

OmniCore™ Controllers

A new era of flexible and digital robot control



Small in a big way! versatile, compact, fast – three little words, that deliver a whole lot of power.

Offering a 50% reduction in size and enhanced integration capabilities without compromising performance. ABB’s newest small controller can tackle your toughest challenges in a big way.

— 01 Small Robot Controller

A new era is here

ABB’s OmniCore robot controller family is the first significant step towards preparing customers for a new era in manufacturing. ABB’s robot controller family offers broadest motion control options and more tailored solutions for the connected Factory of the Future. To power the diverse manufacturing needs of the factory of the future, manufacturers need a controller that delivers unsurpassed flexibility, connectivity, and performance. Every controller in this product family is designed to deliver these capabilities and meet the diverse needs robot users today expect.

The best made even better

The first variant of controller family builds on our heritage of best-in-class motion control and path accuracy, but in a 50% smaller footprint for maximum installation flexibility and floor space utilization. With the class-leading superior precision, cycle times and speed that ABB is renowned for our new robot controllers can tackle the toughest challenges. The OmniCore small robot controller gives our robots the ability to perform their tasks in a highly efficient manner.

Ensures convenient connectivity and digitalization

The ABB Ability™ digital platform and ABB Ability Connected Services are built into all our new controller, as is ABB’s SafeMove2 safety software solution. This means the new controllers can help make any connected industrial robot a collaborative robot.

The industry’s most versatile and powerful controller

In addition to increasing mounting flexibility, ABB’s OmniCore controller also increases flexibility to incorporate the latest digital technologies. The controller is versatile and expandable, and can be equipped with the industry’s most versatile range of additional offerings, such as fieldbus protocols, vision solutions, and force control.

The most intuitive RobotWare 7 and FlexPendant

The controller comes with ABB’s powerful yet intuitive operating system, RobotWare 7. It incorporates new features and functions making the robots more capable than ever and it’s accessed through a newly designed, powerful and intuitive new FlexPendant.

Small Robot Controller



OmniCore Controller Family

Key features & benefits

- Significant size reduction and flexible mounting possibilities
- Best-in-class motion control and path accuracy
- Modern simplified user interface on totally new powerful intuitive FlexPendant
- Built-in SafeMove2, ABB's safety solution to save floor space and facilitate collaborative applications
- Impressive versatile offering including wide variety of fieldbuses, vision systems and sensors
- Built-in connectivity to the ABB Ability™ digital platform and connected services

OmniCore Small Robot Controller

Key features & benefits

- Small in a big way!
- Extensive integration possibilities
- Desktop version for elegant cable management for easy integration
- Rack mounting kit for installation in standard 19" cabinets
- Mounting kit to install vertically without compromising cooling featuring hanging brackets at the rear

Technical information small robot controller

Electrical Connections

Voltage	Single phase 220/230 V 50-60 Hz
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Voltage, IRB 14050	Single phase 100-230 V 50-60 Hz
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Physical

Dimensions (WxDxH)	449 x 443 x 170 mm
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Weight	24 kg
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Physical Desktop version

Dimensions (WxDxH)	509 x 514 x 193 mm
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Weight	28 kg
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Environment

Ambient temperature	5-45°C
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Relative humidity	Max. 95% non condensing
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Level of protection	IP20
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New FlexPendant



New FlexPendant

Key features & benefits

- Modern, intuitive and powerful
- Large multi-touch display with standard gestures such as pinch, swipe and tap
- Hot swappable. Unplug during operation and share among several robots
- Extensive customization possibilities

Technical information New FlexPendant

Functions

Graphical multi-touch 8" color screen
Joystick
Hot-swappable- add/remove during operation
Membrane keyboard with 12 buttons
USB 3.0 support

Safety functions

Emergency stop
3-position enabling switch (dual circuit)
Hold-to-run 100% manual speed button

Environment

Level of protection	IP54
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