

PRESS RELEASE

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Automation meets machine vision: Bosch Rexroth and HD Vision Systems provide joint solutions

ctrlX AUTOMATION's ecosystem provides users with quick and easy access to apps for industrial image processing

- ▶ Automation platform contains HD Vision Systems products
- ▶ Customized industrial applications for machine vision
- ▶ Joint use case: object recognition and placement with a robot



The light field-based technology of the machine vision solution from HD Vision Systems enables intuitive image processing via ctrlX CORE. (Image source: HD Vision Systems GmbH)

Machine vision is an integral part of automation, whereby products are used which control automated processes based on industrial camera systems. HD Vision Systems facilitates automation by means of visually guided object localization, tracking and detection as well as QR code scanning. The company now provides these functions as well as interfaces to standard area scan cameras as a vision suite in the ecosystem of the Bosch Rexroth automation platform ctrlX AUTOMATION. In addition, the two companies are developing customized machine vision products as well as a use case for object recognition and oriented placement by means of a Cartesian robot.

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HD Vision Systems is a new partner of ctrlX World, the ecosystem of the Bosch Rexroth automation platform ctrlX AUTOMATION. As an industrial machine vision specialist, HD Vision Systems supports production facilities with hardware and software products based on light field technology and deep learning – regardless of whether this relates to quality inspections, work piece handling or 3D scanning. As such, together with Bosch Rexroth, the company now offers the HD Vision Systems vision suite in the ctrlX App Store as an image processing app for the control platform ctrlX CORE.

“Thanks to Bosch Rexroth’s cross-application and cross-manufacturer automation platform, we plan to make our image processing products for object recognition and handling even easier to access and intuitive for users. As such, we are supporting the ctrlX AUTOMATION approach of integrating components for different tasks from different suppliers into one overarching system”, explains Dr. Christoph Garbe, CEO of HD Vision Systems GmbH.

Hans Michael Krause, Head of Product Management ctrlX World at Bosch Rexroth, adds: “Users can download the specific Bosch Rexroth or third-party automation solutions that they need in the platform’s ecosystem. As such, together with HD Vision Systems, we offer a modular vision suite via the ctrlX App Store, which helps companies with their specific individual needs.”

Bosch Rexroth and HD Vision Systems are also simultaneously developing joint customized machine vision solutions. An initial use case concerns object recognition and oriented placement with the help of a Cartesian robot. Components are automatically detected by means of a 2D camera system which is connected to the control system ctrlX CORE via Ethernet. The vision suite processes the images and identifies the components, determines their position and provides the robot with the data for accurately grasping them. The data are then stored in a predefined raster. This enables further processing in downstream processes.

ctrlX AUTOMATION provides customers with needs-based solutions in this range of application and quick and easy access to machine vision and automation. The solutions can be intuitively operated without any previous knowledge.

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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 29,600 associates generated sales revenue of around 5.2 billion euros in 2020.

To learn more, please visit www.boschrexroth.com

The Bosch Group is a leading global supplier of technology and services. It employs roughly 395,000 associates worldwide (as of December 31, 2020). The company generated sales of 71.5 billion euros in 2020. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy 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 129 locations across the globe, Bosch employs some 73,000 associates in research and development, of which nearly 34,000 are software engineers.

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