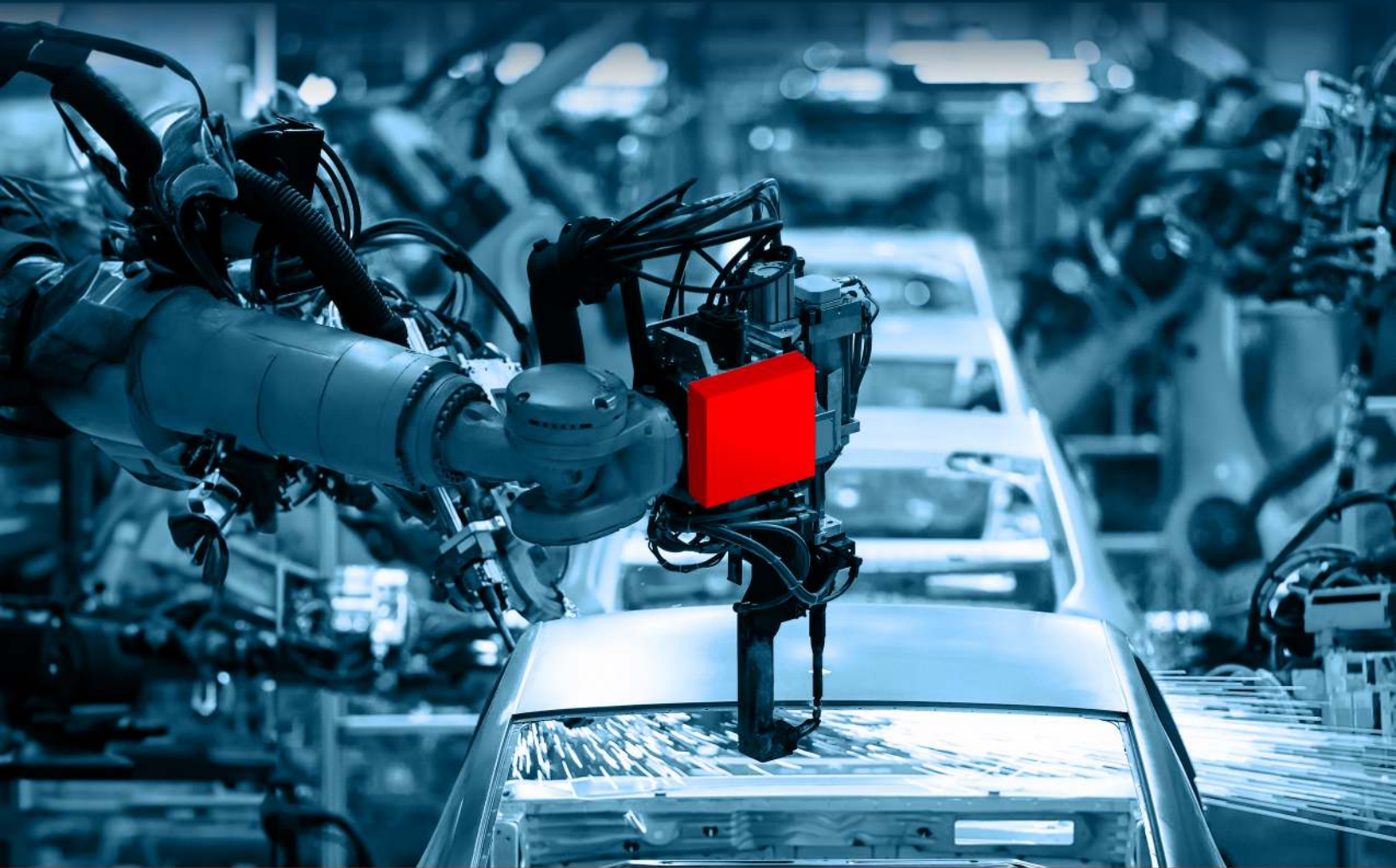




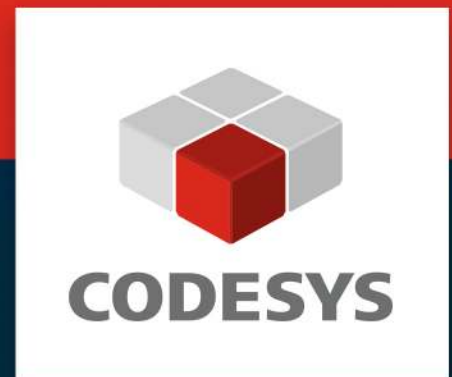
**CODESYS Corporation**

# **CODESYS® Robotics - CNC - Motion**



# CODESYS CNC-

## **CODESYS - ONE Software Tool for Robotics, CNC, SoftMotion, PLC, and Visualization**



The CODESYS Software Suite combines logic and motion control in a single IEC 61131-3 software tool. The CODESYS Development System makes project engineering easy - from motion applications to CNC / robot control. Complex coordinated movements in the PLC development system can be engineered, and integrated editors for cams and CNC (according to DIN 66025), libraries according to PLCopen for motion control, CNC interpolator, axis group configurator, and transformations for gantry, SCARA, tripod, and other robots are all integrated. The creation of professional HMI screens with the latest technologies of CSS, JavaScript and HTML5 can be done directly in the same CODESYS programming environment.

### **Hardware-independence of the drive hardware with CODESYS-Motion-CNC-Robotics**

The CODESYS SoftMotion and the CNC and Robotics applications are completely independent of the drive product used. The connection between SoftMotion and hardware is established by a drive-specific device driver. Currently, CODESYS provides drivers for over 40 different drive products.

From single-axis movements to multi-dimensional CNC path interpolations and complex robot applications - with the CODESYS SoftMotion, CNC and Robotics software packages all required motion functionalities are integrated and all tasks can be developed without leaving your familiar logic controller development environment. Using this tool kit and the language scope of the IEC 61131-3, you can easily develop solutions for the most complex motion applications.



# SOFTMOTION- ROBOTICS

## ADVANTAGES

- The CODESYS Development System includes SoftMotion, 3D-CNC, and robotics function block libraries and editors. Complex CNC tasks and robotic controllers can be engineered without having to leave the CODESYS IEC 61131-3 Development System.
- Convenient parameterization of axis groups for pre-defined kinematics
- Trigger points, and integrated motion planning with coordinate values for robot positions in different coordinate systems
- Function library with program blocks according to PLCopen Motion Part 4
- Additional orientation kinematics, and numerous support kinematics with convenient configuration, for example various gantry robots (2/3/5 axes), bipod/tripod robots, and SCARA robots
  - Support of tools with orientation and position offset (full 6D)
  - Support for user provided dynamic models that compute the torques and forces for each joint,
  - Support for torque/force limitation during planning, torque/force feed forward control,
  - Support for defining the workpiece and tool load





# CODESYS Corporation

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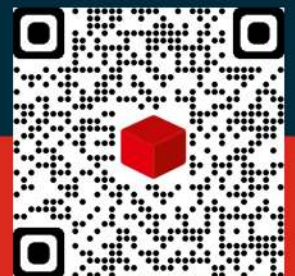
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