

Select Family: MicroLogix 1000, 1200 or 1500 Controller

Review the Features, Programming Instructions, Controller Specifications, and Controller Dimensions to determine which level of MicroLogix controller is required.

Features

Step 1 - Select:

- controller family - based on memory, I/O, added functionality, programming instructions and dimensions
- consider future expansion requirements
- consider requirement for online editing
- consider the need for networked communication

MicroLogix Controllers Feature Comparison Chart

Controller	MicroLogix 1000	MicroLogix 1200/1200R	MicroLogix 1500 1764-LSP, 1764-LRP
Bulletin Number	1761	1762	1764
Memory (in user words) User Program/User Data			
Up to 1 KB	1 KB combined (preconfigured)		
Up to 6 KB		4 KB/2 KB	
Up to 7 KB			3.6 KB/4 KB 1764-LSP
Up to 8 KB			
Up to 14 KB			10 KB/4 KB 1764-LRP
Online editing			
Nonvolatile program and data	EEPROM	Flash	Battery back-up static RAM
Memory Module (for program back-up and transport)	Through hand-held programmer	Optional	Optional
I/O			
Embedded Digital I/O, max	32	40	28
Embedded Analog I/O	Two current and two voltage inputs with one current or voltage output on 20 pt. controllers		
Local Expansion I/O, max	None	96	512
Thermocouple/RTD	None	Expansion	Expansion
Networked Expansion I/O, max	None	None	DeviceNet network using 1769-SDN scanner can own 63 slave devices (such as a 1769-ADN adapter with up to 30 I/O modules per 1769-ADN adapter)
Added Functionality			
Trim Potentiometers		2	2
PID		✓	✓
High Speed Counters (embedded)	One @ 6.6 kHz	One @ 20 kHz	Two @ 20 kHz
High Speed Counters (expansion)			with 1769-HSC counter With two quadrature or four pulse/count @ 1 MHz
Real Time Clock		Optional	Optional
Motion: Pulse Width Modulated		1 @ 20 kHz	2 @ 20 kHz
Motion: Pulse Train Outputs		1 @ 20 kHz	2 @ 20 kHz
Data Access Tool			Optional
Data Logging			48 KB
Recipe Storage			Uses user program memory or 48 KB data logging memory
Floating Point Math		✓	✓
Programming			
Windows - RSLogix 500/Micro Software	✓	✓	✓
Hand-held Programmer	✓		
Communication			

Selecting Hardware: 1769 Compact Expansion I/O

Select I/O Modules for Each Bank			Bus Current Draw Attribute (mA)		Calculate Current Draw			
Expansion I/O Modules	Base Unit Expansion	Bank 1	X	Y	Calculated Current for Base Unit Expansion (mA)		Calculated Current for Bank 1 Power Supply (mA)	
					n1	n2	n1 x X	n1 x Y
Cat. No.	Number of Modules ⁽¹⁾		at 5V DC	at 24V DC	at 5V DC	at 24V DC	at 5V DC	at 24V DC
1769-HSC ⁽²⁾			425	0				
1769-SDN ⁽²⁾			440	0				
1769-SM1 ⁽³⁾			280	0				
1769-SM2 ⁽²⁾			350	0				
TOTAL MODULES:			SUBTOTAL2:		(A2)	(B2)	(C)	(D)

(1) Up to 16 modules can be used in a MicroLogix 1500 system when using a series B Base Unit and series C processor (up to 8 for series A base units).

A maximum of 8 modules can be connected directly to the Base Unit.

A maximum of 8 modules can be connected to each side of the Expansion Power Supply.

(2) The 1769-ASCII, 1769-HSC, 1769-SDN, and 1769-SM2 modules have a power supply distance rating of 4. They can have no more than 3 modules between them and the MicroLogix 1500 Base Unit or Expansion Power Supply.

(3) The 1769-SM1 module has a power supply distance rating of 6. They can have no more than 5 modules between it and the MicroLogix 1500 Base Unit or Expansion Power Supply.

Master List of Catalog Numbers

Cat. No.	Description	Quantity Selected
1764-MM2RTC	MicroLogix 1500 16 KB Memory Module with Real-Time Clock	
1764-M3	MicroLogix 1500 16 KB Memory Module	
1764-MM3RTC	MicroLogix 1500 16 KB Memory Module with Real-Time Clock	
1764-RTC	MicroLogix 1500 Real-Time Clock Module	
1769 Compact I/O Components		
1769-ADN	CompactLogix DeviceNet Adapter, series B	
1769-ASCII	Compact 2-channel ASCII Interface Module	
1769-BOOLEAN	Compact 24V I/O Boolean Control Module	
1769-CRL1	Compact I/O Right Bank-to-Left Bank 1-Foot Expansion Cable ⁽¹⁾	
1769-CRL3	Compact I/O Right Bank-to-Left Bank 3-Foot Expansion Cable ⁽¹⁾	
1769-CRR1	Compact I/O Right Bank-to-Right Bank 1-Foot Expansion Cable ⁽¹⁾	
1769-CRR3	Compact I/O Right Bank-to-Right Bank 3-Foot Expansion Cable ⁽¹⁾	
1769-ECL	Compact I/O Left End Cap	
1769-ECR	Compact I/O Right End Cap	
1769-HSC	Compact I/O High Speed Counter Module	
1769-IA16	Compact 120V AC Input Module	
1769-IA8I	Compact Individually Isolated 120V AC Input Module	
1769-IF4	Compact 1769-IF4 (series B or Later) Analog Input Module	
1769-IF4I	Compact 4-channel Isolated Analog Input Module	
1769-IF4XOF2	Compact 8-Bit Low Resolution Analog I/O Combination Module	
1769-IF4FXOF2F	Compact Combination Fast Analog I/O Module	
1769-IF8	Compact 8-channel Analog Input Module	
1769-IF16C	Compact High Density Analog Current Input Module	
1769-IF16V	Compact High Density Analog Voltage Input Module	
1769-IG16	Compact TTL Input Module	
1769-IM12	Compact 240V AC Input Module	
1769-IQ16	CompactLogix 24V DC 16-point Sink/Source Input Module	
1769-IQ16F	CompactLogix 24V DC 16-point High Speed Sink/Source Input Module	
1769-IQ32	CompactLogix 24V DC 32-point Sink/Source Input Module	
1769-IQ32T	Compact Current Sinking/Sourcing 24V DC Input Module	
1769-IQ6XOW4	Compact Combination 24V DC Sink/Source Input & AC/DC Relay Output Module	
1769-IR6	Compact I/O 1769-IR6 RTD/resistance Input Module	
1769-IT6	Compact I/O 1769-IT6 Thermocouple/mV Input Module	
1769-OA16	Compact 100 to 240V AC Solid State Output Module	
1769-OA8	Compact 100 to 240V AC Solid State Output Module	
1769-OB16	Compact Solid State 16-point 24V DC Source Output Module	
1769-OB16P	Compact Solid State 16-point 24V DC Source Output Module with Electronic Protection	
1769-OB32	Compact Solid State 32-point 24V DC Source Output Module	
1769-OB32T	Compact Current Solid-state Sourcing 24V DC Output Module	
1769-OB8	Compact Solid State 8-point 24V DC Source Output Module	
1769-OF2	Compact Analog Output Module	
1769-OF4	Compact Analog Output Module	
1769-OF4CI	Compact 4-channel Current Isolated Analog Output Module	