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ctrlX AUTOMATION is expanding: new solutions for safety, drives, and engineering

Manuela Kessler | 13.10.2026 | Lohr am Main / Germany | PI 035/26

- Reaktionsschnelle Sicherheitslösung ctrlX SAFETY deckt funktionale Sicherheit von SafeMotion bis zur Safety PLC App ab
- Economy Line erweitert Antriebsportfolio ctrlX DRIVE um „just enough“ Ausführungen
- ctrlX OS 4.6 stärkt Security und vereinfacht das Engineering
- Vorgefertigte Solution Sets verkürzen den Weg zur Anwendung



Bosch Rexroth is adding new products, functions, and ready-made solution sets for various application areas to ctrlX AUTOMATION in all product lines. (Image source: Bosch Rexroth AG)

Bosch Rexroth is comprehensively expanding the automation platform ctrlX AUTOMATION, not only in terms of functional safety and drive technology, but also to include new functions in the operating system. In addition, the long-term support release ctrlX OS 4.6 brings significant security and engineering innovations to the devices. At the same time, solution sets for industries such as mobile robotics or energy technology shorten the route from the initial idea to application.

"Automation is becoming increasingly software-centric, which is opening up new opportunities to adapt machines and systems to different requirements more quickly and flexibly," says Steffen Winkler, Senior Vice President Sales, Business Unit Automation & Electrification Solutions at Bosch Rexroth. "Functions can increasingly be added via software, allowing existing systems to be enhanced in a targeted manner. At the same time, powerful and scalable hardware remains the foundation. With ctrlX AUTOMATION, we are driving this synergy consistently forward."

Safety technology from SafeMotion to the Safety PLC app

Bosch Rexroth has completed the ctrlX SAFETY portfolio, thereby covering functional safety from the drive level all the way to software-based safety control. With SafeMotion, ctrlX DRIVE provides 31 safety features including Safe Torque Off, Safe Stop, Safely Limited Speed, and Safe Maximum Speed. In combination with ctrlX SAFETYlink, the system ensures extremely responsive and reliable communication in safety-related applications.

The compact safety controllers ctrlX SAFETY SAFEX-C.12 and SAFEX-C.15 are available for standalone applications and integration into existing systems, while ctrlX SAFETYplus SAFEX-M.25 is designed for modular machine concepts. The Safety PLC app enables safety functions directly on the operating system ctrlX OS without additional hardware. With the evolution from

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traditional multi-processor systems toward a software-based safety architecture, Bosch Rexroth is breaking new ground: safety functions can be executed as apps directly on a multi-core processor within the standard control system. This allows safety functions to be implemented without additional control hardware. This, in turn, reduces space and costs, and increases flexibility when implementing machine concepts.

New ctrlX DRIVE Economy Line

The Economy Line expands the ctrlX DRIVE portfolio to include economical servo drives with a focus on essential drive functions. The precisely tailored range of functions enables a streamlined device architecture and cost-effective solutions for applications that do not require advanced specialized features – without, compromising on quality. At the same time, users benefit from seamless compatibility with the drive system ctrlX DRIVE: firmware and engineering are identical, and existing projects can be used without any need for adaptation.

ctrlX OS 4.6 strengthens security and engineering

ctrlX OS 4.6 is a new long-term support release from Bosch Rexroth based on Ubuntu Core 24. New features include single sign-on, which enables users to integrate access to ctrlX OS and solutions based on it into comprehensive login concepts. Advanced OPC UA security features further strengthen the protection of industrial communication.

Another new feature is the professional version management of app data using Git directly on the device. Users can manage versions, branch development states, merge changes, and revert to a previous state if necessary. They can also connect to an external Git repository, enabling changes to software and configurations to be documented and tracked transparently. Established processes from software engineering are thus transferred directly to the automation level. In addition, ctrlX OS 4.6 expands networking, device management, and monitoring capabilities. The range of software for ctrlX OS is also growing: The ctrlX OS Store now contains 120 apps for various automation tasks.

Solution sets shorten the route to application

Alongside new products and functions, Bosch Rexroth is also expanding its ready-made solution sets. These combine compatible hardware and software for typical use cases, thereby reducing the work required to implement a concrete application.

The "Mobile Robots" solution set combines control, I/O modules, and laser-based localization software for mobile robots and manual forklifts. Further solution sets are designed for applications in the fields of energy, building, and agriculture. These applications range from energy management, automatic access control, and AI-supported video analysis to heating, cooling, and irrigation tasks, as well as robotics solutions for agriculture.

With the solution sets, Bosch Rexroth applies the modular principle of ctrlX AUTOMATION to specific application areas: Users can draw upon components and functions that are already coordinated with one another, and combine and expand them according to requirements, enabling them to quickly implement a customized solution.

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 31,900 associates generated sales revenue of 6.5 billion euros in 2025.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 413,000 associates worldwide (as of December 31, 2025). The company generated sales

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of 91 billion euros in 2025. 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, digitalization, electrification, and artificial intelligence. In this context, Bosch's broad diversification across regions and industries strengthens its innovativeness and robustness. Bosch uses its proven expertise in hardware, 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 intelligent, user-friendly products. With technology that is "Invented for life," Bosch wants to help improve quality of life. The Bosch Group comprises Robert Bosch GmbH and its roughly 500 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. Bosch employs some 82,000 associates in research and development.

Press Contact

Please get in touch with our Press Contact



Manuela Kessler

Spokesperson
technology topics
+49 9352 184145

Manuela.Kessler@boschrexroth.de