



RP-3

Next-Generation Motion Controller

Master EtherCAT - Master CANopen - Master Axioline

RP-3 is designed for automation OEMs developing high-performance systems such as **robotics**, **multi-axis machines** and **synchronized production lines**.

It is ideal for applications requiring precise motion control, real-time responsiveness and seamless integration across distributed architectures.



**Up to 10x
more power**

Handle complex motion and real-time control.



**Grows with
your machine**

Scale easily as your system evolves.



**Seamless
connectivity**

Fast networks, multi-fieldbus, easy integration.



**Up to 32 interpolated
axes expandable**



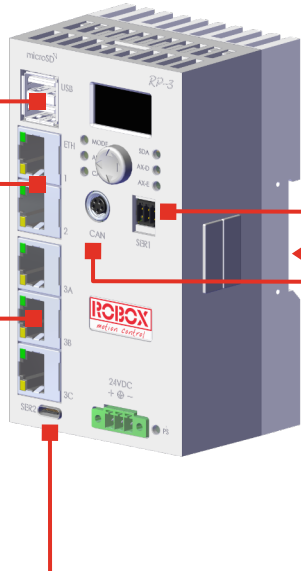
**Hard real-time Multi-Core
operating system**

RP-3 Product specification

2x USB 2.0 type-A
Data storage, data logging, project and configuration upload/restore.

2x Master EtherCAT
10/100/1000 Mbit/s channels for real-time control of drives and I/O (EtherCAT CoE, SoE, EoE)


3x Ethernet
10/100/1000 Mbit/s ports with integrated switch for industrial networking (TCP/IP, UDP, Modbus/TCP, EtherNet/IP, FTP)



RS422/RS485 Serial Port
General-purpose communication and legacy protocol support

Master bus Axioline

Master CANopen
DS301, DS401, DS402, DeviceNet and Robox Cnet for motion axes and remote I/O


USB (UART)
Programming and diagnostics (Robox BBC/31)



Communication libraries
OPC UA, (rLib) for Qt, Java, .NET and C++ are available for communication with HMI, RDE (Robox Development Environment) and remote support

Quad-Core CPU	2× ARM Cortex-A76 @ 1.4 GHz and 2× ARM Cortex-A55 @ 1.25 GHz
Memory	2 GB DRAM
Retentive memory	1 MB for parameters and alarm history
Mounting	Horizontal mounting on DIN rail
Dimensions	70 × 122 × 61,7 mm
Weight	0.35 kg
Display	128x64 OLED Display for diagnostice equipped with five degrees range joystick
Status indication	Leds monitoring the communication ports status
System clock	Real-time clock (RTC)
Product code	AS1020.001

RTEX Firmware (on-board software)

RTEX is the new-generation hard real-time firmware designed to enhance the performance and usability of RP-3 controllers in advanced motion applications.
Built on a **multi-core 64-bit architecture**, it fully leverages the increased processing power of RP-3 to deliver higher performance and efficiency.
It is installed in the removable micro SD and allows the correct execution of the different tasks.

Improves system responsiveness, efficiency and overall operational performance

Enhances diagnostics and reliability while maintaining compatibility with RTE applications