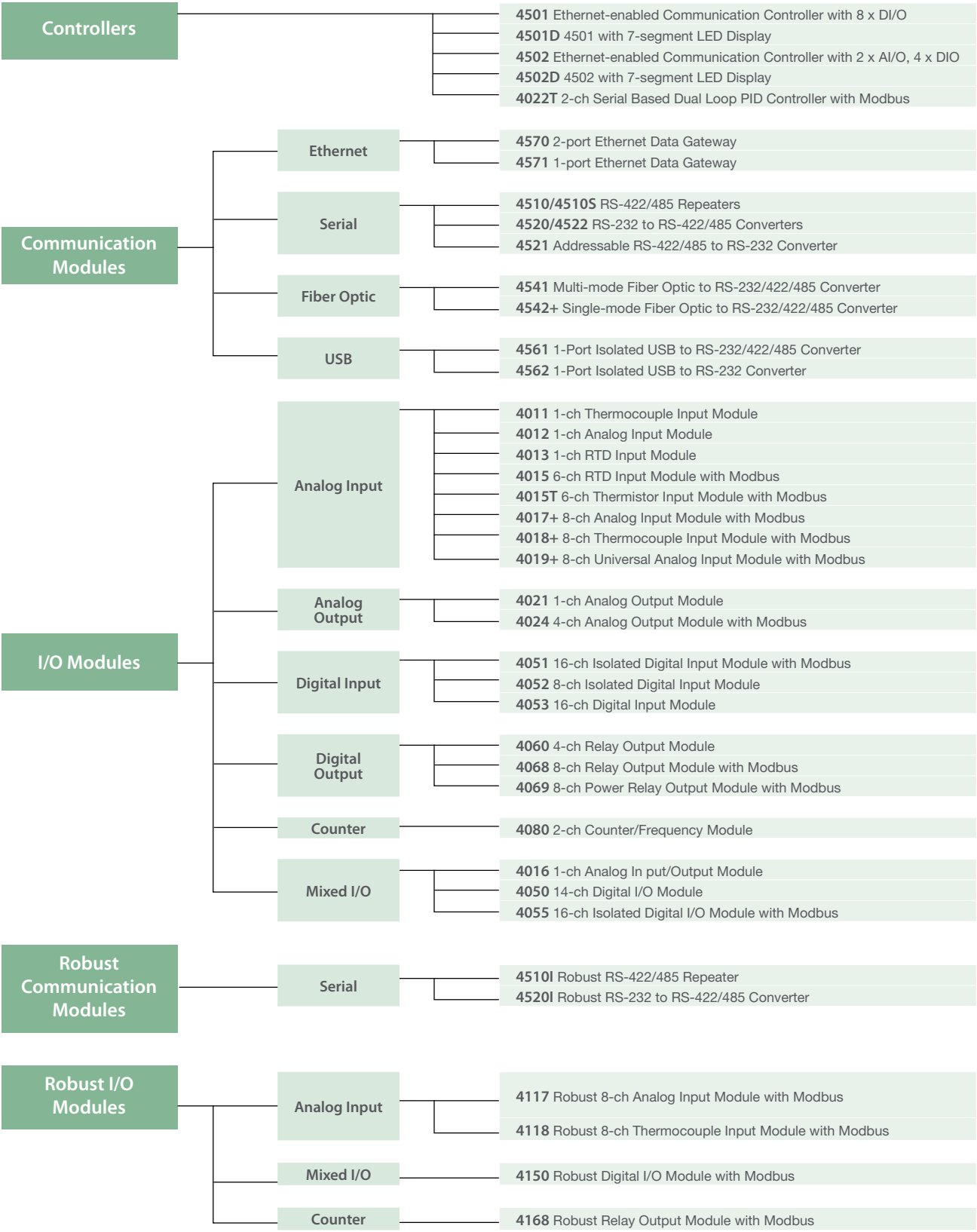


RS-485 I/O Modules: ADAM - 4000

Module Selection Chart



Communication and Controller Module

	Controllers			Repeaters	Converters & Data Gateways				
Module	ADAM-4501 ADAM-4501D	ADAM-4502 ADAM-4502D	ADAM-4022T	ADAM-4510 ADAM-4510S	ADAM-4520 ADAM-4522	ADAM-4521	ADAM-4541 ADAM-4542+	ADAM-4561 ADAM-4562	ADAM-4570 ADAM-4571
Network	Ethernet, RS-232, RS-485		RS-485	RS-422 RS-485	RS-232 to RS-422/485		Fiber Optic to RS-232/422/485	USB to RS-232/485/422	Ethernet to RS-232/422/485
Comm. Protocol	Modbus/RTU, Modbus/TCP TCP/IP, UDP, ICMP, ARP, DHCP		ASCII Command/ Modbus	-					
Comm. Speed (bps)	Ethernet: 10/100M Serial: From 1200 to 115.2 kbps		Serial: From 1200 to 115.2 k						Ethernet: 10/100 M Serial: up to 230.4 k
Comm. Distance	Ethernet: 100 m Serial: 1.2 Km		Serial: 1.2 km	Serial: 1.2 km	Serial: 1.2 km	Serial: 1.2 km	ADAM-4541: 2.5 km ADAM-4542: 15 km	Serial: 1.2 km	LAN: 100 m Serial: 1.2 km
Interface Connectors	Ethernet: RJ-45 RS-485: plug-in screw terminal RS-232: RJ-48		RS-485: plug-in screw terminal	RS-422/485: plug-in screw terminal	RS-232: female DB9 RS-422/485: plug-in screw terminal	RS-232: female DB9 RS-422/485: plug-in screw terminal	RS-232/422/485: plug-in screw terminal Fiber: ADAM-4541: ST connector ADAM-4542: SC connector	USB: type A client connector Serial: ADAM-4561: plug-in screw terminal (RS-232/422/485) ADAM-4562: DB9 (RS-232)	Ethernet: RJ-45 RS-232/422/485: RJ-48
LED Indicators	Communication & Power		Power	Communication & Power					Network: Tx/ Rx Link, Speed, Power
Data Flow Control	Yes		Yes	-	-	Yes	-	Yes	Yes
Watchdog Timer	Yes		Yes	-	-	Yes	-	Yes	Yes
Isolation Voltage	-	1000 V _{DC}	3000 V _{DC}	3000 V _{DC} (ADAM-4510S)	3000 V _{DC} (ADAM-4520)	1000 V _{DC}	-	ADAM-4561: 3000 V _{DC} ADAM-4562: 2500 V _{DC}	-
Special Features	Email function Built-in HTTP and FTP Server		PID Control	-	-	-	-	-	-
Built-in I/O	4DI/4DO	1AI/1AO/2DI/2DO	-	-	-	-	-	-	-
Power Requirement	+10 ~ +30 V _{DC}								
Operating Temperature	-10 ~ 70° C		-10 ~ 50° C	-10 ~ 70° C					0 ~ 60° C
Humidity	5 ~ 95% RH								20 ~ 95% RH
Power Consumption	4 W @ 24 V _{DC}			1.4 W @ 24 V _{DC}	1.2 W @ 24 V _{DC}	1 W @ 24 V _{DC}	1.5 W @ 24 V _{DC}	ADAM-4561: 1.5 W @ 5 V _{DC} ADAM-4562: 1.1 W @ 5 V _{DC}	4 W @ 24 V _{DC}

I/O Module

		Analog Input							
Module		ADAM-4011	ADAM-4012	ADAM-4013	ADAM-4015 ADAM-4015T	ADAM-4016	ADAM-4017+	ADAM-4018+	ADAM-4019+
Resolution		16 bit							
Analog Input	Input Channels	1 differential			6 differential	1 differential	8 differential	8 differential	8 differential
	Sampling Rate	10 Hz							
	Voltage Input	±15 mV ±50 mV ±100 mV ±500 mV ±1 V ±2.5 V	±150 mV ±500 mV ±1 V ±5 V ±10 V	-	-	±15 mV ±50 mV ±100 mV ±500 mV	±150 mV ±500 mV ±1 V ±5 V ±10 V	-	± 100 mV ± 500 mV ± 1 V ± 2.5 V ± 5 V ± 10 V
	Current Input	±20 mA	±20 mA	-	-	±20 mA	4 ~ 20 mA ±20 mA	4 ~ 20 mA ±20 mA	4 ~ 20 mA ± 20 mA
	Direct Sensor Input	J, K, T, E, R, S, B Thermocouple	-	RTD	ADAM-4015: RTD ADAM-4015T: Thermistor	-	-	J, K, T, E, R, S, B Thermocouple	J, K, T, E, R, S, B Thermocouple
	Burn-out Detection	Yes	-	-	Yes	-	-	Yes	Yes (4~20 mA & All T/C)
	Channel Independent Configuration	-	-	-	Yes	-	Yes	Yes	Yes
Analog Output	Output Channels	-	-	-	-	1	-	-	-
	Voltage Output	-	-	-	-	0 - 10 V	-	-	-
	Current Output	-	-	-	-	30 mA	-	-	-
Digital Input and Output	Digital Input Channels	1	1	-	-	-	-	-	-
	Digital Output Channels	2	2	-	-	4	-	-	-
	Alarm Settings	Yes	Yes	-	-	-	-	-	-
Counter (32-bit)	Channels	-	-	-	-	-	-	-	-
	Input Frequency	-	-	-	-	-	-	-	-
Isolation		3000 Vdc							
Digital LED Indicator		-							
Watchdog Timer		Yes (System)	Yes (System)	Yes (System)	Yes (System & Comm.)	Yes (System)	Yes (System & Comm.)	Yes (System & Comm.)	Yes (System & Comm.)
Safety Setting		-							
Modbus Support *		-	-	-	Yes	-	Yes	Yes	Yes

*: All ADAM-4000 I/O Modules support ASCII Commands

Analog Output		Digital Input/Output					Relay Output			Counter
ADAM-4021	ADAM-4024	ADAM-4050	ADAM-4051	ADAM-4052	ADAM-4053	ADAM-4055	ADAM-4060	ADAM-4068	ADAM-4069	ADAM-4080
12 bit	12 bit	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
1	4	-	-	-	-	-	-	-	-	-
0 ~ 10 V	±10 V	-	-	-	-	-	-	-	-	-
0 ~ 20 mA 4 ~ 20 mA	0 ~ 20 mA 4 ~ 20 mA	-	-	-	-	-	-	-	-	-
-	4	7	16	8	16	8	-	-	-	-
-	-	8	-	-	-	8	4-ch relay	8-ch relay	8-ch power relay	2
-	Yes	-	-	-	-	-	-	-	-	Yes
-		-		-	-		-	-	-	2
-	-	-	-	-	-	-	-	-	-	50 kHz
3,000 Vdc	3,000 Vdc	-	2,500 Vdc	5,000 VRMS	-	2,500 Vdc	-	-	-	2,500 VRMS
-	-	-	Yes	-	-	Yes	-	-	-	-
Yes (System)	Yes (System & Comm.)	Yes (System)	Yes (System & Comm.)	Yes (System)	Yes (System)	Yes (System & Comm.)	Yes (System)	Yes (System & Comm.)	Yes (System & Comm.)	Yes (System)
-	Yes	-	-	-	-	Yes	Yes	Yes	Yes	-
-	Yes	-	Yes	-	-	Yes	-	Yes	Yes	-

Robust RS-485 I/O Module

Module		ADAM-4117	ADAM-4118	ADAM-4150	ADAM-4168
Resolution		16 bit		-	-
Analog Input	Input Channels	8 differential		-	-
	Sampling Rate	10/100 Hz (total)		-	-
	Voltage Input	0 ~ 150 mV, 0 ~ 500 mV, 0 ~ 1 V, 0 ~ 5 V, 0 ~ 10 V, 0 ~ 15 V, ±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V, ±15V	±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1 V, ±2.5V	-	-
	Current Input	0 ~ 20 mA, ±20 mA, 4 ~ 20 mA	±20 mA, 4 ~ 20 mA	-	-
	Direct Sensor Input	-	J, K, T, E, R, S, B Thermocouple	-	-
	Burn-out Detection	Yes (mA)	Yes (mA and All T/C)	-	-
	Channel Independent Configuration	Yes		-	-
Digital Input and Output	Digital Input Channels	-	-	7	-
	Digital Output Channels	-	-	8	8-ch relay
Counter	Channels	-	-	7	-
	Input Frequency	-	-	3 kHz	-
Isolation Voltage		3000 Vdc			
Digital LED Indicator		Communication and Power			
Watchdog Timer		Yes (System & Communication)			
Safety Setting		-		Yes	
Communication Protocol		ASCII Command/Modbus			
Power Requirement		10 ~ 48 Vdc			
Operating Temperature		-40 ~ 85° C			
Storage Temperature		-40 ~ 85° C			
Humidity		5 ~ 95% RH			
Power Consumption		1.2 W @ 24 Vdc	0.5 W @ 24 Vdc	0.7 W @ 24 Vdc	1.8 W @ 24 Vdc

Module	ADAM-4510I	ADAM-4520I
Network	RS-422/485	
Communication Speed (bps)	From 1200 to 115.2k	
Communication Distance	Serial: 1.2 km	
Interface Connectors	RS-422/485: plug-in screw terminal	RS-232: female DB9 RS-422/485: plug-in screw terminal
Digital LED Indicators	Communication and Power	
Auto Data Flow Control	Yes	
Isolation Voltage	3000 Vdc	
Power Requirement	10 ~ 48 Vdc	
Operating Temperature	-40 ~ 85° C	
Storage Temperature	-40 ~ 85° C	
Humidity	5 ~ 95%	
Power Consumption	1.4 W @ 24 Vdc	1.2 W @ 24 Vdc

Ethernet I/O Modules: ADAM-6000

Module Spec.	ADAM-6015	ADAM-6017	ADAM-6018	ADAM-6022	ADAM-6024	ADAM-6050	ADAM-6051	ADAM-6052	ADAM-6060	ADAM-6066	ADAM-6050W	ADAM-6051W	ADAM-6060W	
Interface	10/100 Mbps Ethernet										802.11b wireless LAN			
Peer-to-Peer*	Yes			No	Receiver Only**	Yes								
GCL*	Yes			No	Receiver Only**	Yes					No			
Resolution	16 bit			16 bit for AI 12 bit for AO		-	-	-	-	-	-	-	-	
Analog Input	Channels	7	8	8	6	6	-	-	-	-	-	-	-	
	Sampling Rate	10 sample/second					-	-	-	-	-	-	-	
	Voltage Input	-	±150 mV ±500 mV ±1 V ±5 V ±10 V	-	±10 V	±10 V	-	-	-	-	-	-	-	
	Current Input	-	0 ~ 20 mA 4 ~ 20 mA	-	0 ~ 20 mA 4 ~ 20 mA	0 ~ 20 mA 4 ~ 20 mA	-	-	-	-	-	-	-	
	Direct Sensor Input	Pt, Balco and Ni RTD	-	J.K.T.E.R.S.B. Thermocouple	-	-	-	-	-	-	-	-	-	
	Burn-out Detection	Yes	-	Yes	-	-	-	-	-	-	-	-	-	
	Math. Functions	Max. Min. Avg.	Max. Min. Avg.	Max. Min. Avg.	-	-	-	-	-	-	-	-	-	
	Analog Output	Channels	-	-	-	2	2	-	-	-	-	-	-	-
Current Output		-	-	-	0 ~ 20 mA, 4 ~ 20 mA with 15 VDC	0 ~ 20 mA, 4 ~ 20 mA with 15 VDC	-	-	-	-	-	-	-	
Voltage Output		-	-	-	0 ~ 10 Vdc with 30 mA	0 ~ 10 VDC with 30 mA	-	-	-	-	-	-	-	
Digital Input and Output	DI Channels	-	-	-	2	2	12	12	8	6	6	12	12	6
	DO Channels	-	2 (Sink)	8 (Sink)	2 (Sink)	2 (Sink)	6 (Sink)	2 (Sink)	8 (Source)	6-channel relay	6-channel power relay	6 (Sink)	2 (Sink)	6-channel relay
	Extra Counter Channels	-	-	-	-	-	-	2	-	-	-	-	2	-
	Counter Input	-	-	-	-	-	3 kHz	4.5 kHz	3 kHz			4.5 kHz	3 kHz	
	Frequency Input	-	-	-	-	-	3 kHz	4.5 kHz	3 kHz			4.5 kHz	3 kHz	
	Pulse Output	-	-	-	-	-	Yes							
	High/Low Alarm Settings	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-
Isolation Protection	2000 Vdc			2000 VDC***		2000 Vdc								
Remark	-	-	-	Built-in Dual Loop PID Control Algorithm	-	-	-	-	-	-	-	-	-	

* : Peer-to-Peer and GCL cannot run at the same time, only one feature is enabled at one time.
** : ADAD-6024 can only play the receiver and generate analog output when using Peer-to-Peer or GCL.
*** : Only for analog input and analog output channels.