The IRC5 Compact controller extends the comprehensive IRC5 family of robot controllers. It brings the familiar benefits of the world leading robot controller, including superior motion control and flexible RAPID language, while adding the advantage of a minimized footprint.

IRC5 Compact
The IRC5 Compact offers the capabilities of the extremely powerful IRC5 controller in a truly compact format. In addition, the IRC5 Compact 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.

Utilizing many of the well-known features of the IRC5 controller, the new compact version offers familiar programming and operation, ensuring no additional training is required.

Initially released for the new IRB 120, the IRC5 Compact controller is also scheduled to be released on other ABB small robots such as the IRB 140 and IRB 360 'Flexpicker' throughout 2010.

Safety
Operator safety is a central quality of the IRC5 Compact, fulfilling all relevant regulations, as certified by third-party inspections.

Motion Control
Based on advanced dynamic modeling, the IRC5 optimizes the performance of the robot for the shortest possible cycle time and precise path accuracy. Together with a speed independent path, predictable and high performance behaviour is delivered automatically, with no tuning required by the programmer. What you program is what you get!

FlexPendant
The FlexPendant is characterized by its clean, color touch screen-based design and 3D joystick for intuitive interaction. Powerful customized application support enables loading of tailor-made applications, for example operator screens, thus eliminating the need for a separate operator HMI.

RAPID programming language
RAPID programming provides the perfect combination of simplicity, flexibility and power. It is a truly unlimited language with support for structured programs, shop floor language and advanced features. It also incorporates powerful support for many process applications.

Communication
The IRC5 supports the state-of-the-art field busses for I/O and is a well-behaved node in any plant network. Sensor interface functionality, remote disk access and socket messaging are examples of the many powerful networking features.

Remote service enabled
Remote monitoring of the robot is available through standard communication networks (GSM or Ethernet). Advanced diagnostic methods allow fast investigation on failure as well as monitoring of the robot condition throughout the life cycle. Service packages are available, including new services like backup management, reporting and proactive maintenance activities.

RobotStudio
RobotStudio is a powerful PC tool for working with IRC5 data. It can be used offline, providing a perfect digital copy of the automation system together with strong programming and simulation features.
## Specification

**Controller hardware**
- Multi-processor system
- PCI bus
- Flash disk mass memory
- Energy back-up power failure handling
- USB memory interface

**Control software**
- Well proven real-time OS
- High-level RAPID programming language
- PC-DOS file format, preloaded software, available on DVD
- Extensive functionality set, see separate RobotWare data sheet

## Electrical Connections

**Supply voltage**
- Single phase 220/230 V, 50-60 Hz

**Physical**
- Size HxWxD: 258 x 450 x 565
- Weight: 27.5 kg

## Environment

**Ambient temperature**
- +0°C (32°F) - +45°C (122°F)

**Relative humidity**
- Max. 95%

**Level of protection**
- IP20

**Fulfilment of regulations**
- Machine directive 98/37/EC regulation Annex II B
- EN 60204-1:2006
- ISO 10218-1:2006
- ANSI/RIA R 15.06 -1999

## User Interfaces

**Control panel**
- On cabinet
- Weight 1 kg
- Graphical color touch screen
- Joystick
- Emergency stop
- Support for right and left hand operators
- USB Memory support

**FlexPendant**
- Weight 1 kg
- Graphical color touch screen
- Joystick
- Emergency stop
- Support for right and left hand operators
- USB Memory support

**Maintenance**
- Diagnostic software
- Recovery procedure
- Logging with time stamp
- Remote Service enabled

## Safety

**Basic**
- Safety and emergency stops
- 2-channel safety circuits supervision
- 3-position enabling device

**Machine Interfaces**
- **Inputs/outputs:** Standard 16/16 (up to 8192)
- **Digital**
  - 24V DC or relay signals
- **Analogue**
  - 1 x 0-10V
- **Serial channel**
  - 1 x RS 232 (RS422 with adaptor)
- **Network**
  - Ethernet (10/100 Mbits per second)
- **Two channels**
  - Service and LAN
- **Fieldbus Master**
  - DeviceNet™
  - PROFINET
  - PROFIBUS DP
  - Ethernet/IP™
- **Fieldbus Slave**
  - PROFINET
  - PROFIBUS DP
  - Ethernet/IP™
  - Interbus
  - Allen-Bradley Remote I/O
  - CC-link
- **Process encoder**
  - Up to 6 channels

## Sensor Interfaces

- Search stop with automatic program shift
- Conveyor tracking
- Machine vision
- Seam tracking

Data and dimensions may be changed without notice.