

# Micro800 Controllers



Flexible and Customizable Micro Control Solutions  
for Your Standalone Machines



# Micro800 Controllers

## Personalized Solutions for Your Micro Application Needs

For a customized solution that provides basic control for standalone machines, turn to the Allen-Bradley® Micro800™ programmable logic controller (PLC) family. Available in different form factors, these micro controllers are optimized to deliver a Smart, Productive, Secure solution throughout all phases of your machine lifecycle: design, develop, deliver and engage, all at a micro application level.



### Benefits

#### Cost-effective Solution

- ▶ Reduce controller footprint by using plug-in modules to expand controller functionality
- ▶ Reduce hardware costs and meet operational needs by scaling machine with support for up to eight expansion I/O modules and 304 digital I/O points
- ▶ Produce reliable close loop control systems with embedded PID instructions and floating point calculations

#### Easy to Install, Program and Maintain

- ▶ Program controllers and other devices with ease using the Connected Components Workbench™ software
- ▶ Reduce programming time by leveraging user-defined functions (UDFs) and user-defined function blocks (UDFBs)
- ▶ Shorten machine development time with up to 280 KB memory size and support for up to 20,000 programming steps
- ▶ Reduce wiring time with removable terminal blocks

#### Connect Controllers Conveniently

- ▶ Communicate easily to various devices through embedded Ethernet, Serial, and USB ports
- ▶ Complement new or existing third-party devices by connecting via EtherNet/IP™, DeviceNet®, Modbus TCP, Modbus RTU, ASCII and Open Socket capabilities
- ▶ Control drives and communicate to other controllers with ease using symbolic addressing with client messaging

### Smart Machines and Equipment

Partner with Rockwell Automation® today to enhance productivity and profitability through smart machines and equipment.

- ▶ Make any standalone machine smart by adding a Micro800 controller with embedded EtherNet/IP to connect to the enterprise
- ▶ Reduce unplanned downtime with performance information from smart devices connected to a Micro800 controller and relay this information over EtherNet/IP to the enterprise
- ▶ Gain more programming freedom and maintain just one large program for all machine models and configurations by using modular programming with UDFs and UDFBs
- ▶ Minimize downtime by leveraging real-time diagnostic data from sensors and actuators, made available through the wide range of Micro800 I/O and communications options
- ▶ Reduce operational costs by making machines more flexible and smart, enabled by the robust Micro800 controller programming to reduce mechanical setup times
- ▶ Simplify machine design and easily create a smart Micro800 control system using Connected Components Workbench software, including visualization and safety

## Key Machine and Equipment Builder (OEM) Segments

Smart machines go a long way in helping businesses optimize their production and supply chain. Micro800 controllers can be applied on a wide range of applications, including:

### Packaging

“ We get the same tray erecting performance as the servo-based machine, but at a lower speed and a more attractive entry-level price. The panel is also much more compact – roughly 25 percent the size of the servo solution due to the smaller electronic components used.

**Linkx Systems Ltd, United Kingdom ”**



### Material Handling

“ The Micro820® controllers are great for applications with low I/O requirements and they are one of the very few PLCs on the market that provide great value, delivering Ethernet capabilities and serial Modbus control of variable speed drives. The scan time is about three milliseconds in our application, which is very fast.

**Compac Sorting Equipment, New Zealand ”**



### Process

“ Thanks to recipe integration and the new control system, one of our customers was able to reduce his mix time by about 30 percent, which helped improve the efficiency of his entire operation.

**AMF Bakery Systems, United States of America ”**



### Heavy Industry Equipment

“ With a product as good as the MicroLogix™ used in many of our units throughout Mexico and Central America, it was difficult to exceed the expectations of a new and better product, and the Micro800 family did. Now connectivity, performance and versatility have improved, not to mention the programming environment that remains friendly and powerful.

**Grupo Zeta, Mexico ”**



### Manufacturing and Assembly



Reduce operating cost and minimize scrap when manufacturing or assembling materials into various finished products

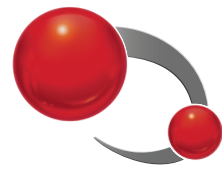


### Converting and Web Handling Automation

Minimize waste when converting rolled materials into useful products with precise control for speed, tension, and torque

Learn more:  
[rok.auto/machinebuilder](http://rok.auto/machinebuilder)





# Connected Components Workbench Software

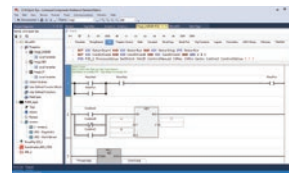
## Easy to Configure

- ▶ Reduce development time with a common project for all devices
- ▶ Select and discover devices via plug and play USB or EtherNet/IP™
- ▶ Configure PowerFlex® AC drives with intuitive parameter groups and the help of wizards
- ▶ Configure Guardmaster® 440C-CR30 software configurable safety relay using function blocks instead of switches or wiring
- ▶ Update device firmware from project organizer without ControlFLASH™



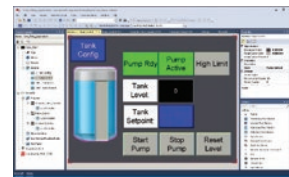
## Easy to Program

- ▶ Program Micro800™ controllers in Ladder Diagram, Function Block Diagram and Structured Text with symbolic addressing
- ▶ Program in your preferred environment by switching instruction names between default IEC and Logix themes
- ▶ Run Mode Change simplifies debugging
- ▶ Reduce programming time using sample code and Rockwell Automation® building blocks
- ▶ Supports Open Socket programming for communication to Ethernet devices



## Easy to Visualize

- ▶ Use application-specific Human Machine Interface (HMI) templates for PanelView™ 800 graphic terminal from Rockwell Automation building blocks
- ▶ Save time and reduce complexity of referencing controller tags by browsing into the Micro800 program and into the CompactLogix™ 5370 program to configure communications
- ▶ Map PanelView 800 tags to Micro800 controllers and CompactLogix 5370 controllers (L5X file) using Import function
- ▶ Simple object animation by using tags to determine the size and location on the screen



## Latest release for Connected Components Workbench software

- ▶ Program in preferred environment with Logix Theme
- ▶ Design and debug application code in a controlled environment using Micro800 Simulator
- ▶ Capture, view and analyze real-time data with PowerFlex drives and Micro800 Trending
- ▶ Perform simple object animation with PanelView 800 DesignStation



*Standard Edition is available as a free web download or free DVD. Includes demo version of Micro800 Simulator and free technical support.*

*Developer Edition offers additional features including full version of Micro800 Simulator and Archive Manager, as well as extensive Micro800 controller programming capabilities for an enhanced user experience.*

For more information on software specifications and supported products, visit [rok.auto/ccw](http://rok.auto/ccw)

Allen-Bradley, CompactLogix, Connected Components Workbench, ControlFLASH, Encompass, Guardmaster, Micro800, Micro810, Micro820, Micro830, Micro850, Micro870, MicroLogix, PanelView, PowerFlex, Rockwell Automation, Rockwell Software and TechConnect are trademarks of Rockwell Automation, Inc. EtherNet/IP and DeviceNet are trademarks of the ODVA, Inc. Trademarks not belonging to Rockwell Automation are property of their respective companies.

**[www.rockwellautomation.com](http://www.rockwellautomation.com)**

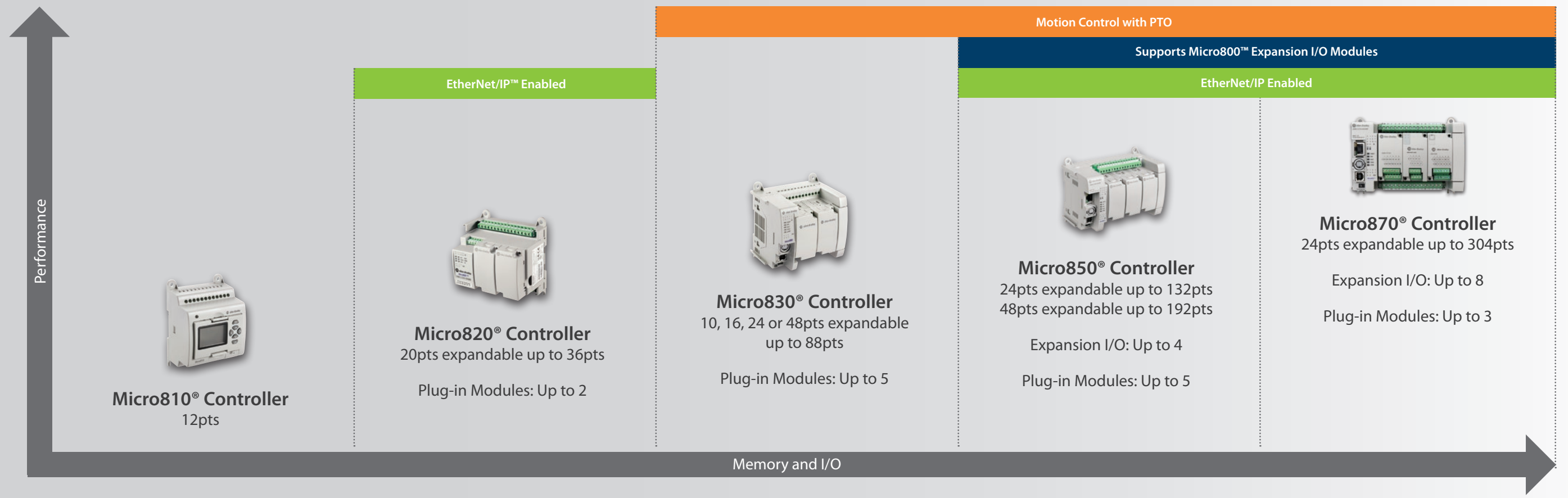
### Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

## At-A-Glance



### Micro870 Controller

#### Highest Memory and I/O

- ▶ Supports up to 8 Expansion I/O modules, up to 304 digital I/O points
- ▶ Offers 280 KB memory that supports up to 128 KB user data, up to 20,000 program steps
- ▶ 100 kHz speed high-speed counter (HSC) inputs on 24V DC models
- ▶ Motion capabilities with support for up to 2 axes with Pulse Train Outputs (PTO)
- ▶ Supports microSD™ card for program transfer, datalog and recipe management



Learn more:

[ab.rockwellautomation.com/Programmable-Controllers/Micro870](http://ab.rockwellautomation.com/Programmable-Controllers/Micro870)

### Micro850 Controller

#### Customizable with Plug-in and Expansion

- ▶ Supports up to 4 Expansion I/O modules, up to 132 or 192 digital I/O points
- ▶ Embedded USB programming port, Ethernet port and non-isolated serial port
- ▶ 100 kHz speed HSC inputs on 24V DC models
- ▶ Motion capabilities with support for up to 3 axes with PTO
- ▶ Supports microSD card for program transfer, datalog and recipe management

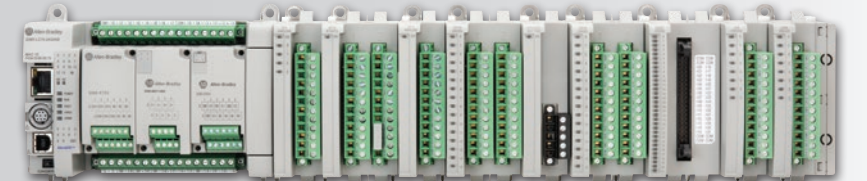


Learn more:

[ab.rockwellautomation.com/Programmable-Controllers/Micro850](http://ab.rockwellautomation.com/Programmable-Controllers/Micro850)

### Micro800 Expansion I/O Modules, Bulletin 2085

- ▶ Snaps firmly to the right side of controller with removable terminal blocks for ease of installation, maintenance and wiring
- ▶ Reduces space consumption with high-density digital and analog I/Os



Learn more:

[ab.rockwellautomation.com/IO/Chassis-Based/2085-Micro800-Expansion-IO](http://ab.rockwellautomation.com/IO/Chassis-Based/2085-Micro800-Expansion-IO)

### Micro830 Controller

#### Flexible with Simple Motion

- ▶ Embedded USB programming port and non-isolated serial port
- ▶ 100 kHz speed HSC inputs on 24V DC models
- ▶ Motion capabilities with support for up to 3 axes with PTO
- ▶ Supports microSD card for program transfer, datalog and recipe management



Learn more:

[ab.rockwellautomation.com/Programmable-Controllers/Micro830](http://ab.rockwellautomation.com/Programmable-Controllers/Micro830)

### Micro820 Controller

#### Ethernet Enabled for Remote Automation

- ▶ Embedded Ethernet port and non-isolated serial port
- ▶ Embedded analog input and output
- ▶ Built-in real-time clock (RTC)
- ▶ Embedded microSD slot for program transfer, datalog and recipe management



Learn more:

[ab.rockwellautomation.com/Programmable-Controllers/Micro820](http://ab.rockwellautomation.com/Programmable-Controllers/Micro820)

### Micro810 Controller

#### Smart Relay

- ▶ Embedded smart relay function block
- ▶ High current relay output
- ▶ Embedded analog input and built-in RTC
- ▶ Optional 1.5 inch LCD module



Learn more:

[ab.rockwellautomation.com/Programmable-Controllers/Micro810](http://ab.rockwellautomation.com/Programmable-Controllers/Micro810)

### Micro800 Controller Plug-in Modules

#### Customize Your Applications with Space-saving Plug-in Modules

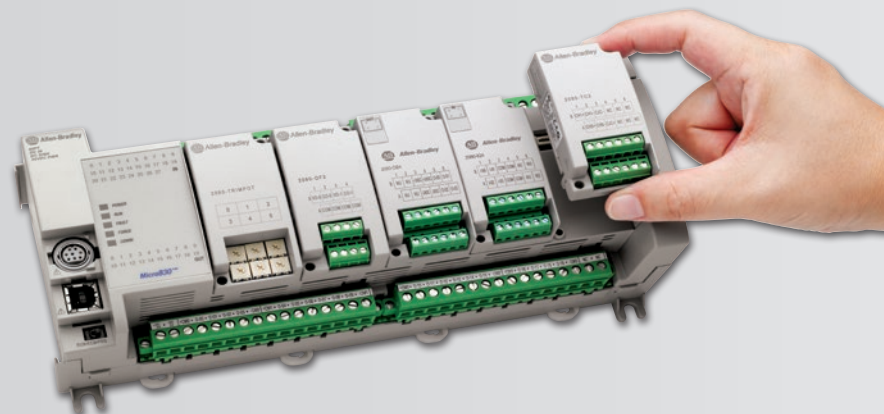
- ▶ Extend the digital and analog I/O functionality without increasing the footprint of your controller
- ▶ Increase communication functionality
- ▶ Utilize the expertise of Encompass™ Product Partners to add enhanced capabilities with tighter integration to the controller
- ▶ Plug-in flexibility applies to Micro820, Micro830, Micro850 and Micro870 controllers

Learn more:

[ab.rockwellautomation.com/Programmable-Controllers/Micro800-Plug-in-Modules](http://ab.rockwellautomation.com/Programmable-Controllers/Micro800-Plug-in-Modules)

Learn more about our Encompass Partners:

[rockwellautomation.com/global/sales-partners/partnernetwork.page](http://rockwellautomation.com/global/sales-partners/partnernetwork.page)



### Micro800 Remote LCD Display

#### Simple HMI to Micro820 Controller

- ▶ 4 or 8 lines of ASCII text and tactile keypad
- ▶ Embedded USB port for program upload/download and debugging to controller
- ▶ System menu available in multiple languages
- ▶ Front panel and DIN rail mounting supported



# Micro800 Controllers

## Optimized for customization, cost, and performance



Find out more at  
**[rok.auto/micro800](http://rok.auto/micro800)**

# Rockwell Automation

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