

PRESS INFORMATION

New ctrlX OS OEM Advantech: Partnership for modular and secure edge solutions

Manuela Kessler | 02.10.2025 | Lohr am Main / Germany | PI 045/25

- Bosch Rexroth and Advantech combine modular industrial PCs and a secure, open operating system to create a turnkey edge platform
- Advantech's UNO series of edge IPCs are supplied with the Rexroth operating system ctrlX OS and apps
- The edge platform is ideal for IoT edge gateway and edge control applications



The ctrlX OS Ecosystem has gained a new partner in Advantech. Steffen Winkler, Bosch Rexroth (left), and Jash Bansidhar, Advantech (right), are looking forward to working together. (Image source: Bosch Rexroth AG)

Today's IoT gateways and edge platforms need to be able to do so much more than just transport data: They need to be secure, flexible and ready to use within a short timeframe. But many systems are difficult to scale or require long integration cycles. Bosch Rexroth and Advantech have therefore combined their expertise to offer a turnkey platform for industrial applications: Customers benefit from the combination of the open and app-based operating system ctrlX OS from Bosch Rexroth with its ecosystem and the modular hardware from Advantech. This enables a high degree of security and considerably faster implementation of custom solutions to be achieved.

The aim of the collaboration between the two companies is to significantly simplify the development and adaptation of edge solutions. A software base will gradually be established on Advantech's growing hardware portfolio, allowing the flexible implementation of a wide variety of industrial requirements. Initially, the UNO-series edge IPCs will be shipped from the factory with the Linux-based ctrlX OS and pre-installed apps from the ctrlX OS Store, such as a firewall, Node-RED, InfluxDB and IoT Dashboard. The app modules and hardware modules allow customers to configure IoT gateways quickly and easily.

Customized solutions in no time

While Advantech hardware offers needs-based scaling of key resources such as memory and storage, the open software approach of ctrlX OS opens up an equally modular world of functions. Organizations can use standardized hardware and tailor it to their specific use case using software – from simple IoT gateways to sophisticated edge AI or edge control applications. The ctrlX OS Store provides customers the possibility to flexibly add industry-specific features, both by installing ctrlX OS apps from Bosch Rexroth or ctrlX World partners and by developing their own solutions. This enables a basic system to be turned into a customized solution in no time at all with add-ons for database connections, visualization or IIoT protocols.

"Our partnership with Advantech is a prime example of co-creation in industrial digitalization," explains Steffen Winkler, Senior Vice President Sales, Business Unit Automation & Electrification

PRESS INFORMATION

Solutions at Bosch Rexroth. "ctrlX OS brings software innovations directly into the product world of the global IPC manufacturer. Together, we create new opportunities for partners and customers."

Jash Bansidhar, AVP IoT Automation at Advantech, adds: "The requirements in the industrial environment are changing rapidly. Shorter product life cycles and greater system complexity require flexible, scalable platforms. With our bundle, customers can quickly develop, adapt and implement new solutions. This reduces development work and accelerates time to market." In addition, Advantech provides an easy way to transfer data streams from the edge level into usable cloud services for end-to-end solutions with the WISE IoT Marketplace.

Secure foundation at all levels

The joint solution is based on a secure architecture: ctrlX OS was developed to be secure by design for industrial use and is prepared for the requirements of the Cyber Resilience Act (CRA). The operating system is certified according to IEC 62443-4-2 Security Level 2 by TÜV Rheinland. The solution is part of two strong networks: Bosch Rexroth and Advantech each contribute their distribution channels and development communities to the collaboration. This allows for worldwide availability, comprehensive support and ongoing development of the platform. Caption: The ctrlX OS Ecosystem has gained a new partner in Advantech. Steffen Winkler, Senior Vice President Sales, Business Unit Automation & Electrification Solutions at Bosch Rexroth (left), and Jash Bansidhar, AVP IoT Automation at Advantech (right), are looking forward to working together. (Image source: Bosch Rexroth AG)

Basic Information Bosch Rexroth

As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of Mobile and Industrial Applications as well as Factory Automation. With its intelligent components, customized system solutions, engineering and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things. With locations in over 80 countries, around 32,600 associates generated sales revenue of 6.5 billion euros in 2024.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 418,000 associates worldwide (as of December 31, 2024). The company generated sales of 90.3 billion euros in 2024. Its operations are divided into four business sectors: Mobility, Industrial Technology, Consumer Goods, and Energy and Building Technology. With its business activities, the company aims to use technology to help shape universal trends such as automation, electrification, digitalization, connectivity, and an orientation to sustainability. In this context, Bosch's broad diversification across regions and industries strengthens its innovativeness and robustness. Bosch uses its proven expertise in sensor technology, software, and services to offer customers cross-domain solutions from a single source. It also applies its expertise in connectivity and artificial intelligence in order to develop and manufacture user-friendly, sustainable products. With technology that is "Invented for life," Bosch wants to help improve quality of life and conserve natural resources. The Bosch Group comprises Robert Bosch GmbH and its roughly 490 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. Bosch's innovative strength is key to the company's further development. At 136 locations across the globe, Bosch employs some 87,000 associates in research and development.

Press Contact

PRESS INFORMATION

Please get in touch with our Press Contact



Manuela Kessler

Spokesperson
technology topics
+49 9352 184145

Manuela.Kessler@boschrexroth.de