

## OmniCore™ E10 controller

Ultra-slim controller for faster, scalable and more energy efficient manufacturing.



OmniCore E10 controller provides an ultra-slim design for use in confined spaces and high-density electronics assembly lines, while delivering best-in-class motion control, as well as 20 percent energy saving, and future-proofing through built-in digital connectivity and 1000+ scalable functions.

The E in E10 stands for “Essential”, with its ultra slim design it is E10 is suitable for confined space or high-density assembly lines. Its compact design is optimized for small part assembly within electronics production, general industry, or similar, where the small size of the complete production cell is a key requirement.

OmniCore E10 helps manufacturers stay one step ahead of changing market demands, enabling them to accelerate automation and providing the flexibility to meet changing demands, including production space, energy efficiency, scalability, digitalization, and minimum downtime.

### Empowering robots

With the same, full, motion control performance as all OmniCore controllers including built in I/O, the E10 is designed to power ABB’s SCARA and articulated robots with payloads up to 11kg such as the IRB 1300. E10 controller makes our robots even stronger and more powerful. Robots profit from the full potential and strength of E10 controller.

### Precise motion control

Combining our TrueMove and QuickMove motion control technologies, OmniCore controller offers best-in-class motion control, delivering high speed and path accuracy.

### 1000+ scalable functions

The OmniCore controller is designed to be scalable and adaptable to your needs. With more than 1000+ software and hardware functions, and applications, it can be easily scaled to meet a variety of demands. The functions include Externally Guided Motion, stop position simulation, integrated vision, wizard easy programming, and robot control mate.

### Easier access to digitalization

With out-of-the-box connectivity to ABB Ability™ digital platform and Connected Services, OmniCore controller offers actionable intelligence and predictive maintenance services. The OmniCore controller provides an IoT gateway supporting both OPC UA and MQTT data transmission, easy to configure by using the ABB dedicated configuration tool. IoT gateway enables seamless transmission of data from the factory floor and robots to other machines. These digital solutions enable manufacturers to get more out of their equipment through better uptime and higher productivity.

## 20 percent energy savings

Featuring energy-saving power re-generation technology and brake energy recovery, the OmniCore E10 controller consumes less power by up to 20 percent compared with our previous generation of IRC5 controllers. The result is a powerful controller that saves your energy.

## Full life cycle

Full integration into ABB's robotic ecosystem also ensures full support at all stages of a project, from ideas and simulation through to commissioning and operation.

## Main applications

- Small parts assembly, picking and placing, machine tending
- High precision material handling/assembly processes using integrated vision and EGM

## OmniCore E10 benefits

- Ultra slim for confine spaces
- Best-in-class motion control, cycle times, and path accuracy
- Built-in connectivity to the ABB Ability™ digital platform and Connected Services
- IP20 enclosure for general purpose
- 19" rack mount for easy installation
- Up to 20 percent lower power consumption, compared with IRC5
- Scalable, with 1000+ functions with hardware and software functions
- IoT Gateway: easy configurable data transmission using OPC UA or MQTT standards

## FlexPendant

- 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

## OmniCore controllers

### Power supply

Voltage IRB 1100	Single phase 100-230VAC, 50-60Hz	
Voltage IRB 1300	Single phase 220/230VAC, 50-60Hz	2-live-phase 220/230VAC, 50-60Hz

### Environment

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

### Physical

Dimensions (WxDxH) (mm)	449 x 338 x 89
Weight (kg)	13

### Connections

Built in I/O	16Digital IN/8 Digital Out
Safety	General Stop/Auto Stop, Emergency stop input, Emergency stop status output, Motors On
24VDC	4A supply for customer equipment

### Industrial Ethernet

PROFINET; PROFIsafe	later release
EtherNet/IP; CIPsafety	later release
CC-Link IE basic; Safety	later release
EtherCAT; FSOE	later release

## 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