



***Allen-Bradley***

by ROCKWELL AUTOMATION

# Micro800 Controllers

Scalable micro control solution  
for your standalone machines



**Rockwell  
Automation**

▶ BEGIN

## Customize for your application needs

Make your machines smarter and increase speed to market with the Allen-Bradley® Micro800™ programmable logic controller (PLC) family.

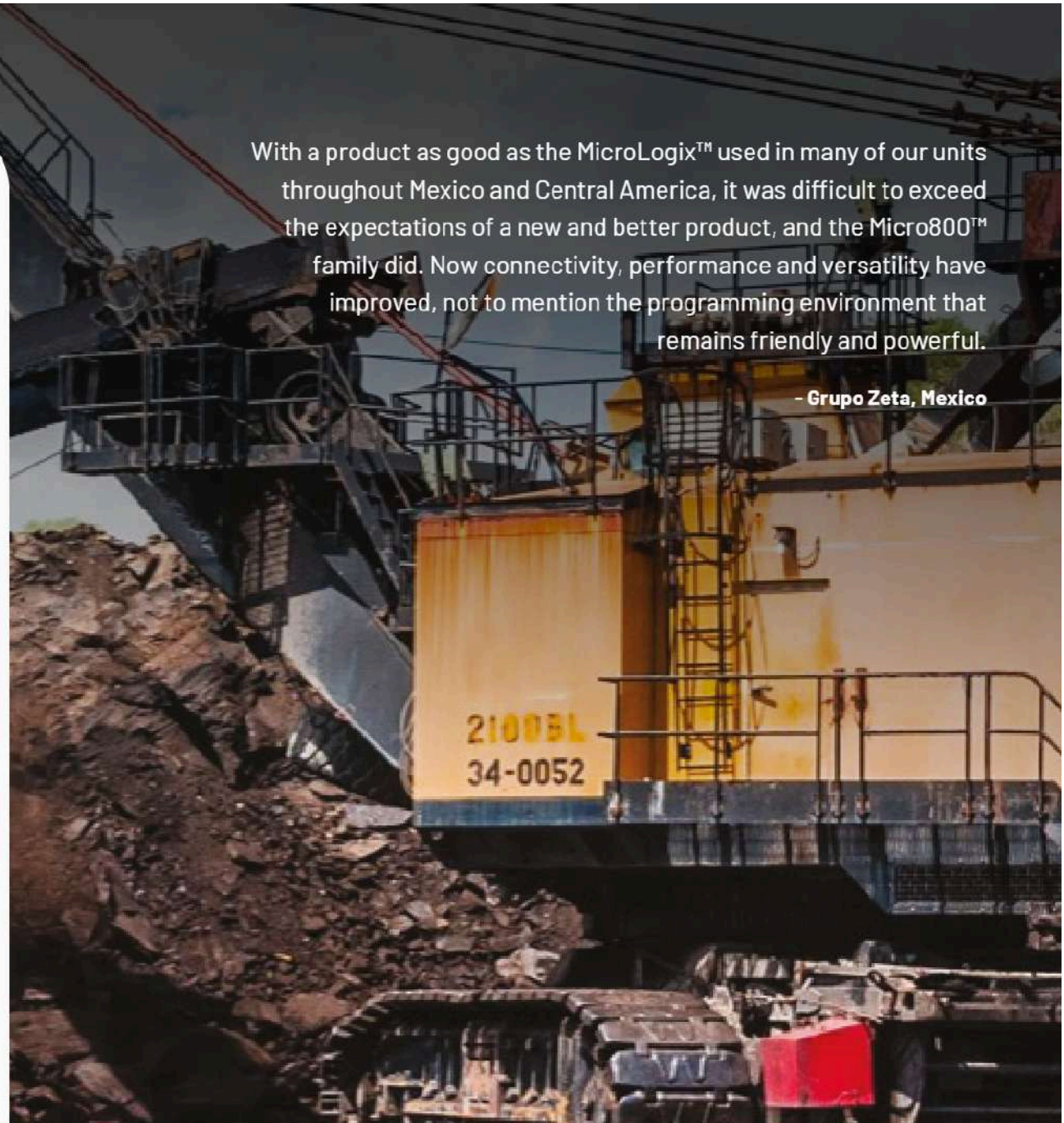
The Micro800 controller platform offers a scalable and robust Micro Control solution for small to large standalone applications. Available in different form factors, these controllers are designed and built with customization and flexibility in mind. You can buy only the functionality you need and use plug-in modules to match your application requirements.

Our Micro800 control system with Connected Components Workbench™ software can help reduce machine design time and maximize productivity.

**Start smart and drive operational efficiency** today.

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



# Achieve results

## Optimize operational productivity

- Reduce controller footprint by using plug-in modules to expand controller functionality
- Achieve operations and hardware cost efficiency by scaling the machine with support up to eight expansion I/O modules and 304 digital I/O points
- Produce reliable closed loop control systems with embedded proportional integral derivative (PID) instructions and floating point calculations
- Reduce unplanned downtime with performance information from smart devices connected to a Micro800 controller and relay this information over EtherNet/IP™ to the enterprise

## Simplify engineering and installation

- Ease development and create a smart Micro800 control system using Connected Components Workbench software, including visualization and safety
- Accelerate deployment time with modular programming across machine models and configurations using user-defined functions (UDFs), user-defined function blocks (UDFBs) and sample application code
- Reduce programming time in Logix Theme environment by reusing code from Studio 5000 Logix Designer® application and support for up to 20,000 programming steps with up to 280 KB memory size
- Shorten wiring time with removable terminal blocks
- Ease integration of PowerFlex® 520 series and Kinetix® 5100 drives to Micro800 controllers over EtherNet/IP with pre-defined tags available in Connected Components Workbench software version 21 or later

## Connect controllers conveniently

- Control drives and communicate to other controllers with ease using symbolic addressing with client messaging
- Enhance usability with direct application upload or download when connected to PanelView™ 800 graphic terminals



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**

# Micro800™ controllers at-a-glance

Performance and features

DNP3 support

DF1 support (full-duplex, half-duplex and radio modem)

CIP™ Symbolic and Programmable Controller Communication Commands (PCCC)

Supports expansion modules

Motion control with pulse train output (PTO)

Class 1 implicit messaging support\*

Supports plug-in modules and microSD™ cards






EtherNet/IP™ enabled



Memory and I/O

\*Supported in Micro820®, Micro850® and Micro870® Lx0E controllers

# Select a Micro800™ controller

Attribute	Micro810®	Micro820® LC20 or L20E	Micro850® L50E		Micro870® L70E
					
Embedded digital I/O points	12	19	24	48	24
Maximum digital I/O	12	35	132	192	304
Communication options and protocols	<ul style="list-style-type: none"> <li>• USB programming port (with adapter)</li> </ul>	<ul style="list-style-type: none"> <li>• USB programming port (with 2080-REMLCD)</li> <li>• USB Type C port<sup>1</sup></li> <li>• CIP™ Serial, DF1, Modbus RTU, ASCII</li> <li>• EtherNet/IP™, Modbus TCP</li> </ul>	<ul style="list-style-type: none"> <li>• Embedded USB programming port</li> <li>• USB programming port (with 2080-REMLCD)<sup>2</sup></li> <li>• CIP Serial, DF1, Modbus RTU, ASCII</li> <li>• EtherNet/IP, Modbus TCP</li> </ul>	<ul style="list-style-type: none"> <li>• Embedded USB programming port</li> <li>• USB programming port (with 2080-REMLCD)<sup>2</sup></li> <li>• CIP Serial, DF1, Modbus RTU, ASCII</li> <li>• EtherNet/IP, Modbus TCP, DNP3<sup>3</sup></li> </ul>	
Class 1 implicit messaging <sup>4</sup>	–	<ul style="list-style-type: none"> <li>• Up to four Ethernet nodes<sup>1</sup></li> <li>• Supported with firmware revision 23.011 or later</li> </ul>	<ul style="list-style-type: none"> <li>• Up to eight Ethernet nodes</li> <li>• Supported with firmware revision 21.011 or later</li> </ul>		
High-speed counter (HSC) input	–	100 kHz speed HSC inputs on 24V DC models			
Motion support	–	–	Up to three axes with PTO	Up to two axes with PTO	
microSD™ use for program transfer, datalog and recipe management	–	Embedded slot	Supports card		
Software	Connected Components Workbench™ software				

<sup>1</sup>Available with Micro820® L20E controllers

<sup>2</sup>Requires 2080-Lx0E controllers supported with Connected Components Workbench™ software version 23 or later

<sup>3</sup>Supported with Micro870® controllers, catalogs 2080-L70E-xxxxN

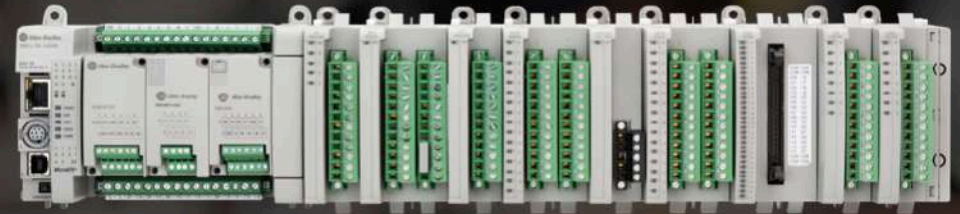
<sup>4</sup>Supported with Micro800™ Lx0E controllers

See **Micro800™ Programmable Controllers Family Selection Guide** (publication 2080-S6001) for more details.

# Scale and customize your control system architecture

## Micro800 expansion I/O modules

- Ease installation, wiring and maintenance with removable terminal blocks
- Save space with high-density digital and analog I/O
- Gain temperature control with high accuracy RTD and thermocouple module
- Minimize downtime with real-time diagnostic data from sensors and actuators, made available through the wide range of Micro800 I/O and communications options



## Micro800 plug-in modules

- Extend the digital and analog I/O functionality without increasing the controller footprint
- Increase communication functionality
- Achieve tighter integration by adding enhanced capabilities using the expertise of Technology Partners
- Add on to Micro820®, Micro850® and Micro870® controllers

## Remote LCD, compatible with Micro820, Micro850\* and Micro870\* controllers

- Gain visualization and control using four or eight lines of ASCII text and a tactile keypad
- Program and debug controller with ease by uploading/downloading program using the embedded USB port
- Ease programming with system menu in multiple languages
- Reduce installation time and effort with option for front panel and DIN rail mounting



[▶ Discover complementary products from our Technology Partners](#)

\* Requires 2080-Lx0E controllers supported with Connected Components Workbench software version 23 or later

# Program your controllers with Connected Components Workbench software

## Program

- Leverage the latest design technology that is optimized for compatibility with Micro800 controllers
- Program in your preferred environment by switching between default IEC and Logix Theme easily
- Reduce operational costs by making machines more flexible and smart, enabled by the robust Micro800 controller programming to reduce mechanical setup times
- Reduce programming time with Filter and Quick Declaration features in the Global and Local Variable data grid
- 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
- Increase efficiency with the faster data transfer rate and enhanced Run Mode Change (RMC) capabilities
- Increase system security with password set/verify and user project encryption/decryption

## Simulate

- Experience digital engineering and programming without hardware
- Develop and test application code in a controlled environment using the Micro800 Simulator
- Boost productivity with remote communication validation by connecting EtherNet/IP devices to the Micro800 Simulator

## Configure

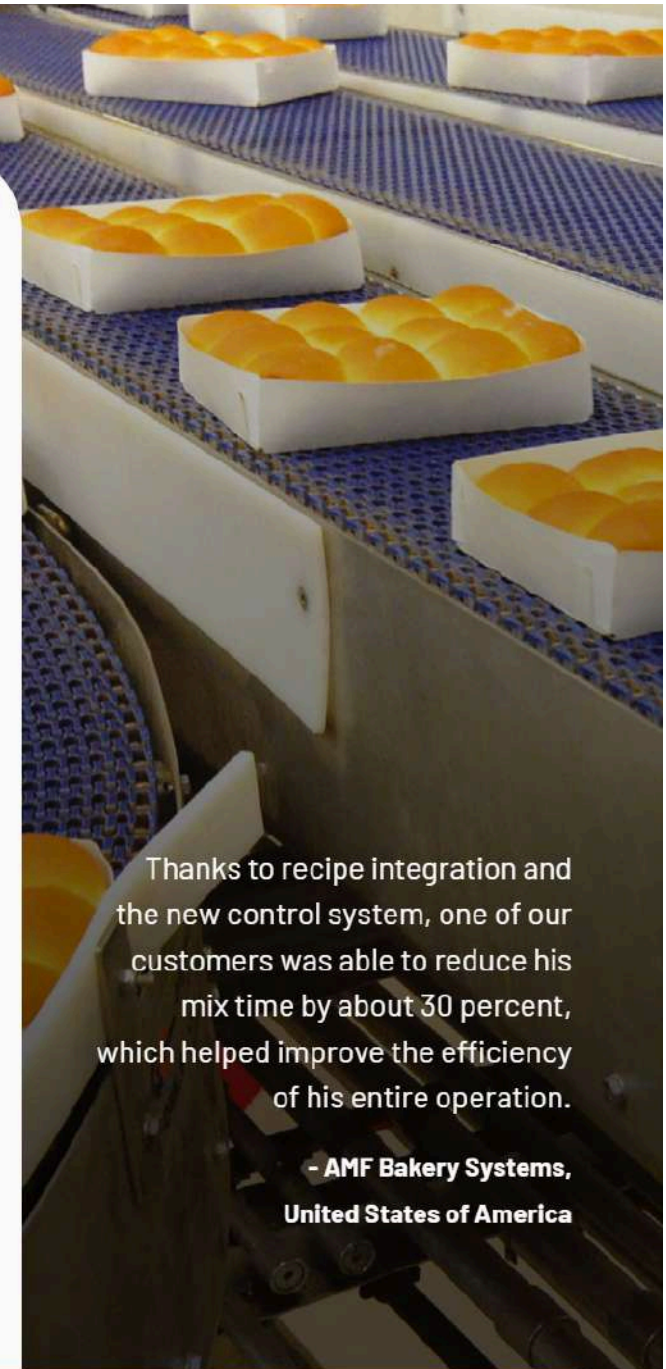
- Reduce development time with a common project for all devices
- Ease configuration with a wide range of communication options and protocols: USB programming port, non-isolated Serial port (RS-232 and RS-485), Ethernet port, EtherNet/IP, DNP3, DF1, and Programmable Controller Communication Commands (PCCC)
- Update device firmware from project organizer without ControlFLASH™

## Visualize

- Integrate a PanelView 800 graphic terminal application with a Micro800 controller using DesignStation
- Save time by referencing Micro800 controller variables to Human Machine Interface (HMI) tags directly
- Gain flexibility to perform object animation automation without controller

▶ Learn more at [rok.auto/ccw](http://rok.auto/ccw)

▶ Accelerate machine development with [one integrated design software](#)






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**

## LEARN MORE

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- ▶ Visit [rok.auto/micro800](https://rok.auto/micro800)
- ▶ Boost efficiency with self-paced tutorials at [rok.auto/micro800videos](https://rok.auto/micro800videos)
- ▶ Automate machines with [Micro Control Systems](#)

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[rockwellautomation.com](https://rockwellautomation.com)

expanding **human possibility**<sup>®</sup>

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