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Press Release

Here comes a new servo control kit for robotics.

Two leading names in motor control work together to ease development challenges for engineers and students. They jointly created a plug-and-play servo control development kit for drives, robotics and automation.

STMicroelectronics, a global semiconductor leader serving customers across the spectrum of electronics applications, is working with maxon, a leading precision-drive specialist, to accelerate the design of robotics applications and industrial servo drives. The companies demonstrated a jointly developed servo control kit at sps 2019 trade show in Nuremberg.

The [EVALKIT-ROBOT-1](#) is a plug-and-play solution aimed to help users easily approach the world of precise positioning and high-end motion in servo drives and robotics. A maxon 100-Watt BLDC motor with built-on 1024-pulse incremental encoder is included in the kit, embodying the company's expertise in magnetic design in precision motors that ensures smoothness and balance to allow fine control even at low rotor speeds.

The servo control board supplied with the kit contains ST's STSPIN32F0A intelligent 3-phase motor controller and a complete inverter stage built with ST power transistors ready to connect to the motor. Motor-control firmware is also included, making it easy for users to start the motor and begin sending commands.

"Our motors are trusted worldwide to deliver high quality, precision, and accuracy," said Felix Herger, Head of Business Development Industrial Automation at maxon. "Teaming with ST has created a platform that makes these attributes more easily accessible to a wider variety of product designers."

"Designing high-end motion controls with accurate positioning capabilities is complex and time-consuming, demanding specialist skills. Working with maxon, we have now put those skills in a box for our customers," said Branimir Ivetic, Motion Control Product Marketing Manager, STMicroelectronics. "The EVALKIT-ROBOT-1 kit accelerates development of next-generation robotics and automation that delivers advanced capabilities and dexterity with excellent reliability and ease of use."

Further technical information:

ST's STSPIN32F0A system-in package contains critical circuitry for motor control, including an STM32F031C6 microcontroller and three-phase inverter driver in a compact 7mm x 7mm VFQFPN package. The microcontroller comes loaded with plug-and-play firmware for MODBUS communication and field-oriented control (FOC) with precise positioning capabilities. Power management and current sensing circuitry are also embedded in the device making it more flexible and versatile.

The maxon EC-i 40, 40mm-diameter, 100-Watt brushless (BLDC) motor embeds a maxon ENX 16 EASY 1024-pulse incremental encoder for precision control. Hall sensors for detecting rotor position are included. The motor features an optimised design for high output torque with low cogging torque, which permits smooth motion across the speed range and enhances positioning precision.

The 3-phase BLDC inverter power stage features ST's STL7DN6LF3 60V, low on-resistance, N-channel MOSFETs, capable of 6A maximum output for driving the motor. The kit is available now at [ST.com](https://www.st.com)

For further information please contact maxon motor Australia tel. +61 2 9457 7477.

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The press release is available on the internet at: www.maxongroup.net.au



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The Swiss specialist for quality drives

maxon is a developer and manufacturer of brushed and brushless DC motors, as well as gearheads, encoders, controllers, and entire mechatronic systems. maxon drives are used wherever the requirements are particularly high: in NASA's Mars rovers, in surgical power tools, in humanoid robots and in precision industrial applications, for example. To maintain its leadership in this demanding market, the company invests a considerable share of its annual revenue in research and development. Worldwide, maxon has more than 3000 employees at nine production sites and is represented by sales companies in more than 30 countries.