

PRESS RELEASE

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Bosch Rexroth presents I/O portfolio

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Automation platform lifted to the next level with ctrlX I/O

- ▶ ctrlX AUTOMATION is extended by open I/O portfolio
- ▶ Focus on future technologies such as 5G, TSN and AI



With the new ctrlX I/O portfolio, Rexroth's automation platform will be even better connected and geared to future technologies. (Image source: Bosch Rexroth AG)

Bosch Rexroth has just announced the next level of its open industrial automation platform ctrlX AUTOMATION. The launch of ctrlX I/O adds other interfaces on the field and control levels to the platform, a system shaped by app technology. The I/O range facilitates horizontal and vertical integration on the one hand and serves as a functional expansion of the control platform ctrlX CORE on the other. In the future, comprehensive communication and performance enhancements as well as I/O modules geared to technologies of the future like 5G, TSN and AI will be offered. The new comprehensive automation solution will create a broad range of connectivity and networking options in the increasingly digitalized industrial world.

ctrlX AUTOMATION surmounts the classic boundaries between machine controls, the IT world and the Internet of Things. ctrlX AUTOMATION reduces component and engineering effort by 30% to 50% with the help of the real-time

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operating system Linux, fully open standards, app programming technologies, web-based engineering and a comprehensive IoT connection.

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ctrlX I/O as the enabler of greater flexibility and future viability

Steffen Winkler, Vice President Sales of the Business Unit Automation & Electrification Solutions of Bosch Rexroth, said: "With ctrlX AUTOMATION, we are uncompromisingly focusing on standardized, industry- and manufacturer-independent interfaces and communication standards. Our new ctrlX I/O range will provide users with greater flexibility and future viability. The more connected an automation solution is, the more flexible the solutions equipped with it will be on the job. Connectivity is the basis for the digital factory. The potential of Industry 4.0 can be fully exploited only with the help of communication from machine to machine, machine to system and machine to operator."

On the field level, ctrlX I/O smoothly facilitates flexible machine topologies and the seamless integration on the sensor/actor level. As a result, higher-level control systems as well as MES and cloud solutions can be easily connected on the control level. ctrlX I/O also represents a functional expansion of the control system ctrlX CORE, providing it with such technology and hardware options as additional memory, USB and ethernet interfaces and much more.

A nearly unlimited interface range

ctrlX I/O is based on EtherCAT, a foundation for real-time-capable data processing. PROFINET and IO-Link are supported as well.

These features provide users with a nearly unlimited range of high-performance and freely combinable interfaces. More than 30 communication standards such as OPC UA and MQTT facilitate the seamless connection to IT and IoT systems. Analog and digital inputs/outputs allow standard sensors and actuators to be connected. By the use of encoder interfaces and drive modules, small and stepping motors can be controlled directly from the I/O level.

Machine manufacturers can combine modules and extensions freely. Apps tailored to ctrlX I/O from the ctrlX WORKS software and engineering toolbox cover numerous technological functions.

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Reduced engineering effort and other benefits of the smart factory

ctrlX I/O supports the principle of ctrlX AUTOMATION: “more productivity, fewer components, less engineering.” This provides developers with the freedom they need to implement modular machine concepts and offers tremendous cost-saving potential.

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With the same compact form factor as ctrlX CORE, ctrlX I/O saves space in the control cabinet and offers up to 16 I/O points over a width of just 12 mm. The well-considered, ergonomic mechanical design and the push-in technology allow easy installation without the use of tools and the quick exchange of modules thanks to removable peripheral plugs. The clever diagnostic concept on the module and channel level reduces downtimes. The robust design in the IP20 protection type ensures maintenance and fault-free operation in the control cabinet. Performance functions can be flexibly added to the system.

Steffen Winkler sums up the new development this way: “ctrlX I/O helps our customer develop viable machine concepts for the future. In combination with ctrlX AUTOMATION, we are promoting intelligent networking within automation and setting new standards. This underpins our clear growth strategy, including in new markets.”

About 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 Applications, Machinery Applications and Engineering, and Factory Automation. With its intelligent components, customized system solutions 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, more than 31,000 associates generated sales revenue of around 6.2 billion euros in 2021.

To learn more, please visit www.boschrexroth.com

The Bosch Group is a leading global supplier of technology and services. It employs roughly 420,000 associates worldwide (as of December 31, 2022). According to preliminary figures, the company generated sales of 88.4 billion euros in 2022. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy

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and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company's future growth is its innovative strength. At 128 locations across the globe, Bosch employs some 85,000 associates in research and development, of which nearly 44,000 are software engineers.

Additional information is available online at www.bosch.com, www.iot.bosch.com, www.bosch-press.com, www.twitter.com/BoschPress.

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