Micro800 Controllers Comparison

Features

Attribute	Micro810	Micro820	Micro830				Micro850	
	12-point	20-point	10-point	16-point	24-point	48-point	24-point	48-point
Communication ports, embedded	USB 2.0 (with USB adapter)	10/100 Base T Ethernet port (RJ-45) RS232/RS485 non-isolated combo serial	USB 2.0 (non-isolated) RS232/RS485 non-isolated combo serial				USB 2.0 (non-isolated) RS232/RS485 non-isolated combo serial 10/100 Base T Ethernet port (RJ-45)	
Embedded digital I/O points(1)	12	19	10	16	24	48	24	48
Base analog I/O channels	Four 24V DC digital inputs are shared as 0…10V analog inputs (DC input models only)	One 0…10V analog output Four 24V DC digital inputs can be configured as 0…10V analog inputs (DC input models only) and via plug-in modules	Via plug-in modules				Via plug-in modules and expansion I/O	
Number of plug-in modules	0	2	2	2	3	5	3	5
Maximum digital I/O(2)	12	35	26	32	48	88	132	
Types of accessories or plug-ins supported	• LCD display with backup memory module • USB adapter	• Micro800 Remote LCD (2080-REMLCD) • All-plug-in modules except 2080-MEMBAK-RTC (see page 51)	All plug-in modules (see page 51)					
Expansion I/O supported	—	—	—				All expansion I/O modules (see page 41)	
Power supply	Embedded 120/240V AC and 12/24V DC options	Base unit has embedded 24V DC power supply, optional external 120/240V AC power supply available						
Basic instruction speed	2.5 µs per basic instruction	0.30 µs per basic instruction						
Minimum scan/cycle time(3)	<0.25 ms	<4 ms	<0.25 ms					
Software	Connected Components Workbench							

(1) See Number and Types of Inputs/Outputs for Micro810, Micro820, Micro830, and Micro850 Catalogs on page 6.

(2) For Micro820 and Micro830 controllers, the number of maximum digital I/O assumes 8-point digital I/O plug-ins (for example, 2080-IQ4OB4) are used on all available plug-in slots. For Micro850 controllers, the maximum number of digital I/O supported between the base, plug-ins, and expansion I/O is 132.

(3) Including reading and writing I/O, program execution, and communications overhead.

Micro800 Plug-in Modules and Accessories – Features and Compatibility

Plug-in / Accessory	Supported by Micro810	Supported by Micro820	Supported by Micro830/Micro850	Feature
1.5" LCD and Keypad 2080-LCD	Yes	No	No	• backup module for Micro810 controllers • configure Smart Relay Function Blocks
Micro810 USB Adapter 2080-USBADAPTER	Yes	No	No	USB programming access
External Power Supply 2080-PS120-240VAC	Yes	Yes	Yes	optional controller power supply
RS232/485 Isolated Serial Port 2080-SERIALISOL	No	Yes	Yes	• adds additional serial communications with Modbus RTU and ASCII protocols • isolated for increased noise immunity
Digital Input, Output, Relay, and Combination Modules 2080-IQ4, 2080-IQ4OB4, 2080-IQ4OV4, 2080-OB4, 2080-OV4, 2080-OW4I	No	Yes	Yes	• 4-channel inputs/outputs or combination modules • configurable as voltage and current inputs • sink or source output • 4-channel relay outputs
High Speed Counter 2080-MOT-HSC	No	Yes	Yes	• Up to a minimum of 250 KHz differential line driver for improved noise immunity and additional dedicated I/O • One Quadrature (ABZ) differential inputs alternately configurable for pulse internal, pulse with external direction, A-up and B-down input configurations, and quadrature mode • User-configurable minimum and maximum values, preset, and Z operation
DeviceNet Scanner 2080-DNET20	No	Yes	Yes	• Scanner mode – scan devices such as CompactBlock™ LDX, PowerFlex® drives, overloads and sensors
Remote LCD 2080-REMLCD	No	Yes	No	• Operator interface for configuring such settings as IP address on Micro820 controller • With RS232 and USB ports
Non-isolated Unipolar Analog Input/Output 2080-IF2, 2080-IF4, 2080-OF2	No	Yes	Yes	• adds up to 20 embedded analog I/O with 12-bit resolution (with 48-point controllers) • 2 channels for 2080-IF2, 2080-OF2 • 4 channels for 2080-IF4
Non-isolated Thermocouple 2080-TC2	No	Yes	Yes	• for temperature control, when used with PID • 2 channels for 2080-TC2 and 2080-RTD2
Non-isolated RTD 2080-RTD2	No	Yes	Yes	
Memory Module with RTC 2080-MEMBAK-RTC	No	No	Yes	• backup project data and application code • high accuracy real-time clock
6-Channel Trim Potentiometer Analog Input 2080-TRIMPOT6	No	Yes	Yes	adds six analog presets for speed, position and temperature control

Memory Backup and High Accuracy RTC Plug-In (2080-MEMBAK-RTC)

Specifications (2080-MEMBAK-RTC)

Mounting torque	Terminal screw torque	Operating temperature	Non-operating temperature	Surrounding air, max	North American temp code
0.2 Nm (1.48 lb-in)	0.22....0.25 Nm (1.95…2.21 lb-in.) using a 2.5 mm (0.10 in.) flat-blade screwdriver	-20...65 °C (-4…149 °F)	-40...85 °C (-40…185 °F)	65 °C (149 °F)	T4

RS232/485 Serial Port Plug-in (2080-SERIALISOL)

Specifications (2080-SERIALISOL)

Mounting torque	Terminal screw torque	Wire size	Isolation voltage
0.2 Nm (1.48 lb-in)	0.22…0.25 Nm (1.95…2.21 lb-in) using a 2.5 mm (0.10 in.) flat-blade screwdriver	**Solid**: 0.14…1.5 mm^2 (26…16 AWG) **Stranded**: 0.14…1.0 mm^2 (26…18 AWG) rated @ 90 °C (194 °F) insulation max	500V AC

Operating temperature	Non-operating temperature	Surrounding air, max	North American temp code
-20...65 °C (-4…149 °F)	-40...85 °C (-40…185 °F)	65 °C (149 °F)	T4