Robotics

IRC5
Industrial Robot Controller

Based on more than four decades of robotics experience, the IRC5 is the robotic industry's benchmark in robot controller technology. In addition to ABB's unique motion control it brings flexibility, safety, modularity, application interfaces, multi-robot control and PC tool support.

Safe

Operator safety is a leading benefit of the IRC5. It fulfills all relevant regulations and is certified by third party inspectors world wide.

Electronic position switches and SafeMove™ represent a new generation of safety, enabling more flexible robotic cell safety concepts, e.g. enabling floor space reduction and collaboration between robot and humans.

Fast and accurate

The IRC5 gives our robots the ability to perform their tasks in a highly efficient manner. Based on advanced dynamic modelling, the IRC5 automatically optimizes the performance of the robot by reducing cycle times (QuickMove™) and providing precise path accuracy (TrueMove™).

Thanks to ABB's IRC5 technology, a robot's motion is predictable and its performance high, with no tuning required by the programmer. What you program is what you get.

Compatible

No matter where in the world your robot is located, and regardless of what regulatory standards apply, the IRC5 is up to the task. ABB's controller is compatible with various types of main voltages and can handle a broad spectrum of environmental conditions. IRC5 communicates with other machines in a manufacturing environment; in a safe and predictable way. It supports the majority of all state-of-the-art industrial networks for I/O. Sensor interfaces, remote access and a rich set of programmable interfaces are examples of the IRC5's many powerful networking features.

Programmable

All ABB robot systems are programmed with RAPID™, ABB's flexible, high-level programming language. On the surface RAPID's basic features and functionality are easy to use, but dig deeper and you will find that this programming language allows you to create highly sophisticated solutions. It is a truly universal language on and off the shop floor which supports structured programs, and advanced features. It also incorporates powerful support for the most common robot process applications such as welding and assembly.

Reliable

The IRC5 is practically maintenance free, and its outstanding quality ensures unmatched up-time. Built-in diagnostic functions help ensure fast recovery and production restarts when operations are interrupted on the factory floor.

The IRC5 also comes equipped with remote monitoring technology, ABB Remote Service. Advanced diagnostics allow quick investigation of failures as well as real-time monitoring of the robot condition throughout its lifecycle; all made to increase your productivity.

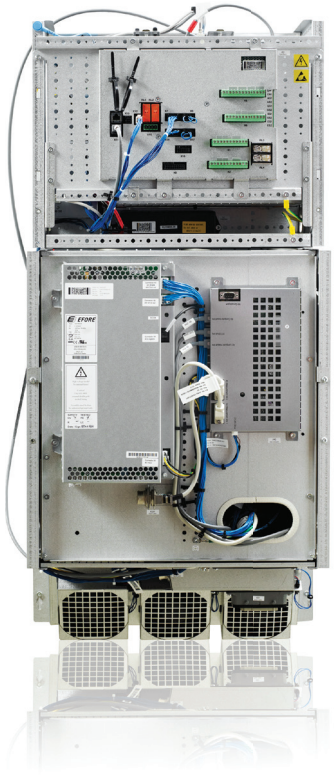
Versions, a cabinet range covering every need.
The IRC5 comes in different variants to provide a cost-effective and optimized solutions for every need.

IRC5 Single Cabinet Controller	
Dimensions	(H x W x D Weight):
Single cabinet	970 x 725 x 710 mm 150 kg
MultiMove drive modules	720 x 725 x 710 mm 130 kg
Electrical connection	Supply voltage: 3 phase 200-600 V, 50-60 Hz
Level of protection	IP54 (cooling ducts IP33)
Environment	Ambient temperature: 0-45°C option 0-52°C Relative humidity: Max. 95% non condensing
Extended safety options	Electronic Position Switches: 5 safe outputs monitoring axis 1-7
SafeMove	Supervision of stand-still, speed, position and orientation (robot and additional axes): 8 safe inputs for function activation, 8 safe monitoring outputs

- Designed for high IP protection and full expandability.
- Provides a protected environment for axillary equipment in the robot system.
- Capable of control of up to four robots in a MultiMove™ setup. Just add a compact drive module to each additional robot.
- MultiMove opens up previously unthinkable operations, thanks to the perfect coordination of complex motion patterns.

IRC5C Compact Controller	
Dimensions	(H x W x D Weight): 310 x 449 x 442 mm 30 kg
Electrical connection	Supply Voltage: Single phase 220/230 V, 50-60 Hz
Level of protection	IP20
Environment	Ambient temperature: 0-45°C Relative humidity: Max. 95% non condensing

- Offers the capabilities of the powerful IRC5 controller in a compact format.
- Delivers space saving benefits and easy commissioning through one phase power input
- External connectors for all signals and a built in expandable 16 in, 16 out I/O system.



IRC5 PMC Panel Mounted Controller

Dimensions	(H x W x D Weight):
Control module	375 x 498 x 271 mm 12 kg
Drive module small *1)	375 x 498 x 299 mm 24 kg
Drive module large *2)	658 x 498 x 425 mm 40 kg
Electrical connection	Supply voltage: 3 phase 200-600 V, 50-60 Hz
Level of protection	IP20
Environment	Ambient temperature: 0-45°C Relative humidity: Max. 95% non condensing
Extended safety options:	Electronic Position Switches: 5 safe outputs monitoring axis 1-7
SafeMove	Supervision of stand-still, speed, position and orientation (robot and additional axes) 8 safe inputs for function activation, 8 safe monitoring outputs

*1) IRB 140, 340, 1600, 260

*2) IRB 2400, 2600, 4400, 4600, 6620, 6640, 6650, 7600, 660, 760

- Comes without a cabinet
- Can be integrated into any enclosure for customization or for special environmental requirements

IRC5P Paint Controller

Dimensions	(H x W x D Weight): 1450 x 725 x 710 mm 180 kg
Electrical connection	Supply voltage: 3 phase 200-600 V, 50-60 Hz
Level of protection	IP54
Environment	Ex classification: II (2) G [Ex ib px] IIB T4 II (2) D [Ex pD 21] T65°C FM Class I,II. Div.1, Group C, D, E, F, G 135°C
Ambient temperature	0-48°C
Relative humidity	Max. 95% non condensing

- Provides full control of the paint process by integrating hardware and software seamlessly
- Reduces cycle time, saves paint, and is environmentally-friendly.
- Is certified as an associated equipment for interfacing manipulators/equipment for hazardous location.
- The IRC5P FlexPaint Pendant is Ex certified for use in hazardous locations; includes soft keys, a dual joystick, a 3.5 inch back lit screen; supports Asian language characters and has an emergency stop
- Includes RobView 5, which automatically adapts the robot system to the specific paint application

Human Machine Interaction, tools for every need

RobotStudio® is a powerful PC tool that interacts with the IRC5 on-line as well as off. On the shopfloor, the FlexPendant or a standard Windows tablet is ideal to jog, calibrate and program your robot system.

RobotStudio Online

RobotStudio Online is a suite of tablet applications for shop floor operations. Utilizing the familiar and user-friendly nature of tablets, these applications make it easy to perform operations such as calibration, editing programs or jogging.

Combined with either an ABB Jokab Safety three position enabling device or a T10 jogging device safety is not compromised.

The T10 jogging device also give you the ability to operate the robot quickly and easily using intuitive gestures in a simple and efficient way.

T10 Jogging Device	
Safety functions	Emergency stop
	3-position enabling switch (dual circuit)
Environment	Level of protection IP54
Functions	6D IMU (acceleration and gyro sensors)
	2-axis joystick with button functionality
	1.45” display
	Membrane keyboard with 10 buttons

JSHD4-3 Three position device	
Safety functions	Emergency stop
	3-position enabling switch (dual circuit)
Environment	Level of protection IP65
Functions	LED status diods

FlexPendant

The FlexPendant is characterized by its clean, color touch screen-based design and 3D joystick for intuitive interaction. Powerful support for tailor-made applications, e.g. operator screens.

FlexPendant	
Safety functions	Emergency stop
	3-position enabling switch (dual circuit)
Environment	Level of protection: IP54
Functions	Graphical color touch screen
	Joystick
	Hot plug- Add/remove during operation
	Membrane keyboard with 12 buttons
	USB Memory support

For more information please contact:

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