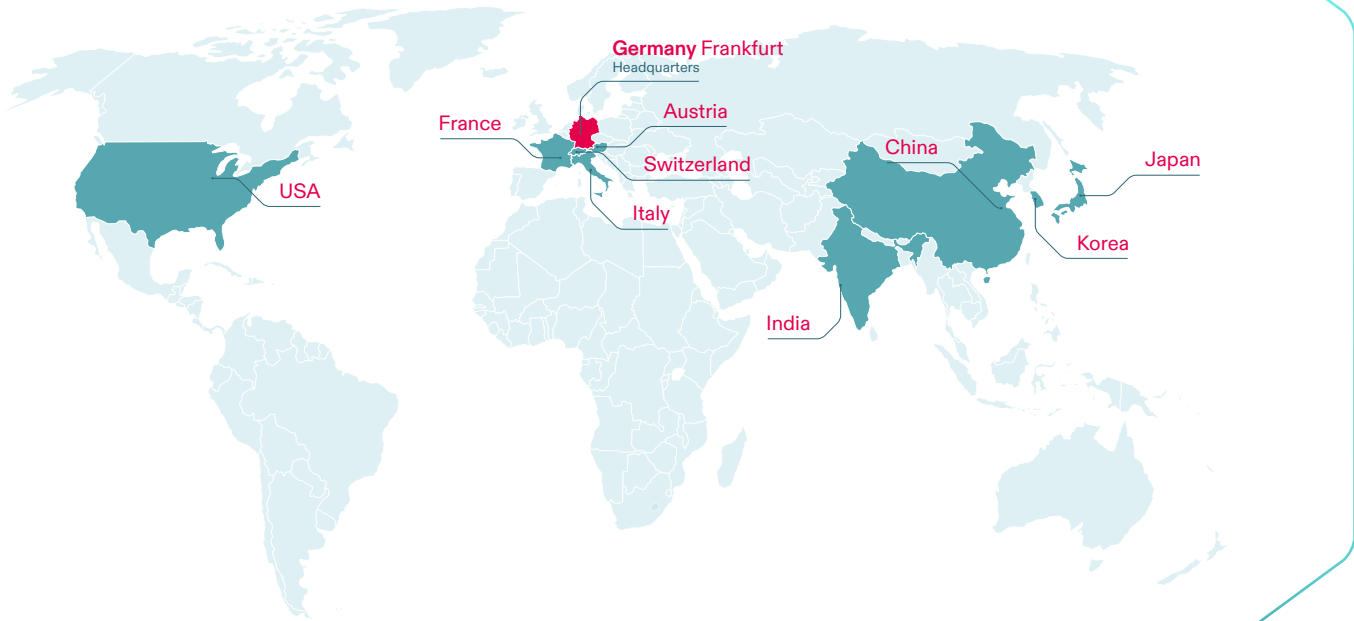
- **Preliminary data analysis for upstream systems without disrupting PLCs or requiring additional hardware**
- **Increased flexibility and simplicity for IIoT adoption by solving interoperability challenges**
- **Increased overall equipment efficiency (OEE) and more efficient industrial processes**



→ Produktinformationen: netX Firmware
www.hilscher.com

For further information about pneumatic solutions by AVENTICS™, please visit: www.emerson.com
For further information about netX, please visit: www.hilscher.com

We look forward to meeting you!



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