

# Micro850® Programmable Logic Controller

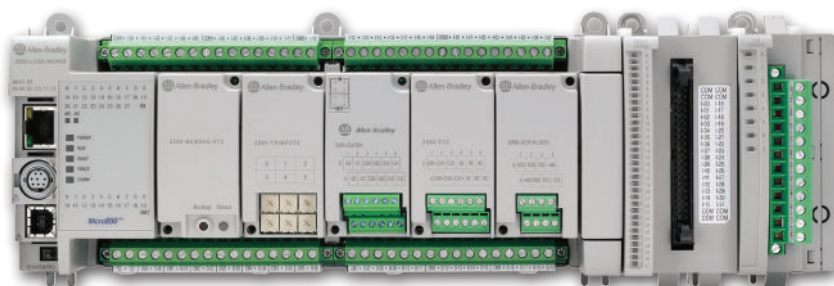
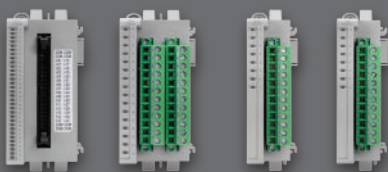


Bulletin 2080 and 2085 Product Profile

## Features and Benefits

- Equipped with same form factor, plug-in support, instruction/data size and motion capabilities as Micro830® 24-pt and 48-pt controllers
- EtherNet/IP™ for Connected Components Workbench™ programming, RTU applications and HMI connectivity. Client messaging for controlling drives and communications to other controllers using symbolic addressing.
- Designed for larger standalone machine applications that require higher density, higher precision analog and digital I/O as compared to Micro830 controller
- Expandable to a maximum of 132 digital I/O points on a 48-pt controller with Micro850 Expansion I/O modules
- Supports up to four Micro850 Expansion I/O modules
- Increased flexibility with removable terminal blocks
- Standard version of Connected Components Workbench software available as a free download

*Micro850 Expansion I/O modules empower flexibility and greater I/O performance*



Machine builders and end users looking for flexibility, personalization, greater I/O performance and space-saving solutions, the expandable Micro850 controller is just the right solution. Designed as the leading controller of the Micro800® family, it also brings Micro800 PLC family to a higher level of flexibility and customization with its space-saving Plug-in, Expansion I/O modules and its removable terminal blocks. Furthermore, Micro850 controller is equipped with the same form factor, Plug-in support, instruction/data size and embedded motion capabilities as the Micro830 24-pt and 48-pt controller. The embedded motion capabilities supports up to 3 axes of motion with TouchProbe instruction that registers position of an axis, more precisely than using interrupts. Especially designed for larger standalone machine applications, Micro850 Expansion I/O module value adds to achieving higher density, higher precision analog and digital I/O as required. Micro850 48-pt controller has the capacity to support up to 4 Expansion I/O modules at a maximum of 132 I/O points.

Connected Components Workbench software is used among the entire Micro800 family of controllers, as well as other component products, such as PanelView Component HMIs and PowerFlex drives. Based on proven Rockwell Automation and Microsoft Visual Studio technology, the new software provides controller programming, device configuration and data sharing with the HMI editor for PanelView Component operator products. In addition, the software supports three standard IEC programming languages: ladder diagram, function block diagram and structured text. For enhanced security, controller password protection is supported for all Micro800 controllers.

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## Bulletin 2080 and 2085

| Catalog Number  | Inputs            |                     | Relay | Outputs  |            | Motion Axis <sup>#</sup> | HSC <sup>*</sup> |
|-----------------|-------------------|---------------------|-------|----------|------------|--------------------------|------------------|
|                 | 120/240V AC       | 12/24V <sup>^</sup> |       | 24V Sink | 24V Source |                          |                  |
| 2080-LC50-24QWB | -                 | 14                  | 10    | -        | -          | -                        | 4 HSC            |
| 2080-LC50-48QWB | -                 | 28                  | 20    | -        | -          | -                        | 6 HSC            |
| 2080-LC50-24QBB | -                 | 14                  | -     | -        | 10         | 2 PTO                    | 4 HSC            |
| 2080-LC50-48QBB | -                 | 28                  | -     | -        | 20         | 3 PTO                    | 6 HSC            |
| 2080-LC50-24QVB | -                 | 14                  | -     | 10       | -          | 2 PTO                    | 4 HSC            |
| 2080-LC50-48QVB | -                 | 28                  | -     | 20       | -          | 3 PTO                    | 6 HSC            |
| 2080-LC50-24AWB | 14 (120V AC only) | -                   | 10    | -        | -          | -                        | -                |
| 2080-LC50-48AWB | 28 (120V AC only) | -                   | 20    | -        | -          | -                        | -                |

| Micro850                                                     | 24-pt                                                                                                    | 48-pt         |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------|
| Base Unit                                                    |                                                                                                          |               |
| Power Supply                                                 | Base Unit has embedded 24V DC Power Supply. Optional External 120/240V AC via Cat. No. 2080-PS120-240VAC |               |
| Base Programming Port                                        | Embedded USB 2.0 (non-isolated)<br>Any standard USB printer cable will work                              |               |
| Base Ethernet port                                           | EtherNet/IP Class 3,<br>Modbus TCP (10/100Mbps)                                                          |               |
| Base Plug-in Slots                                           | 3                                                                                                        | 5             |
| Base 100 KHz HSC* max                                        | 4 HSC                                                                                                    | 6 HSC         |
| I/O                                                          |                                                                                                          |               |
| Digital I/O (In/Out)                                         | 24 (14/10)                                                                                               | 48 (28/20)    |
| Analog I/O Channels                                          | Via Plug-in Modules or<br>with Expansion I/O Modules                                                     |               |
| Expansion I/O Modules                                        | up to 4 modules                                                                                          |               |
| Maximum Digital I/O<br>(via Plug-in & Expansion I/O modules) | 132                                                                                                      |               |
| Programming                                                  |                                                                                                          |               |
| Software                                                     | Connected Components Workbench                                                                           |               |
| Program Steps (or instructions)                              | 10Ksteps                                                                                                 |               |
| Data (bytes)                                                 | 20Kbytes                                                                                                 |               |
| IEC 61131-3 Languages                                        | Ladder Diagram, Function Block,<br>Structured Text                                                       |               |
| User Defined Function Blocks                                 | Yes                                                                                                      |               |
| Motion Instructions                                          | Yes                                                                                                      |               |
| Floating Point Math                                          | 32-bit and 64-bit                                                                                        |               |
| PID Loop Control                                             | Yes                                                                                                      |               |
| Embedded Serial Port Protocols                               | RS232/485, Modbus RTU Master/Slave,<br>ASCII, CIP                                                        |               |
| Environmentals                                               |                                                                                                          |               |
| Certifications                                               | c-UL-us CL1DIV2, CE, C-Tick, KC                                                                          |               |
| Temperature Range                                            | -20°...65°C                                                                                              |               |
| Dimensions (HxWxD, mm)                                       | 90 x 145 x 80                                                                                            | 90 x 230 x 80 |

<sup>^</sup> 12/24V DC and 24V AC supported

<sup>#</sup> Each Pulse Train Output Axis is shared with 2 HSC inputs so if max number of PTO is configured then number of HSC is zero

<sup>\*</sup> 2-wire High Speed Counter shown, divide by 2 to get number of 4-wire HSCs

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| Catalog Number        | Plug-in Modules                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| 2080-IQ4              | 4-pt Digital Input, 12/24VDC, Sink/Source, Type3                                                        |
| 2080-OB4              | 4-pt Digital Output, 12/24VDC, Source                                                                   |
| 2080-OV4              | 4-pt Digital Output, 12/24VDC, Sink                                                                     |
| 2080-OW4I             | 4-pt Relay Output, Individually Isolated, 2A                                                            |
| 2080-IQ4OB4           | 8-pt Combo: 4-pt Digital Input, 12/24VDC, Sink/Source, Type3, and 4-pt Digital Output, 12/24VDC, Source |
| 2080-IQ4OV4           | 8-pt Combo: 4-pt Digital Input, 12/24VDC, Sink/Source, Type3, and 4-pt Digital Output, 12/24VDC, Sink   |
| 2080-IF2, 2080-IF4    | 2/4-ch Analog Input, 0-20 mA, 0-10V, non-isolated 12-bit                                                |
| 2080-OF2              | 2-ch Analog Output 0-20 mA, 0-10V, non-isolated 12-bit                                                  |
| 2080-SERIALISOL       | RS232/485 isolated serial port                                                                          |
| 2080-TRIMPOT6         | 6-ch Trimpot Analog Input                                                                               |
| 2080-RTD2             | 2-ch RTD, non-isolated, ±1.0 °C                                                                         |
| 2080-TC2              | 2-ch TC, non-isolated, ±1.0 °C                                                                          |
| 2080-MEMBAK-RTC       | Memory Backup and High Accuracy RTC                                                                     |
| 2080-MOT-HSC          | High Speed Counter, 250 KHz, Differential Line Receiver, 1 Digital Output                               |
| 2080-DNET20           | DeviceNet Scanner, 20 Nodes                                                                             |
| Catalog Number        | Expansion I/O Modules                                                                                   |
| 2085-IQ16, 2085-IQ32T | 16/32-pt Digital Input, 12/24VDC, Sink/Source                                                           |
| 2085-OV16             | 16-pt Digital Output, 12/24VDC, Sink                                                                    |
| 2085-OB16             | 16-pt Digital Output, 12/24VDC, Source                                                                  |
| 2085-OW8, 2085-OW16   | 8/16-pt Relay output, 2A                                                                                |
| 2085-IA8              | 8-pt 120 VAC input                                                                                      |
| 2085-IM8              | 8-pt 240 VAC input                                                                                      |
| 2085-OA8              | 8-pt 120/240 VAC output                                                                                 |
| 2085-IF4, 2085-IF8    | 4/8-ch Analog Input, 0 ~ 20mA, -10V ~ +10V, isolated, 14-bit                                            |
| 2085-OF4              | 4-ch Analog Output, 0 ~ 20mA, -10V ~ +10V, isolated, 12-bit                                             |
| 2085-IRT4             | 4-ch RTD and TC, isolated, ±0.5 °C                                                                      |
| 2085-ECR              | End Cap Terminator                                                                                      |
| Catalog Number        | Accessories                                                                                             |
| 2080-PS120-240VAC     | External 120/240V AC power supply                                                                       |