Micro850® Programmable Logic Controller

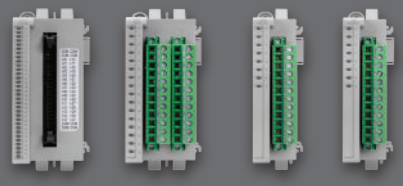
Allen-Bradley

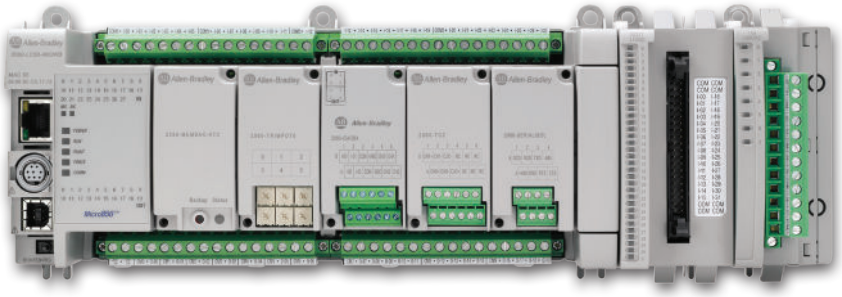
Bulletin 2080 and 2085 Product Profile

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.

Bulletin 2080 and 2085

Catalog Number	Inputs		Outputs			Motion Axis#	HSC*
	120/240V AC	12/24V^	Relay	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) Any standard USB printer cable will work	
Base Ethernet port	EtherNet/IP Class 3, 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 with Expansion I/O Modules	
Expansion I/O Modules	up to 4 modules	
Maximum Digital I/O (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, 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, 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

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

^ 12/24V DC and 24V AC supported

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

* 2-wire High Speed Counter shown, divide by 2 to get number of 4-wire HSCs

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