

Modular I/O Systems



Model		ADAM-5000/485	ADAM-5000E	ADAM-5000L/TCP	ADAM-5000/TCP
CPU		80188	80188	RISC CPU	
RAM		-	-	4 MB	
Flash ROM (User AP)		-	-	512 KB	
Flash Memory (Data Storage)		-	-	-	
Flash Disk		-	-	-	
OS		-	-	Real-time OS	
Timer BIOS		-	-	-	
Real-time Clock		-	-	-	
Watchdog Timer		Yes			
I/O Slots		4	8	4	8
Power Consumption		3 W		4.0 W	5.0 W
Isolation	Communication	2,500 V _{DC}	3,000 V _{DC}	RS-485: 1,500 V _{DC}	
	Communication Power	3,000 V _{DC}			
	I/O Module	3,000 V _{DC}			
Diagnosis	Status Display	Power, CPU, Communication		Power, CPU, Error Diagnostic, Communication	
	Self Test	Yes, while ON			
	Software Diagnosis	✓			
Communication	Interface	RS-232/485 (2-wire)	RS-232/485 (2-wire)	Ethernet	
	Speeds (bps)	1,200, 2,400, 4,800, 9,600, 19.2 K, 38.4 K, 57.6 K, 115.2 K	1,200, 2,400, 4,800, 9,600, 19.2 K, 38.4 K, 57.6 K, 115.2 K	10 M, 100 M	
	Max. Distance	4,000 feet (1.2 km)	4,000 feet (1.2 km)	100 m without repeater	
	Data Format	Advantech protocol: N, 8, 1 Modbus protocol: N, 8, 1 N, 8, 2 E, 8, 1 O, 8, 1	Advantech protocol: N, 8, 1 Modbus protocol: N, 8, 1 N, 8, 2 E, 8, 1	TCP/IP	
	Max. Nodes	128	128	Depend on IP address	
	Protocols	ADAM ASCII/Modbus Protocol	ADAM ASCII/Modbus Protocol	Modbus/TCP	
	Remote I/O	-	-	20 nodes Modbus devices	
	Power Requirements	+10 ~ +30 V _{DC}			
Environment	Operating Temperature	-10 ~ 70°C (14 ~ 158°F)			
	Storage Temperature	-25 ~ 85°C (-13 ~ 185°F)			
	Humidity	5 ~ 95%			
Dimensions (mm)		231 x 110 x 75	355 x 110 x 75	231 x 110 x 75	355 x 110 x 75

✓: supported, -: not supported, Δ: optional

Analog Input/Output Modules



Model		ADAM-5013	ADAM-5017	ADAM-5017P	ADAM-5017UH	ADAM-5018
Analog Input	Resolution	16-bit	16-bit	16-bit	12-bit	16-bit
	Input Channel	3	8	8	8	7
	Sampling Rate	10 (total*)	10 (total*)	10 (total*)	200K**	10 (total*)
	Voltage Input	-	±150 mV, ±500 mV ±1 V, ±5 V, ±10 V	±150 mV, ±500 mV ±15V, ±10V, ±5 V, ±1 V 0 ~ 150mV, 0 ~ 500mV 0 ~ 1V, 0 ~ 5V, 0 ~ 10V 0 ~ 15V	±10 V, 0 ~ 10 V	±15 mV, ±50 mV ±100 mV, ±500 mV ±1 V, ±2.5 V
	Current Input	-	±20 mA	±20 mA, 4 ~ 20mA	0 ~ 20 mA, 4 ~ 20 mA	±20 mA
Direct Sensor Input	Pt or Ni RTD	-	-	-	J, K, T, E, R, S, B	
Isolation		3,000 V _{DC}	3,000 V _{DC}	3,000 V _{DC}	3,000 V _{DC}	3,000 V _{DC}

*Sampling rate value depends on used channel number.
 Example: Using 5 channels on ADAM-5017, sampling rate for each used channel will be 10/5 = 2 samples/second.
 **The sampling rate varies with the controller.



Model		ADAM-5018P	ADAM-5024	ADAM-5050	ADAM-5051 ADAM-5051D ADAM-5051S	ADAM-5052	ADAM-5053S
Analog Input	Resolution	16-bit	-	-	-	-	-
	Input Channel	7	-	-	-	-	-
	Sampling Rate	10 (total*)	-	-	-	-	-
	Voltage Input	±15 mV, ±50 mV ±100 mV, ±500 mV ±1 V, ±2.5 V	-	-	-	-	-
	Current Input	4 ~ 20 mA	-	-	-	-	-
Direct Sensor Input	J, K, T, E, R, S, B	-	-	-	-	-	
Analog Output	Output Channels	-	4	-	-	-	-
	Resolution	-	12 bit	-	-	-	-
	Voltage Output	-	0 ~ 10 V	-	-	-	-
	Current Output	-	0 ~ 20 mA 4 ~ 20 mA	-	-	-	-
Digital Input and Digital Output	Digital Input Channels	-	-	16 DI/O (bit-wise selectable)	16 (ADAM-5051) 16w/LED (5051D/5051S)	8	32
	Digital Output Channels	-	-	-	-	-	-
Isolation		3,000 V _{DC}	3,000 V _{DC}	-	2,500 V _{DC} (5051S)	5,000 V _{RMS}	2,500 V _{DC}

*Sampling rate value depends on used channel number.
 Example: Using 6 channels on ADAM-5017, sampling rate for each used channel will be 12/6 = 2 samples/second.
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- 1 IoT Software Solutions
- 2 Intelligent Systems
- 3 SKY Servers
- 4 AI & Advanced Computer Vision
- 5 Intelligent HMI and Monitors
- 6 Automation Computers
- 7 Intelligent Transportation Platforms
- 8 Mission Critical CompactPCI Platforms
- 9 Utility and Energy Solutions
- 10 EtherCAT Solutions and Automation Controllers
- 11 Intelligent Motion Control Solutions
- 12 High Speed DAQ Solutions
- 13 Industrial Communication
- 14 Intelligent Edge DAQ Devices
- 15 Remote I/O, Wireless I/O & Sensors
- 16 Serial Communication

Digital Input/Output Modules



Model		ADAM-5055S	ADAM-5056 ADAM-5056D	ADAM-5056S ADAM-5056SO	ADAM-5057S	ADAM-5060
Digital Input and Digital Output	Digital Input Channels	8 w/LED	-	-	-	-
	Digital Output Channels	8 w/LED	16 (ADAM-5056) 16 w/LED (ADAM-5056D)	16 w/LED	32	6 relay (2 form A/4 form C)
Isolation		2,500 V _{DC}	-	2,500 V _{DC}	2,500 V _{DC}	-



Model		ADAM-5069	ADAM-5080	ADAM-5081	ADAM-5090 ADAM-5091	ADAM-5191	ADAM-5192
Digital Input and Digital Output	Digital Input Channels	-	-	-	-	-	-
	Digital Output Channels	8 power relay (form A)	-	-	-	-	-
Counter (32-bit)	Channels	-	4	4/8	-	-	-
	Input Frequency	-	0.3 ~ 1000 Hz max. (frequency mode) 5000 Hz max. (counter mode)	5 Hz ~ 1 MHz max. (frequency mode) 1 MHz max. (counter mode)	-	-	-
	Mode	-	Frequency, Up/Down Counter, Bi-direction Counter	Frequency, Counter (Up/Down, Bi-direction, Up, A/B Phase)	-	-	-
Communication	Channels	-	-	-	4	4 (ADAM-5630 only)	2
	Type	-	-	-	RS-232/422/485	RS-232/422/485	LAN (ADAM-5630 only)
Isolation		-	1,000 V _{RMS}	2,500 V _{DC}	-	1,000 V _{DC}	-

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