



# MicroController XC05ix

A taste of the future

[www.firstcontrol.se](http://www.firstcontrol.se)



# About First Control

First Control is a leading company in using general adaptive techniques with industrial robustness for which we received the IEEE CSS Award. So far most of our installations have been made in Sweden. In order to make our adaptive control technology available to a larger public, we have transported the full-size adaptive control system into a small low-cost box which can be used by any engineer. For the moment there are more than 500 self-tuning regulators running somewhere, installed by First Control and others.

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# A super-intelligent control system in a small box

The XCO5 control system is an intelligent IoT unit where we have integrated several disciplines used by engineers and researchers into a small compact box.

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# Key features

- Full sized industrial control system
- Simple graphical programming
- Down to 0.1 msec sampling
- IoT enabled
- Very large program capacity

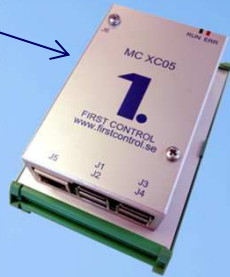
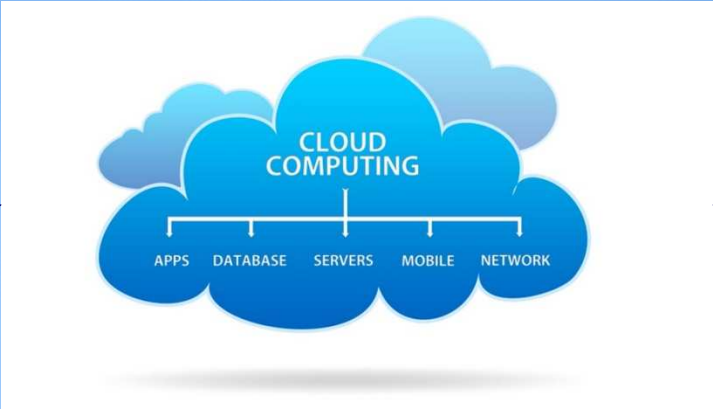
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## Unique features

- Learning function including general self-tuning regulators
- Real-time dynamic simulation using the Modelica language
- Simple graphical programming with automatic code generation

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FIRST CONTROL



# Connect to the cloud

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# Cloud computing

- IoT
- Cloud machine learning IBM Watson
- Logging to the cloud
- Global access to XC05ix units

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# Applications

- General process automation with reduce engineering costs and more control
- Embedded system for more complicated processes and machines
- Technology transfer to other automation systems
- Research tool to optimize the performance of a specific process

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# System software

The software is based on a Linux operative and are written in “C” which can easily be ported to other related CPU hardware.

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# Benefits

- New advanced tools for the end user
- Significant reduced engineering and design time
- Very easy to learn
- Automatic code generation and self-learning

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# Communication

- Modbus TCP/IP, UDP/IP
- FirstProt fast protocol (UDP/IP)
- Internal web server for maintenance
- Any other communication developed on request

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## First KX3-IO expansion card

- Dedicated CAN bus
- 32/16 Analog inputs single/diff, 16 bit, 0-10V, 0-20mA
- 12 Analog outputs, 12 bit, 0-10V, 0-20mA
- 12 Digital inputs, 24VDC
- 20 Digital outputs, 24 VDC

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## Other IO suppliers

- WAGO IO units
- Phoenix IO units
- All suppliers with Modbus TCP/UDP

