



# MICRO CONTROL SYSTEM

**Scale your control and connect all  
your smart devices with ease**



# Simplify your smart machine development

## Integrated Automation Solution for smart manufacturing

As market needs of industry and application requirements evolve, and as available technology improves, we continue to enhance our Micro Control System with expanded capabilities. Designed for large standalone machine applications, our Micro Control System offers a cost-effective and customizable solution. It helps reduce development time and improve productivity with easy network connectivity at the convenience of one programming software.

The core elements supporting the solution are micro controllers, drives, graphic terminals, safety, motion, and one integrated design software.

### Optimize machine performance with the right products

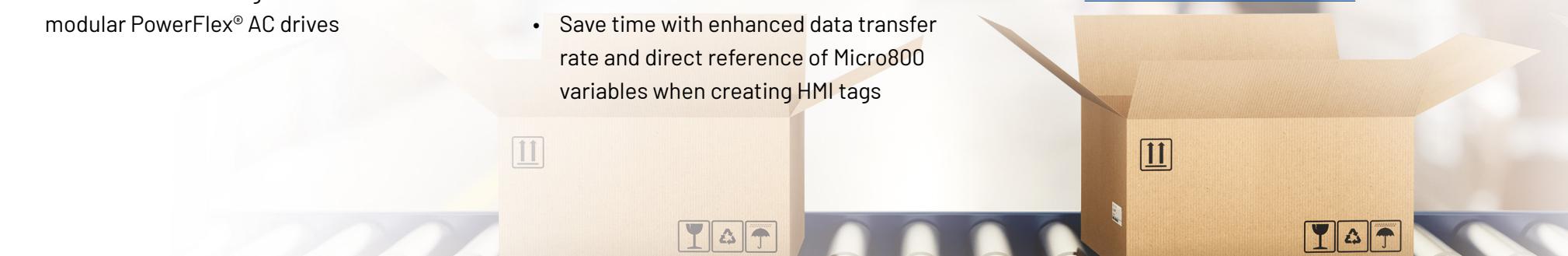
- Leverage the flexibility of Micro800™ controllers, which can be customized with plug-in and expansion I/O modules
- Minimize downtime with remote monitoring by using PanelView™ 800 graphic terminals and a Virtual Network Computing (VNC) server
- Optimize panel space and ease installation and configuration with modular PowerFlex® AC drives

### Accelerate machine time to market with one programming software

- Reduce development time with Connected Components Workbench™ software for your controller programming and simulation, device configuration, and integration with Human Machine Interface (HMI) editor
- Simplify programming using the converter tool with Logix Theme and copy/paste of code share between application software
- Save time with enhanced data transfer rate and direct reference of Micro800 variables when creating HMI tags

### Ship your machine anywhere in the world

- Products comply with the latest global standards
- Software is available in multiple languages: English, French, German, International Spanish, Italian, Portuguese, and Simplified Chinese
- Rockwell Automation provides global support through your [local distributor](#) or [Rockwell Automation Sales](#)

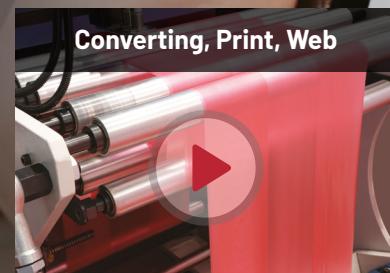


# Smarter Machines with Micro Control

Technologies are ever changing at a faster pace than before. Businesses need smart, high performing and flexible machines that offer seamless integration into a facility.

Evaluating strategic ways to reduce costs and time to market while keeping current with technology is essential to stay ahead of competition.

Rockwell Automation® Micro Control System can help increase business agility to evolving market requirements with its customizable, cost-optimized and easy-to-use architecture. This innovative automation control system, packaged with design tools, supports every stage of your machinery lifecycle to lower the cost to design, develop, deliver, and engage with customers.



A screenshot of a web browser displaying the Rockwell Automation website. The URL is rockwellautomation.com/en-us/capabilities/industrial-auto. The page title is "Micro Control Systems". Below it, the sub-section "Solutions for Standalone Machine Development" is visible. The background of the page shows various industrial automation components like sensors and actuators.

# Products that enable the Micro Control System

## Micro800 controllers

The Allen-Bradley® Micro800 programmable logic controller (PLC) family, together with Connected Components Workbench software, sets a new global standard for ease of use, while providing enough control capability to match your application requirements. With a wide range of network protocols, finding the right controller to fit your communication needs is easy.

With greater flexibility in mind, Micro800 plug-in and expansion I/O modules extend the functionality of embedded I/O without increasing the footprint of your controller. You can buy only the functionality you need to scale your control and use plug-in modules to customize the system for your specific application needs. The controllers offer a scalable Micro Control solution for smart machine development.



**Start smart. Enable Micro800 controllers for cloud connectivity.**

[Watch now.](#)

- ▶ **Micro810® controller**  
Smart relay



- ▶ **Micro820® controller**  
Remote automation



- ▶ **Micro830® controller**  
Simple motion



- ▶ **Micro850® controller**  
3 axes of motion support



- ▶ **Micro870® controller**  
Highest memory and I/O



Each controller is **optimized**  
**for performance and**  
**customization**

## PanelView 800 graphic terminals

**Optimized for compatibility with Micro800 controllers and connectivity to CompactLogix™ 5370 L1, L2, L3; CompactLogix and Compact GuardLogix® 5380 L306x controllers**

PanelView 800 graphic terminals provide a compact space-saving design with a high-speed processor and high-resolution touch screen display with 65K colors. These graphic terminals offer a high-performance control and visualization solution with the ability to scale between Allen-Bradley micro and small control systems, coupled with remote monitoring capabilities.



[Learn more](#)

## PowerFlex AC drives

**Ability to reduce engineering and maintenance time with simple configuration and easy programming**

PowerFlex AC drives offer a flexible and cost-effective motor control solution for standalone machine level applications or simple system integration. This general-purpose class of drives provides a compact and modular design to optimize panel space and application versatility. These drives help simplify configuration and save programming time with a choice of easy-to-use software packages and tools.



[PowerFlex 523](#)

[PowerFlex 525](#)

## Kinetix 5100 servo drives and TL and TLY servo motors

**Simplified machine design and faster time to market with a scalable servo option in a single product**

Kinetix® 5100 servo drives and Kinetix TL and TLY servo motors allow the user to tailor the axes in their machine to the actual power requirement, which minimizes system size and cost. The drives and motors also help to provide easier configuration, startup and commissioning by allowing standardization on one communication network.



[Kinetix 5100 servo drives](#)

[Kinetix TL and TLY servo motors](#)

## GuardShield POC safety light curtains

**Available with CIP Safety™ over EtherNet/IP™, Allen-Bradley 450L GuardShield™ safety light curtains allow you to integrate safety control into your architecture seamlessly**

Designed to improve productivity and increase efficiency, the GuardShield Point of Operation Control (POC) safety light curtains include patented technology that allows each transceiver to be used as a transmitter or receiver via an innovative plug-in module. The 450L-B is the basic model with on/off functionality, while the advanced 450L-E model extends those features and functionality to include integrated laser alignment and cascading. The safety light curtains can be configured easily through DIP switches on dedicated plug-in modules.



[Learn more](#)

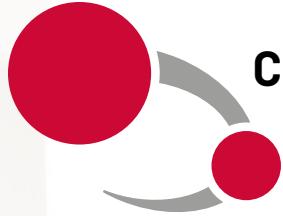
## Guardmaster 440C-CR30 software configurable safety relay

**Ideal for applications requiring as many as 10 dual-channel safety circuits and controlling as many as five output zones**

The Guardmaster® 440C-CR30 software configurable safety relay is flexible, cost-effective and easy to use, with rapid configuration via certified safety function blocks. The complete integration with Micro800 controllers allows the relay to be configured in one software environment for standard and safety control, using Connected Components Workbench software. Its optional EtherNet/IP plug-in module can share information with the control system to help increase uptime.



[Learn more](#)



## Connected Components Workbench software

### Simplify standalone machine development

As the integrated design software for Micro Control Systems, Connected Components Workbench software provides controller programming and simulation, device configuration, and integration with Human Machine Interface (HMI) editor while reducing initial machine development time and cost.

#### ► Overview



Micro Control  
System  
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Smarter  
machines  
PG 3

Controllers  
PG 4

Graphic terminals  
and drives  
PG 5

Safety  
products  
PG 6

**Software**  
**PG 7 - 8**

Resources  
PG 9

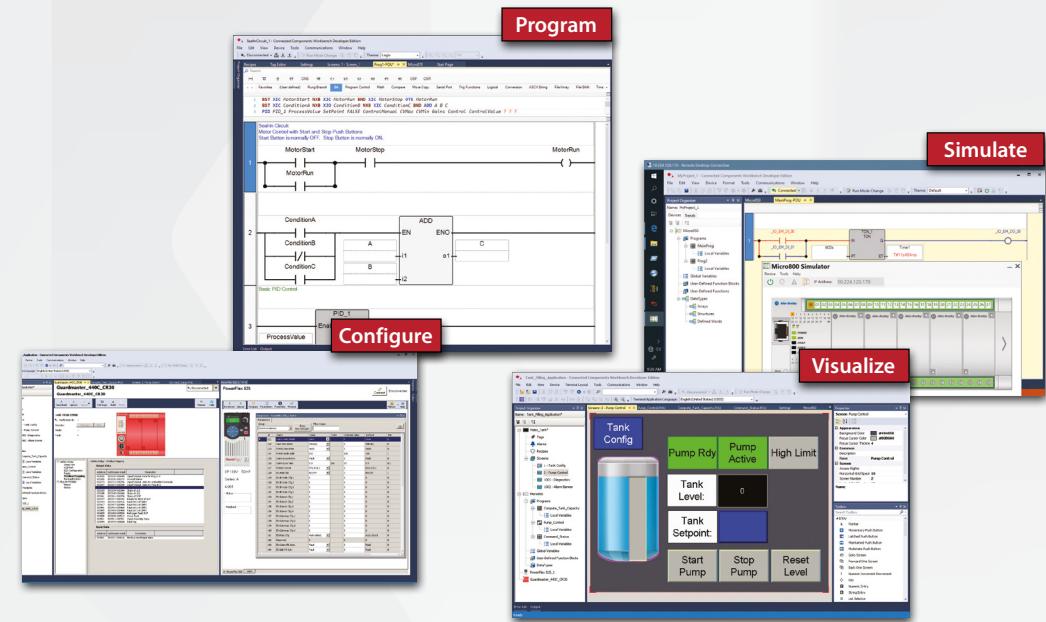
## Connected Components Workbench Software

- Program in your preferred environment by switching instruction names between the default IEC and Logix Themes
- Shorten Micro800 controller programming time by entering and modifying ladder rungs quickly using similar workflows as RSLogix 500® and Studio 5000 Logix Designer® applications
- Search for and add instructions with ease using Instruction Toolbar
- Reduce development time with code share between Connected Components Workbench software and Studio 5000 Logix Designer application using the copy and paste feature
- Ease configuration with expanded communications options through the user-friendly UI for DNP3, DF1 and Class 1 connectivity



## Gain programming efficiency

- Reduce development time with one software to configure multiple devices for standalone machines
- Ease connectivity to devices through various serial and network options
- Simplify programming process with sample code, user-defined functions (UDFs) and user-defined function blocks (UDFBs)
- Increase security with the password set/verify and user project encryption/decryption
- Shorten design time by scaling controllers and applications with converter tool and copy/paste feature
- Save engineering time with direct copy and paste from Studio 5000 Logix Designer in Logix Theme environment
- Ease programming through direct access to pre-defined tags for PowerFlex 520 series and Kinetix 5100 drives using Connected Components Workbench software version 21 or later



# Resources

Leverage our self-paced tutorials, selection and how-to publications, and self-service tools to ease your standalone machine development.

## Learn more about Micro Control System

### Optimize productivity with the right products

- ▶ Modernize from [MicroLogix™ to Micro800 controllers](#)
- ▶ Select the right components using the [Essential Components Selection Guide](#)
- ▶ Customize your control system with [Micro800 controllers](#)
- ▶ Visualize with [PanelView 800 graphic terminals](#)
- ▶ Simplify configuration with [PowerFlex 520 series drives](#)
- ▶ Scale motion control with [Kinetix 5100 servo drives and TL and TLY servo motors](#)
- ▶ Save design time with [Connected Components Workbench Software Guide for Studio 5000 Logix Designer Software Users](#)

### Leverage tools that support your application

- ▶ [Sample Code Library](#)
- ▶ [Integrated Architecture® Builder](#)

### Ease engineering with these useful videos

- ▶ Program Micro800 controllers at [rok.auto/micro800videos](http://rok.auto/micro800videos)
- ▶ Design with Connected Components Workbench software at [rok.auto/ccwvideos](http://rok.auto/ccwvideos)
- ▶ Configure PanelView 800 graphic terminals at [rok.auto/pv800videos](http://rok.auto/pv800videos)
- ▶ Discover [essential safety components](#)

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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) 2663 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  
UNITED KINGDOM: Rockwell Automation Ltd., Pitfield, Kiln Farm, Milton Keynes, MK11 3DR, United Kingdom, Tel: (44)(1908) 838-800, Fax: (44)(1908) 261-917

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