

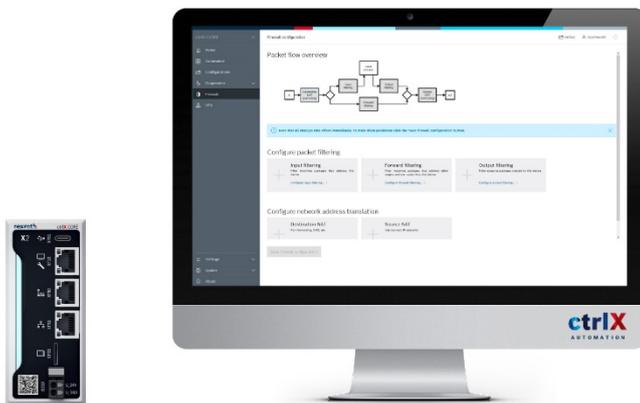
PRESS RELEASE

PI 021/21  
2021-08-04

## Bosch Rexroth demonstrates end-to-end automation security for networked environments

**The Industrial Internet of Things is placing new demands on the security of automation solutions**

- ▶ Secure connection of control technology, IT and IoT
- ▶ Consistent security implementation at all levels
- ▶ ctrlX AUTOMATION features built-in holistic security concept from the ground up



The control platform ctrlX CORE provides an all-in-one-network appliance and ensure maximum security. (Image source: Bosch Rexroth AG)

**Industry networking and the associated Industrial Internet of Things (IIoT) are redefining security requirements – and thus also the demands on the automation solutions used. As security features often have to be individually integrated at a later date into existing products to make them secure in the networked world, an end-to-end security concept is usually not possible. With the ctrlX AUTOMATION platform, Bosch Rexroth has “reinvented” security from the ground up, and thus been able to integrate a holistic security concept from the very beginning of the design process.**

“It is of pivotal importance for users – especially in the area of Industry 4.0 – that all solutions used for automation and networking have the requisite security mechanisms. These security requirements have defined the design

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approach to ctrlX AUTOMATION. In this automation platform, we combine control technology, IT and IoT to create an overarching secure system. Security is consistently implemented at all levels”, explains Thomas Maag, Head of Product Management in the Automation & Electrification Solutions Business Unit at Bosch Rexroth.

The ctrlX AUTOMATION hardware and software products are inherently “Secure by Design”. This means that the security requirements were already taken into account during the development phase. The automation platform, which is certified according to IEC 62443, is based on the Linux Ubuntu Core operating system.

With its ctrlX CORE control system, Bosch Rexroth offers an integrated all-in-one network appliance. This ensures maximum security and availability of routers, IoT gateways, firewalls and VPN. The connected IoT software works according to fully integrated IEC 62443 cyber security standards for access control and remote maintenance. The control system furthermore offers diverse security features such as Secure Boot, TPM 2.0-Chip, Secure Production Mode and much more.

In addition to this, ctrlX CORE is also a “Secure by Default” solution, and thus ensures security and flexibility when integrating data into existing IT manufacturing systems. The user can securely deploy the device from the very first minute and connect it safely to other systems and the IoT without any configuration being required.

### **Bridging the gap between universal openness and security requirements**

The system can be expanded with customer-specific apps and is ready for new standards such as 5G and OPC UA over TSN. To allow additional use cases, a VPN extension or firewall can be integrated per app.

“ctrlX AUTOMATION is a completely open system. The ecosystem offers not only our own solutions but also third-party apps for a variety of automation tasks. This openness does not, however, preclude security. We sign each of

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the partner apps offered. This rules out the possibility of third-party software introducing malicious code”, explains Thomas Maag.

The integrated apps are also tamper-proof and protected against unwanted attacks. ctrlX AUTOMATION thus offers a high level of security both for its own products and for all components within the ecosystem.

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