

Factory Automation (FA)

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Bringing PAC Solutions to Factory Floors

Advantech's ADAM-5550KW PAC Series is designed for high level industrial applications in factory floors which require complex control capabilities, high speed analog measurements, local storage and database, multiple programs support with different cycle times, open communication functions and enterprise-level network integration. For food and beverage machinery, high speed analog measurement is required for weight measuring. Advantech's ADAM-5550KW Series also supports distributed motion control functions, making it the best solution for food and beverage machines by replacing IPC plus PLC combinations.

Project Implementation

ADAM-5550KW Programmable Automation Controller



- Designed for control tasks that meet robustness and computing performance requirements for PLC and Industrial PC's
- Supports IEC 61131-3 Standard PLC Programming languages and PLCopen compliant motion control function blocks
- Open Architecture & Versatile Connectivity

Modules



- AMAX-2212 One-axis AMONet RS-485 Motion Slave Module
- AMAX-2752FN 32-ch Isolated Digital Input Module
- AMAX-2754FN 32-ch Isolated Digital Output Module
- AMAX-2756FNN 6/16-ch Isolated Digital Input/Output Module

AMAX-2000 and AMONet RS-485 Motion Slave



Environmental and Facility Monitoring Systems (EFMS)

Develop Your SCADA System with ADAM Solutions

Advantech has gained a great reputation in Supervisory Control and Data Acquisition (SCADA) by continuously improving its advanced ADAM series. Advantech's ADAM series distinguishes itself by featuring a wide variety of I/O and communication modules to meet high-volume SCADA requirements in environmental monitoring applications such as air/water quality measurement & control services, warning systems for landscapes, dams, bridges, traffic monitoring and unmanned station monitoring. In energy management, we also have field-proven solutions for pipeline management, power distribution and supply.

Project Implementation

ADAM-5510/TCP Ethernet-enabled PC-based Controller



- 10/100Base-T Ethernet Interface
- Four serial communication ports
- Supports HTTP server, FTP server, and e-mail alarm functions
- Supports Modbus/TCP server/client functions

ADAM-6000W Wireless I/O Modules



- Supports IEEE802.11b wireless LAN
- Embedded web server with built-in web page
- Supports Modbus/TCP & UDP protocols
- Supports event trigger function

ADAM-6000 Ethernet I/O Modules



- Ethernet-based smart I/O
- Mixed I/O in single module
- Pre-built HTTP server and web page in each module for data/alarm monitoring

ADAM-4100 Robust I/O Modules



- Robust design for harsh environment
- Easy plug-in system integration
- ADAM and Modbus/RTU dual protocol support



Machine Automation (MA)

Complete Application Ready Platforms for the GMC Market

During the LCD manufacturing process, having zero faults tolerance is almost impossible. Moreover, LCD panels are very delicate products, and can frequently have minor defects. Therefore, defect inspection is essential at each assembly station. Our customer wanted to increase the efficiency of their defect inspection stations and speed up their overall LCD production. They were using the traditional method of inspection, which consisted of having just one camera to complete the process, which is slow and cumbersome. With a new PC-based automation solution from Advantech, more cameras can be set up for inspections, allowing a smoother and faster production flow.

Project Implementation

PCI-1202U / 2-port AMONet RS-485 Master Card

- Max. 20 Mbps transfer rate 2 independent AMONet - RS-485 Master Rings
- Max. 128 AMONet RS-485 slave modules supported
- Programmable digital input to notify events
- Easy installation with RJ45 phone jack and LED diagnostic

AMAX-2212/J2S / 1-axis AMONet RS-485 Motion Slave Module for Mitsubishi MR-J2S

- Max. 20 Mbps transfer rate
- Max. 6.5 MHz, 1-Axis pulse output 28 bits counter for incremental encoder
- Programmable acceleration and deceleration time
- T-curve and S-curve velocity profiles support



AMAX-2752 / 32-ch Isolated Digital Input Module



AMAX-2754 / 32-ch Isolated Digital Output Module



AMAX-2756 / 16/16-ch Isolated Digital Input/Output Module

- DIN-rail mounting (L x W x H): 125 x 47.6 x 156 mm
- Max. 20 Mbps transfer rate
- Onboard terminal for direct wiring
- Easy installation with RJ45 phone jack and LED diagnostic
- LED indicator for each IO channel (Switch by SW4)
- Selection of I/O-channel configuration (32 DI, 32 DO or 16/16 DI/O)
- 2500 Vrms Isolation voltage



Automatic Test Equipment (ATE)

Complete Solutions for your ATE Requirements

The high cost of state-of-the-art quality control systems for mobile phones has created a demand for more cost-effective alternatives. A leading ODM mobile phone manufacturer in Taiwan found such an alternative with Advantech. Standard products from Advantech were used to verify GSM and GPRS signals of mobile phones. The basic quality control procedure for frequencies used to require the phone to be tested, an operator, a test instrument, and a test station. This test would take approximately 1 minute per phone. After implementing the new test equipment, the testing time was reduced to one operator using 4 test stations to simultaneously check 4 phones in 20 seconds; an output improvement of 1,200%. Reduced human error was another bonus, and the entire process is now accomplished at the fraction of the cost of a high-end, quality control system.

Project Implementation

PCI-1762 / Relay Actuator and Isolated D/I Card



- 16 relay output channels and 16 isolated digital input channels
- LED indicators to show activated relays
- Jumper selectable Form A/Form B-type relay output channel
- Output status read-back

PCI-1723 / Non-isolated Analog Output Card



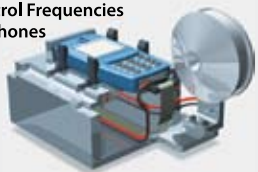
- Auto calibration function
- A 16-bit DAC is equipped for each analog output channel
- Synchronized output function
- Output values retained after system hot reset

PCI-1671UP / GPIB Interface



- IEEE 488.2 Standard interface
- Complete Talker/Listener/Controller
- Industry standard 32-bit PCI bus
- Data transfer rates over 1.5 Megabytes/sec
- 1024-word FIFO buffer
- High-Speed State Machine Bus Manager
- 7 Interrupt lines, shared interrupt capability
- Transparent interrupt enabling/disabling
- Includes GPIB-Library software
- Low profile MD1 size

Quality Control Frequencies for Mobile Phones



- PCI-1671UP — GPIB
- PCI-1762 — Relay Output
- PCI-1723 — Analog Output

Selection Guide

UNO Series

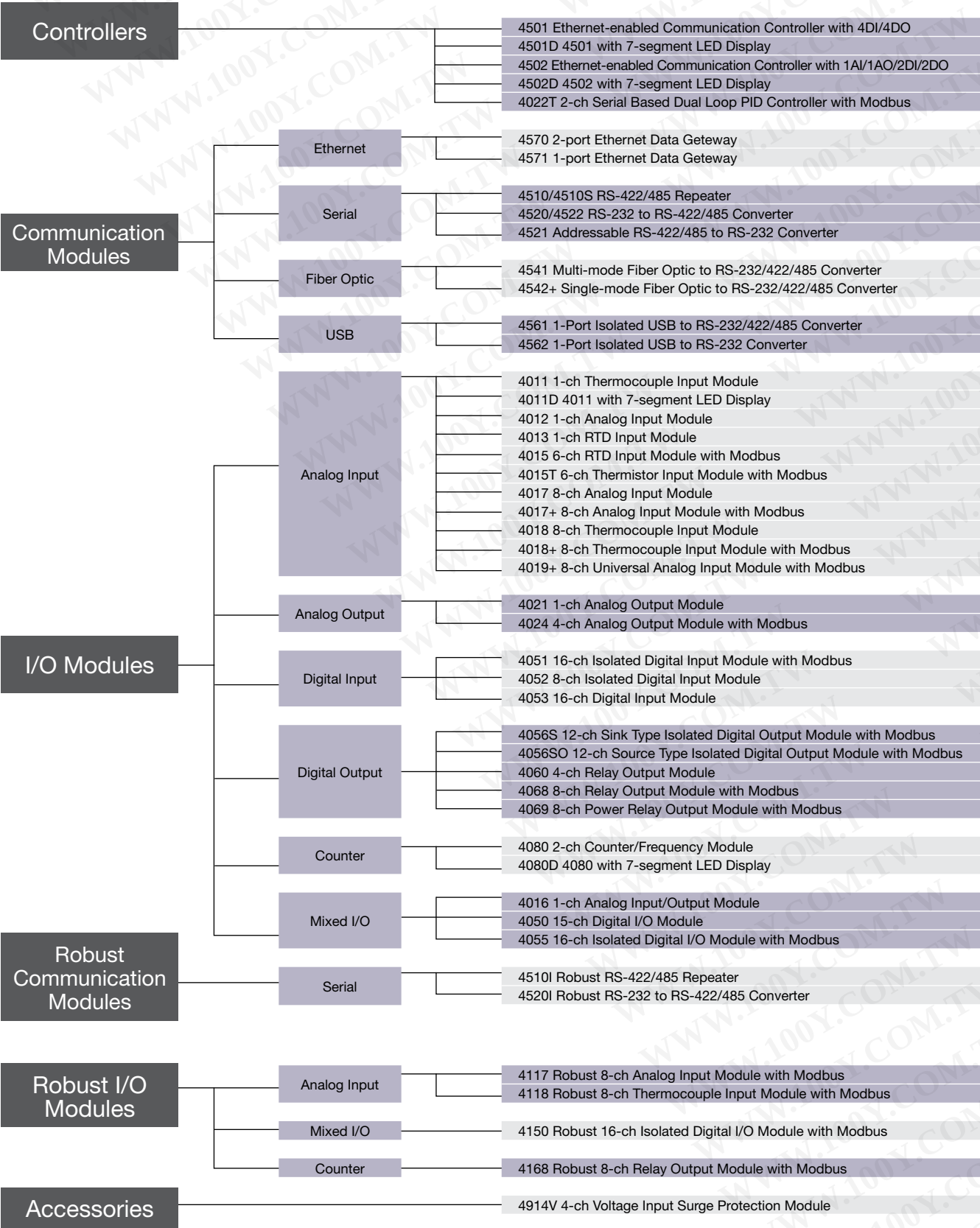


Model Name	UNO-1019	UNO-2050E	UNO-2052E	UNO-2053E	UNO-2059E	UNO-2160	UNO-2170
CPU	XScale PXA 255 200 MHz	GX2-400 MHz				Celeron 400 MHz	Celeron M 1 GHz
Onboard RAM	64 MB SDRAM	256 MB DDR SDRAM				256 MB SDRAM	512 MB DDR SDRAM
Battery-Backup RAM	-	-				512 KB	
VGA/Mouse/ Keyboard	-	Yes					
Audio	-	-	-	Yes	-	-	-
Serial Ports	2 x RS-232 2 x RS-232/422/485	2 x RS-232 2 x Isolated RS-232/422/485	2 x CAN 1 x RS-232	2 x RS-232	2 x RS-232 2 x RS-232/422/485	2 x RS-232 2 x RS-232/422/485	
10/100Base-T Ethernet Ports	Two	Two	One	Two	One	Two	
USB Ports	-	-	One	Two	Two	Two	Two
PC Card Slots	-	-	-	One	One	One	One
Printer Ports	-	-	-	-	-	One	One
PC/104 Expansion	-	-	-	-	-	PC/104	PC/104
PCI Expansion	-	-	-	-	-	-	-
Onboard I/O	2-ch DI 2-ch DO	8-ch isolated DI 8-ch isolated DO	4-ch isolated DI 4-ch isolated DO 2-ch isolated AI	-	-	-	-
Watchdog Timer	Yes						
CompactFlash Slots	One External	One internal					
2.5" HDD Expansion	-	Option				Yes	
Operating Systems	Windows CE .NET 4.2	Windows XP Embedded, Windows CE 5.0, Windows 2000/XP, Linux					
Programming Runtime Library	Yes						
Software Development Kit	Yes						
Activesync	Yes						
Web server/ Email service	Yes						
Modem Dial-in (RAS)/ Dial-up Function	Yes						
Mounting	DIN-rail/Wall					Wall	
Anti-Vibration	-	2G w/CF, 1G w/HDD @ IEC 68 section 2-6, sine, 12~300 Hz, 1 Oct./min, 1hr/axis.				2G w/CF, 0.5G w/HDD @ IEC 68 section 2-64, sine, 5 ~ 500 Hz, 1 Oct./min, 1hr/axis.	
Anti-Shock	-	20 G w/CF @ DIN IEC 68 section 2-27, half sine, 11ms 50 G w/CF @ Wall/Panel 68 section 2-27, half sine, 11 ms				20 G w/HDD @ IEC 68 section 2-27, half sine, 11 ms 50 G w/CF @ IEC 68 section 2-27, half sine, 11 ms	
Power Input Range	10 ~ 30 V _{DC}	9 ~ 36 V _{DC}			10 ~ 48 V _{DC}	9 ~ 36 V _{DC}	
Operating Temperature	0 ~ 70° C @ 5 ~ 85% RH	-10 ~ 55° C @ 5 ~ 85% RH				-20 ~ 50° C @ 5 ~ 85% RH	
Relative Humidity	95% @ 40° C (non-condensing)						
Power Consumption Typical	8.5 W	15 W				22 W	24 W
Power Requirement	Min. 13 W	Min. 24 W, +24 V @ 1 A power input				Min. 48 W, +24 V @ 2 A power input	
Dimensions (W x D x H)	46 x 162 x 126 mm (1.8" x 6.4" x 5")	188.8 x 106.5 x 35.5 mm (7.5" x 4.2" x 1.4")				255 x 152 x 50 mm (10" x 6.0" x 2.0")	
Weight	0.4 kg	0.8 kg				1.6 kg	



Model Name	UNO-2171	UNO-2172	UNO-2176	UNO-2182	UNO-3072L	UNO-3072	UNO-3074
CPU	Pentium M 1.4 GHz, Celeron M 1.0 GHz	Pentium M 1.6 GHz, Celeron M 1.3 GHz	Celeron M 1 GHz, Pentium M 1.4 GHz	Core Duo 1.66 GHz	Celeron M 1 GHz, Pentium M 1.4 GHz		
Onboard RAM	512 MB DDR SDRAM	512 MB DDR2 SDRAM	512 MB DDR DRAM	1 GB DDR2 SDRAM	512 MB DDR SDRAM		
Battery-Backup RAM	512 KB	512 KB	512 KB	512 KB	-	512 KB	
VGA/Mouse/ Keyboard	Yes	DVI-I	Yes	DVI-I	Yes		
Audio	Yes	Yes	-	Yes	-	-	-
Serial Ports	2 x RS-232, 2 x RS-232/422/485 with DB9 connectors	2 x RS-232, 2 x RS-232/422/485 with DB9 connectors	2 x RS-232, 2 x Isolated RS-232/422/485 with DB9 connectors, 2 x Isolated RS-232/422/485 with 5-pin screw terminal	2 x RS-232, 2 x RS-232/422/485 with DB9 connectors	2 x RS-232, 2 x RS-232/422/485		
10/100Base-T Ethernet Ports	Two			One 10/100 LAN & One Giga LAN	Two		
USB Ports	Two	Two	Two	Two	Four		
PC Card Slots	One	One	-	One	-	One	
Printer Ports	-						
PC/104 Expansion	PC/104+	PCI-104	PC/104	PCI-104	-		
PCI Expansion	-				Two		Four
Onboard I/O	-	-	8-ch Isolated DI 8-ch Isolated DO	-	4-ch isolated DI, 4-ch isolated DO		
Watchdog Timer	Yes						
CompactFlash Slots	Two internal	One external	Two internal	One external	One internal	One internal, One external	
2.5" HDD Expansion	Yes						
Operating Systems	Windows XP Embedded, Windows CE 5.0, Windows 2000/XP, Linux	Windows XP Embedded, Windows 2000/XP	Windows XP Embedded, Windows CE 5.0, Windows 2000/XP, Linux	Windows XP Embedded, Windows 2000/XP	Windows XP Embedded, Windows CE 5.0, Windows 2000/XP, Linux		
Programming Runtime Library	Yes						
Software Development Kit	Yes						
Activesync	Yes						
Web server/Email service	Yes						
Modem Dial-53 (RAS)/Dial-up Function	Yes						
Mounting	Wall			Wall	Wall/Panel/Stand		
Anti-Vibration	2G w/CF, 1G w/HDD (for X and Y Axis), 1G w/HDD @ IEC 68 section 2-64, sine, 5 ~ 500 Hz, 1 Oct./min, 1hr/axis				2G w/CF, 1G w/HDD @ IEC 68 section 2-64, sine, 5 ~ 500 Hz, 1 Oct./min, 1hr/axis.		
Anti-Shock	20 G w/HDD @ IEC 68 section 2-27, half sine, 11 ms, 50 G w/CF @ IEC 68 section 2-27, half sine, 11 ms						
Power Input Range	10 ~ 53 V _{DC}	9 ~ 36 V _{DC}			16 ~ 36 V _{DC}		20 ~ 36 V _{DC}
Operating Temperature	-20 ~ 65° C @ 5 ~ 85% RH	-20~ 50° C @ 5 ~ 85% RH	-20 ~ 65° C @ 5 ~ 85% RH	-20~ 60° C @ 5 ~ 85% RH	-20 ~ 60° C @ 5 ~ 85% RH	-20 ~ 55° C @ 5 ~ 85% RH	
Relative Humidity	95% @ 40° C (non-condensing)				95% @ 40° C	95% @ 40° C (non-condensing)	
Power Consumption Typical	24 W	45 W	24 W	35 W	24 W		
Power Requirement	Min. 48 W, +24 V @ 2 A power input						Min. 96 W, +24 V @ 4 A power input
Dimensions (W x D x H)	255 x 152 x 59 mm (10" x 6.0" x 2.3")	255 x 152 x 79 mm (10" x 6.0" x 3.1")	255 x 152 x 59 mm (10" x 6.0" x 2.3")	255 x 152 x 79 mm (10" x 6.0" x 3.1")	140 x 237 x 177 mm (5.5" x 9.3" x 7.0")		180 x 237 x 177 mm (7.1" x 9.3" x 7.0")
Weight	2.4 kg				4.2 kg	4.4 kg	5.0 kg

ADAM-4000 Series Selection Chart



ADAM-4000 Series Communication and Controller Modules

Module	Controllers			Repeaters	Converters & Data Gateways				
	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: RJ45 RS-485: plug-in screw terminal RS-232: RJ48		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 and Power					Network: Tx/Rx Link, Speed, Power
Data Flow Control	Yes		Yes	-	-	Yes	-	Yes	Yes
Watchdog Timer	Yes		Yes	-	-	Yes	-	Yes	Yes
Isolation Voltage	-		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}

ADAM-4000 Series I/O Modules

Module	Analog Input									
	ADAM-4011/ ADAM-4011D	ADAM-4012	ADAM-4013	ADAM-4015 ADAM-4015T	ADAM-4016	ADAM-4017	ADAM-4017+	ADAM-4018	ADAM-4018+	ADAM-4019+
Resolution	16 bit									
Analog Input	Input Channels	1 differential		6 differential	1 differential	6 differential, 2 single-ended	8 differential	6 differential, 2 single-ended	8 differential	8 differential
	Sampling Rate	10 Hz			10 Hz (total)					
	Voltage Input	±15 mV ±50 mV ±100 mV ±500 mV ±1 V ±5 V ±2.5 V	±150 mV ±500 mV ±1 V ±5 V ±10 V	-	-	±15 mV ±50 mV ±100 mV ±1 V ±5 V ±10 V	±150 mV ±500 mV ±1 V ±5 V ±10 V	±15 mV ±50 mV ±100 mV ±1 V ±5 V ±2.5 V	-	± 100 mV ± 500 mV ± 1 V ± 2.5 V ± 5 V ± 10 V
	Current Input	±20 mA	±20 mA	-	-	±20 mA	±20 mA	4~20 mA, ±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	-	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 V _{DC}									
Digital LED Indicator	Yes (4011D)									
Watchdog Timer	Yes (System)	Yes (System)	Yes (System)	Yes (System & Comm.)	Yes (System)	Yes (System)	Yes (System & Comm.)	Yes (System)	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-4056S/ ADAM-4056SO	ADAM-4060	ADAM-4068	ADAM-4069	ADAM-4080/ ADAM-4080D
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	ADAM-4056S: 12 (Sink) ADAM-4056SO: 12 (Source)	4-ch relay	8-ch relay	8-ch power relay	2
-	Yes	-	-	-	-	-	-	-	-	-	Yes
-	-	-	-	-	-	-	-	-	-	-	2
-	-	-	-	-	-	-	-	-	-	-	50 kHz
3,000 V _{DC}	3,000 V _{DC}	-	2,500 V _{DC}	5,000 V _{RMS}	-	2,500 V _{DC}	5000 V _{DC}	-	-	-	2,500 V _{RMS}
-	-	-	Yes	-	-	Yes	Yes	-	-	-	Yes (4080D)
Yes (System)	Yes (System & Comm.)	Yes (System)	Yes (System & Comm.)	Yes (System)	Yes (System)	Yes (System & Comm.)	Yes (System & Comm.)	Yes (System)	Yes (System & Comm.)	Yes (System & Comm.)	Yes (System)
-	Yes	-	-	-	-	Yes	Yes	Yes	Yes	Yes	-
-	Yes	-	Yes	-	-	Yes	Yes	-	Yes	Yes	-

Robust RS-485 I/O Modules



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 V _{DC}			
Digital LED Indicator	Yes			
Watchdog Timer	Yes (System & Communication)			
Safety Setting	Yes			
Communication Protocol	ASCII Command/Modbus			
Power Requirement	10 ~ 48 V _{DC}			
Operating Temperature	-40 ~ 85° C			
Storage Temperature	-40 ~ 85° C			
Humidity	5 ~ 95% RH			
Power Consumption	1.2 W @ 24 V _{DC}	0.5 W @ 24 V _{DC}	0.7 W @ 24 V _{DC}	1.8 W @ 24 V _{DC}

Module	ADAM-4510I	ADAM-4520I
Network	RS-422/485	RS-232 to 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
LED Indicators	Communication and Power	
Auto Data Flow Control	Yes	
Isolation Voltage	3000 V _{DC}	
Power Requirement	10 ~ 48 V _{DC}	
Operating Temperature	-40 ~ 85° C	
Storage Temperature	-40 ~ 85° C	
Humidity	5 ~ 95%	
Power Consumption	1.4 W @ 24 V _{DC}	1.2 W @ 24 V _{DC}

ADAM-5000 Modules

Module	ADAM-5202	ADAM-5240
Axes	Number of Axes	4
	Linear Interpolation	Yes
	2-Axis Circle Interpolation	Yes
Advanced Functions	Encoder Channels	4
	Limit switch Input Channel	8
	Home Input Channel	4
	Emergency stop Input Channel	1
	Slow Down Limit Switch	8
	General Purpose DI Channel	-
	Servo On Output Channel	4
	General Purpose DO Channel	4
	Position Compare Event	Yes
	Remote Motion	Yes
	Remote I/O	Yes
	Board ID	-
Connectors	2 x RJ-45	100-pin SCSI-II
Wiring Board	AMAX-3752F AMAX-3754F AMAX-3756F	ADAM-3952, ADAM-3952J2S
Remote Motion Wiring Board	AMAX-3210 AMAX-3211/PMA AMAX-3212/J2S AMAX-3213/YS2	
Supported Controller	ADAM-5550KW	

Module		ADAM-5030
Storage	Type	SD (Secure Digital Card)
	Channel	2
	Size	2 GB (Max)
USB	Type	V2.0 (compliant)
	Channel	2
Supported Controller		ADAM-5550KW

ADAM-5000 Modules

Module		ADAM-5013	ADAM-5017	ADAM-5017P	ADAM-5017UH	ADAM-5018	ADAM-5018P	ADAM-5024	ADAM-5050	ADAM-5051	ADAM-5051D	ADAM-5051S
Analog Input	Resolution	16 bit	16 bit	16 bit	12 bit	16 bit	16 bit	-	-	-	-	-
	Input Channel	3	8	8	8	7	7	-	-	-	-	-
	Sampling Rate	10	10	10	200K	10	10	-	-	-	-	-
	Voltage Input	-	±150 mV ±500 mV ±1 V ±5 V ±10 V	±150 mV ±500 mV ±1 V 0 ~ 150mV 0 ~ 500mV 0 ~ 1V 0 ~ 5V 0 ~ 10V 0 ~ 15V	±10 V 0 ~ 10 V 0 ~ 20 mV	±15 mV ±50 mV ±100 mV ±500 mV ±1 V ±2.5 V	±15 mV ±50 mV ±100 mV ±500 mV ±1 V ±2.5 V	-	-	-	-	-
	Current Input	-	±20 mA	±20 mA, 4 ~ 20mA	4 ~20 mA	±20 mA	4 ~ 20 mA	-	-	-	-	-
	Direct Sensor Input	Pt or Ni RTD	-	-	-	J, K, T, E, R, S, B	J, K, T, E, R, S, B	-	-	-	-	-
	Analog Output	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 DIO (bit-wise selectable)	16	16 W/LED	16 W/LED
	Digital Output Channels	-	-	-	-	-	-	-		-	-	-
Counter (32-bit)	Channels	-	-	-	-	-	-	-	-	-	-	-
	Input Frequency	-	-	-	-	-	-	-	-	-	-	-
	Mode	-	-	-	-	-	-	-	-	-	-	-
COMM	Channels	-	-	-	-	-	-	-	-	-	-	-
	Type	-	-	-	-	-	-	-	-	-	-	-
Isolation		3000 V _{DC}	3000 V _{DC}	300V _{DC}	3000 V _{DC}	3000 V _{DC}	3000 V _{DC}	3000 V _{DC}	-	-	-	2500 V _{DC}

ADAM-5052	ADAM-5055S	ADAM-5056	ADAM-5056D	ADAM-5056S /5056SO	ADAM-5060	ADAM-5068	ADAM-5069	ADAM-5080	ADAM-5081	ADAM-5090
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	8 w(LED)	-	-	-	-	-	-	-	-	-
8	8 w(LED)	16	16 w(LED)	16 w(LED)	6 relay (2 form A/ 4 form C)	8 relay (8 form A)	8 power relay (form A)	-	-	-
-	-	-	-	-	-	-	-	4	8	-
-	-	-	-	-	-	-	-	5000 Hz (max)	5 Hz ~ 1 MHz max. (frequency mode) 1 MHz max. (counter mode)	-
-	-	-	-	-	-	-	-	Frequency, Up/Down Counter, Bi-direction Counter	Frequency, up/down, Bi-direction, up, A/B Phase, Counter	-
-	-	-	-	-	-	-	-	-	-	4
-	-	-	-	-	-	-	-	-	-	RS-232
5000 VRMS	2500 VDC	-	-	2500 VDC	-	-	4000 VRMS	1000 VRMS	2500VDC	-

ADAM-5500 Series Controllers



System	ADAM-5510M/5510E	ADAM-5510/TCP ADAM-5510E/TCP	ADAM-5510KW/ 5510EKW	ADAM-5510EKW/TP	ADAM-5550KW
CPU	80188				AMD Geode GX533 (GX2)
RAM	640 KB				128 MB DDR SDRAM
Flash ROM	256 KB				-
Flash Memory	256 KB	256 KB	768 KB	768 KB	-
Flash Disk	1 MB	1 MB	512 KB	512 KB	-
OS	ROM-DOS				WinCE 5.0
Real-time Clock	Yes				
Watchdog Timer	Yes				
COM1	RS-232 (ADAM-5510M) RS-232/485 (ADAM-5510E)	RS-232 (ADAM-5510/TCP) RS-232/RS-485 (ADAM-5510E/TCP)	RS-232 (ADAM-55510KW) RS-232/485 (ADAM-5510EKW)	RS-232/485	RS-232/485
COM2	RS-485				
COM3 (Programming)	RS-232 (TX, RX, GND)	RS-232 (TX, RX, GND)	RS-232 (TX, RX, GND)	RS-232 (TX, RX, GND)	RS-232
COM4	RS-232/485				
I/O Slots	4/8			8	
Power Consumption	4 W				12 W
Isolation					
Communication	2500V _{DC} (COM2 RS-485)				2500V _{DC} (COM2 RS-485) 1000V _{DC} (COM4 RS-485)
Communication Power	3000 V _{DC}				
I/O Module	3000 V _{DC}				
Diagnosis					
Status Display	Power, CPU, Communication, Battery				Power, User define
Self Test	Yes, while ON				
Software Diagnosis	Yes				
Communication					
Network	RS-232/485	Ethernet (RJ-45)	RS-232/485	Ethernet (RJ-45)	Ethernet (2 x RJ-45)
Speeds	1200 bps ~ 115.2 kbps	10/100 Mbps	9600, 38400, 57600 bps and 115.2 kbps	10/100 Mbps	10/100 Mbps
Max. Distance	4000 feet (1.2 km)	150 m	4000 feet (1.2 km)	150 m	150 m
Data Format	N, 8, 1, 1	-	N, 8, 1, 1	-	-
Max. Nodes	32	256 for Ethernet, 32 for RS-485	32	32	-
Protocol	User Defined Modbus/RTU	User Defined Modbus/RTU Modbus/TCP	Modbus/RTU	Modbus/RTU, Modbus/TCP	Modbus/RTU, Modbus/TCP
Remote I/O	Modbus Device				
Power Requirements	+10 ~ +30 VDC				
Environment					
Operating Temperature	-10 ~ 70° C (14 ~ 158° F)				0 ~ 50° C (32 ~ 122° F)
Storage Temperature	-25 ~ 85° C (-13 ~ 185° F)				
Humidity	5 ~ 95%				



Distributed Controllers

System	ADAM-5000/485	ADAM-5000E	ADAM-5000/TCP	ADAM-5000/TCP
CPU	80188	80188	RISC CPU	
RAM	-	-	4 MB	
Flash ROM (user's AP)	-	-	512 KB	
Flash Memory (data storage)	-	-	-	
Flash Disk	-	-	-	
OS	-	-	real-time OS	
Timer BIOS	-	-	-	
Real-time Clock	-	-	-	
Watchdog Timer	Yes			
COM1/COM2	RS-485	RS-485	RS-485 (Modbus)	
COM3 (Programming)	TX, RX, GND			
I/O Slots	4	8	4	8
Power Consumption	3 W		4.0 W	5.0 W
Isolation				
Communication	2500 V _{DC}	3000 V _{DC}	RS-485: 1500 V _{DC} Ethernet: 3000 V _{DC}	
Communication Power	3000 V _{DC}			
I/O Module	3000 V _{DC}			
Diagnosis				
Status Display	Power, CPU, Communication		Power, CPU, Error Diagnostic, Communication	
Self Test	Yes, while ON			
Software Diagnosis	Yes			
Communication				
Interface	RS-232/485 (2-wire)	RS-232/485 (2-wire)	Ethernet	
Speeds (bps)	1200, 2400, 4800, 9600, 192 K, 38.4 K, 57.6 K, 115.2 K	1200, 2400, 4800, 9600, 19.2 K, 38.4 K, 57.6 K, 115.2 K	10 M, 100 M	
Max. Distance	4000 feet (1.2 km)	4000 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 ~ 186° F)			
Humidity	5 ~ 95%			

Selection Guide

ADAM-6000

Spec.	Module	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										802.11 b wireless LAN		
Resolution		16 bit	16 bit	16 bit	16 bit for AI 12 bit for AO	16 bit for AI 12 bit for AO	-	-	-	-	-	-	-	-
Analog Input	Input Channels	7 differential	8 differential	8 differential	6 differential	6 diff. AI	-	-	-	-	-	-	-	-
	Sampling Rate	10 samples/sec					-	-	-	-	-	-	-	-
	Voltage Input	PT-50 PT-100 PT-200 PT-1000 Balco 500 NI 50	±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	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	-	-	-	-	-	-	-	-	-	-
	Channel Independent Configuration	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-
	Math. Functions	Max. Min. Avg.	Max. Min. Avg.	Max. Min. Avg.	-	-	-	-	-	-	-	-	-	-
Analog Output	Output Channels	-	-	-	2 AO	2 AO	-	-	-	-	-	-	-	-
	Voltage Output	-	-	-	0 ~ 20 mA, 4 ~ 20 mA with 15 V _{DC}	0 ~ 20 mA, 4 ~ 20 mA with 15 V _{DC}	-	-	-	-	-	-	-	-
	Drive Current	-	-	-	0 ~ 10 V _{DC} with 30 mA	0 ~ 10 V _{DC} with 30 mA	-	-	-	-	-	-	-	-
Digital Input and Output	Digital Input Channels	-	-	-	2	2	12	12	8	6	6	12	12	6
	Digital Output Channels	-	2 (Sink)	8 (Sink)	2 (Sink)	2 (Sink)	6 (Sink)	2 (Sink)	8 (Source)	6-channel power relay	6-channel power relay	6 (Sink)	2 (Sink)	6-channel relay
	Event Counter	-	-	-	-	-	-	2 (4.5 kHz)	-	-	-	-	2 (4.5 kHz)	-
	High/Low Alarm Settings	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-
Isolation		2,000 V _{RMS}												
Watchdog Timer		Yes												
Remark		-	-	-	Built-in Dual Loop PID Control Algorithm	-	-	-	-	-	-	-	-	-

Name	ADAM-6501	ADAM-6520/6521	ADAM-6541/6542
Interface	10/100Base-T	10/100Base-T, 100Base-FX	10/100Base-TX and 100Base-FX
Ethernet Port	1	5	2
Serial Port	2	-	-
Speed	10/100 Mbps	up to 100 Mbps	up to 100 Mbps
Parity	Even, odd, none, space, mark	-	-
Data Bit	5, 6, 7, 8	-	-
Stop Bit	1, 1.5, 2	-	-
Software	Configuration/port mapping utility	-	-
Connector	Network: RJ-45 Serial: RJ-48 & Screw Terminator	Network: RJ-45 Fiber: SC type multi/single mode	Network: RJ-45 Fiber: SC type multi-mode ST type single-mode
Mounting	DIN 35 rail, stack, wall		
Power Requirement	10 - 30 V		
Power Consumption	4 W	6520: 2.4 W 6521: 3 W	3 W
Operating Temperature	0 ~ 55° C	-10 ~ 65° C	-10 ~ 65° C

Touch Panel Computers



Specifications		Model	TPC-1570H	TPC-1270H	TPC-1261H
CPU			Intel Celeron M 1 GHz Intel Celeron M 600 MHz	Intel Pentium M 1.4 GHz Intel Celeron M 1 GHz	AMD LX800 500 MHz
Memory			512 MB DDR SDRAM (up to 1 GB DDR SDRAM)	512 MB DDR2 SDRAM	256 MB DDR SDRAM (up to 1 GB DDR SDRAM)
Display	Type		TFT color LCD	TFT color LCD	TFT color LCD
	Size		15"	12.1"	12.1"
	Max. Resolution		1024 x 768	800 x 600	800 x 600
	Max. Colors		262 K	262 K	262 K
	Luminance (cd/m2)		350	350	340
	Viewing Angle (H°/V°)		120/100	140/120	100/60
	Backlight Life (hrs)		50,000	50,000	50,000
Touchscreen			Resistive	Resistive	Resistive
Flash Memory			-	-	-
HDD			1 x Internal 2.5" (optional)	1 x Internal 2.5" SATA (optional)	1 x Internal 2.5" (optional)
FDD			External from USB interface	External from USB interface	External from USB interface
CD-ROM			External from CF slot	External from CF slot	External from CF slot
Network (LAN)			1 x 10/100Base-T, 1 x 10/100/1000Base-T (TPC-1570H-A1E) 2 x 10/100Base-T (TPC-1570H-B1E)	1 x 10/100Base-T, 1 x 10/100/1000Base-T (TPC-1270H-P1E) 2 x 10/100Base-T (TPC-1270H-C1E)	1 x 10/100Base-T
I/O Ports			Serial Port x 3 (2 x RS-232 and 1 x RS-232/485/422) Parallel Port x 1 VGA x 1 USB x 2 Audio x 3 (1 x MIC-in, 1 x Line-in, 1 x Line-out) PS/2 x 1	Serial Port x 4 (3 x RS-232 and 1 x RS-232/485/422) VGA x 1 USB x 4 Audio x 2 (1 x MIC-in, 1 x Line-out) PS/2 x 1	Serial Port x 4 (3 x RS-232 and 1 x RS-232/485/422) Parallel Port x 1 USB x 2 PS/2 x 1
CompactFlash Slots			Type II x 1	Type II x 1	Type II x 1
PCMCIA Slots			Type II x 1	-	-
Expansion Slots			-	PCI-104 x 1	PCI-104 x 1
Power	Input Voltage		18 ~ 32 Vdc	18 ~ 32 Vdc	18 ~ 32 Vdc
	Power Consumption		60 W	60 W	60 W
Dimensions	W x D x H (mm)		383 x 307 x 65 mm (15.08" x 12.09" x 2.56")	311 x 237 x 65 mm (12.24" x 9.33" x 2.56")	311 x 237 x 50 mm (12.24" x 9.33" x 1.97")
	Weight (Net)		5.5 kg (12.13 lb)	3.5 kg (7.72 lb)	2.2 kg (4.85 lb)
Front Cover			Al-Mg	Al-Mg	Al-Mg
Operating Temperature			0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
Ingress Protection (Front Panel)			NEMA4/IP65	NEMA4/IP65	NEMA4/IP65
Certifications			BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL
Operating System			Windows 2000, Windows XP Windows CE, XP Embedded	Windows 2000, Windows XP Windows CE, XP Embedded	Windows XP Windows CE, XP Embedded



TPC-1070H	TPC-660G	TPC-120H	TPC-66S	TPC-66T/TPC-68T
Intel Pentium M 1.4 GHz Intel Celeron M 1 GHz	AMD LX800 500 MHz	Intel PXA270 520 MHz	Intel PXA270 416 MHz	
256 MB DDR SDRAM (up to 512 MB)	256 MB DDR SDRAM (up to 1 GB DDR SDRAM)	64 MB SDRAM on board	64 MB SDRAM on board	
TFT color LCD	TFT color LCD	TFT color LCD	STN color LCD	TFT color LCD
10.4"	6.4"	12.1"	5.7"	5.6"
800 x 600	640 x 480	800 x 600	320 x 240	320 x 234
260	262 K	262 K	64 K	64 K
400	150	340	400	500
140/100	90/50	100/60	100/55	100/60
40,000	20,000	50,000	60,000	30,000
Resistive	Resistive	Resistive	Resistive	
-	-	64 MB on board	64 MB on board	
1 x Internal 2.5" (optional)	1 External 2.5" (optional)	-	-	
External from USB interface	-	-	-	
External from CF slot	-	-	-	
1 x 10/100Base-T, 1 x 10/100/1000Base-T (TPC-1070H-P1E) 2 x 10/100Base-T (TPC-1070H-C1E)	10/100Base-T	2 x 10/100Base-T	10/100Base-T	
Serial Port x 3 (2 x RS-232 and 1 x RS-232/485/422) USB x 2 PS/2 x 1	Serial Port x 2 (1 x RS-232 and 1 x RS-232/485/422) USB x 2	Serial Ports x 3 (2 x Full RS-232; 1 x 4-pin RS-232/ RS485) VGA x 1 USB x 2 CAN Bus x 1 (optional)	Serial Port x 3 USB x 2 (Host x 1, Client x 1) TPC-66T Serial Port x 3, USB x 2 (Host x 1, Client x 1) TPC-68T Serial Port x 2, CAN Bus x 1, USB x 2 (Host x 1, Client x 1)	
Type II x 1	Type II x 1	Type II x 1	Type II x 1	
-	-	-	-	
-	PC-104 x 1	-	-	
18 ~ 32 Vdc	18 ~ 32 Vdc	18 ~ 32 Vdc	18 ~ 32 Vdc	
60 W	30 W	30 W	20 W	
286 x 266 x 58 mm (11.26" x 8.9" x 2.28")	195 x 148 x 44.4 (7.68" x 5.83" x 1.75")	311 x 237 x 50 (12.24" x 9.33" x 1.97")	195 x 148 x 44.4 (7.68" x 5.83" x 1.75")	
3.5 kg (7.72 lb)	0.8 kg (1.76 lbs)	2.2 kg (4.85 lbs)	0.8 kg (1.76 lbs)	
Die-Cast Aluminum Alloy	ABS	Al-Mg	ABS	
0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	
NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4 / IP65	
BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	
Windows 2000, Windows XP Windows CE, XP Embedded	Windows XP, Windows CE, XP Embedded	Windows CE	Windows CE	

Selection Guide

Industrial Panel PC



Specifications		Model	IPPC-9171G	IPPC-9151G
LCD Display	Type		SXGA TFT LCD	XGA TFT LCD
	Size		17"	15"
	Max. Resolution		1280 x 1024	1024 x 768
	Max. Colors		16.2 M (RGB 6-bit + FRC data)	262,144
	Viewing Angle (H,V°)		140,130	120, 100
	Luminance (cd/m ²)		260	350
	Backlight Life (hrs)		50,000	50,000
	Contrast Ratio		450:1	400:1
CPU			Socket 478 Pentium 4 (up to 2.8 GHz)	Socket 478 Pentium 4 (up to 2.8 GHz)
Memory			Up to 2 GB DDR SDRAM (DDR-DIMM 184 pin)	Up to 2 GB DDR SDRAM (DDR-DIMM 184 pin)
IEEE 1394 (Firewire) Ports			Two	Two
Serial Ports			1 x RS-232, 1 x RS-232/422/485	1 x RS-232, 1 x RS-232/422/485
Parallel Ports			One	One
Video Ports			S-Video x 1	S-Video x 1
USB Ports			4 x USB 2.0	4 x USB 2.0
Network (LAN)			10/100Base-T	10/100Base-T
Floppy Disk Drive			One	One
CD-ROM Drive			Slim Type x 1	Slim Type x 1
Hard Disk Drive (Optional)			1 x 3.5"	1 x 3.5"
PCMCIA Slot			Type II x 2	Type II x 2
Expansion Slots			2 x PCI	2 x PCI
Touchscreen Type (Optional)			Resistive	Resistive
Power Supply (AC)			180 W	180 W
Operating Temperature			0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
Storage Temperature			-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)
Certifications			BSMI CCC, CE, FCC UL	BSMI, CCC, CE, FCC, UL
Dimensions (W x H x D)			482 x 354.8 x 162 mm (18.97" x 13.96" x 6.37")	428 x 310 x 150 mm (16.85" x 12.2" x 5.9")



	IPPC-9151F	IPPC-9150G	IPPC-9120G
	XGA TFT LCD	XGA TFT LCD	SVGA TFT LCD
	15"	15"	12.1"
	1024 x 768	1024 x 768	800 x 600
	262,144	262,144	262,144
	120, 100	120,100	100, 60
	350	350	340
	50,000	50,000	50,000
	400:1	400:1	300:1
	Socket 478 Pentium 4 (up to 2.8 GHz)	Socket 370 Pentium III (up to 1.26 GHz) Socket 370 Celeron (up to 1.2 GHz)	Socket 370 Pentium III (up to 1.26 GHz) Socket 370 Celeron (up to 1.2 GHz)
	Up to 2 GB DDR SDRAM (DDR-DIMM 184 pin)	Up to 1 GB SDRAM (SODIMM 168 pin)	Up to 1 GB SDRAM (SODIMM 168 pin)
	Two	-	-
	1 x RS-232, 1 x RS-232/422/485	2 x RS-232, 1 x RS-232/422/485 (IPPC-9150G-RAE) 3 x RS-232, 1 x RS-232/422/485 (IPPC-9150G-XAE)	2 x RS-232, 1 x RS-232/422/485 (IPPC-9120G-RAE) 3 x RS-232, 1 x RS-232/422/485 (IPPC-9120G-XAE)
	One	One	One
	S-Video x 1	-	-
	4 x USB 2.0	2 x USB 1.1	2 x USB 1.1
	10/100Base-T	10/100Base-T	10/100Base-T
	One	-	-
	Slim Type x 1	Slim Type x 1	Slim Type x 1
	1 x 3.5"	2.5" x 1	2.5" x 1
	Type II x 2	Type II x 2	Type II x 2
	2 x PCI	PCI x 1, PCI/ISA x 1	PCI x 1, PCI/ISA x 1
	Resistive	Resistive	Resistive
	180 W	100 W	100 W
	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)
	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL
	428 x 310 x 150 mm (16.85" x 12.2" x 5.9")	402 x 302 x 127 mm (15.9" x 11.9" x 5")	402 x 302 x 127 mm (15.9" x 11.9" x 5")

Selection Guide

Flat Panel Monitor



Specifications		Model	FPM-3190G	FPM-3191G	FPM-3170G	FPM-3171G
LCD Display	Size (diagonal)		19"	19"	17"	17"
	Resolution		1280 x 1024	1280 x 1024	1280 x 1024	1280 x 1024
	Colors		16.7 M	16.7 M	16.2 M	16.2 M
	Viewing Angle (H,V)		178, 178	178, 178	140, 130	140, 130
	Luminance (cd/m²)		300	300	300	300
	Backlight Life (hrs)		50,000	50,000	40,000	40,000
	Contrast Ratio		1000:1	1000 : 1	500 : 1	500 : 1
Direct VGA Input			Yes	Yes	Yes	Yes
DVI Input			Yes	-	Yes	-
S-Video			Yes	-	Yes	-
Video Input			Yes	-	Yes	-
Touchscreen (Optional)			Resistive	Resistive	Resistive	Resistive
OSD (Onscreen Display)			Yes	Yes	Yes	Yes
Touchscreen Sensor			ELO	ELO	ELO	ELO
Inverter			TDK	TDK	TDK	TDK
Power Supply (Volt, AC)			100-240 V	100-240 V	100-240 V	100-240 V
Front Panel Ingress Protection			NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65
Operating Temperature			0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
Storage Temperature			-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)
Certifications			BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC
Dimensions (W x H x D)			482 x 399 x 66 mm (18.9" x 15.7" x 2.6")	482 x 399 x 66 mm (18.9" x 15.7" x 2.6")	482 x 354 x 68 mm (18.9" x 13.9" x 2.7")	482 x 354 x 68 mm (18.9" x 13.9" x 2.7")



FPM-3150G	FPM-2150G	FPM-3120G / FPM-3121G	FPM-3060G
15"	15"	12.1"	6.5"
1024 x 768	1024 x 768	800 x 600/1024 x 768	640 x 480
16.2 M	16.2 M	262 k	262 k
140, 125	140, 125	140, 120/100, 120	140, 120
400	250	350	400
50,000	40,000	50,000	50,000
500 : 1	500 : 1	200 : 1/350 : 1	500 : 1
Yes	Yes	Yes	Yes
-	-	-	-
-	-	-	-
-	-	-	-
Resistive	Resistive	Resistive	Resistive
Yes	Yes	Yes	Yes
3 M/AMT	3 M/AMT	3 M/AMT	AMT
TDK	TDK	TDK	TDK
100-240 V	100-240 V	100-240 V	100-240 V
NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65
0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)
BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC
422 x 310 x 86 mm (16.6" x 12.2" x 3.4")	383 x 307 x 48 mm (15" x 12" x 1.89")	312 x 244 x 44.6 mm (12.28" x 9.61" x 1.76")	220 x 150 x 45 mm (8.7" x 5.9" x 1.8")

Selection Guide

Industrial Workstations

Product Series		AWS-8259	AWS-8248V	AWS-8129H	AWS-8124H
Brief Description		Modular Workstation	Modular Workstation	Workstation with 9 expansion slots	Mini Workstation
LCD Display	Diagonal	15"	15"	12.1"	12.1"
	Type	XGA TFT LCD	XGA TFT LCD	SVGA TFT LCD	SVGA TFT LCD
	Resolution	1024 x 768	1024 x 768	800 x 600	800 x 600
	Colors	262 K	262 K	262 K	262 K
	Viewing Angle (H°, V°)	120, 100	120, 100	140, 120	120, 90
	Luminance (cd/m2)	350	350	350	350
	Backlight Lifetime (hrs)	50,000	50,000	50,000	50,000
	Interface	VGA	VGA	VGA, LVDS	VGA
	Other	Detachable display module	-	-	-
OSD (Optional Display)		Yes	Yes	Yes	Yes
Backplane	Slot Number	9	14	9	4
	CPU, PCI, ISA, PCI/ISA	1, 0, 8, 0 (AWS-8259T)	0, 0, 14, 0 (AWS-8248VT)	2, 4, 3, 0 (AWS-8129H1-X(R)AE)	1, 3, 0, 0 (AWS-8124H1)
		1, 4, 4, 0 (AWS-8259TP)	1, 4, 9, 0 (AWS-8248VTP)		1, 0, 3, 0 (AWS-8124H2)
Storage Device	FDD (Standard)	1	1	Slim Type x 1	1
	HDD Housing	3.5" x 1	3.5" x 2	3.5" x 1	3.5" x 1
	CD-ROM (Optional)	Slim Type x 1	5.25" x 1	Slim Type x 1	-
Key Pad	Data Entry Keys	39	39	60	-
	Function Keys	10	10	10	-
	Macro Function Keys	10	10	10	-
Touchscreen (Optional)		Analog Resistive	Analog Resistive	Analog Resistive	Analog Resistive
Power Supply (AC)		300 W	250 W	250 W	100 W
Front Panel Compliance		NEMA 4/IP65	NEMA 4/IP65	NEMA 4/IP65	NEMA 4/IP65
Operating Temperature		0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
Storage Temperature		-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)
Certifications		CE,FCC, BSMI, CCC	CE, FCC, BSMI, CCC	CE, FCC, BSMI, CCC	CE, FCC, BSMI, CCC
Dimensions (W x H x D)		482 x 356 x 229 mm (18.98" x 14" x 9")	482 x 356 x 465 mm (18.98" x 14" x 18.32")	482 x 266 x 317 mm (18.98" x 10.5" x 12.5")	344 x 260 x 159.8 mm (13.5" x 10.2" x 6.2")
Weight		22 kg	25.5 kg	17 kg	7 kg
CPU Card Suggestion		PCA-6186VE PCA-6186LV PCA-6003VE	PCA-6186VE PCA-6186LV PCA-6003H	PCA-6186 PCA-6187	PCI-6881 PCI-6872 PCA-6774

ATM-4233	ATM-4008	ATM-4023	PWS-1409	PWS-1419
Industrial Automation Platform	Industrial Automation Platform	Industrial Automation Platform	Ruggedized Portable Workstation	
6"	6"	6.4"	14.1"	
VGA TFT LCD	VGA TFT LCD	VGA TFT LCD	VGA TFT LCD	
640 x 480	640 x 480	640 x 480	1024 x 768	
262 K	262 K	262 K	262 K	
120, 100	120, 100	55, 50	80,45	100, 55
400	400	300	130	220
10,000	10,000	20,000	25,000	
VGA	VGA	VGA	VGA	
OSD control for Brightness adjustment & backlight	OSD control for Brightness adjustment & backlight	OSD control for Brightness adjustment & backlight	OSD control for Brightness adjustment & backlight	
Yes	Yes	Yes	-	
14	8	8	9	
1, 10, 2, 0 (ATM-4233N10)	1, 7, 0, 0 (ATM-4008R1)	1, 7, 0, 0 (front wire) (ATM-4023H8)	1, 0, 8, 0	
			1, 4, 4, 0	
-	-	-	1	
3.5" x 1	3.5" x 1	3.5" x 2	3.5" x 1	
5.25" x 2	5.25" x 2	Slim Type x 1	Slim Type x 1	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
250 W	250 W	250 W	200 W	
-	-	-	-	
0 ~ 45° C (32 ~ 113° F)	0 ~ 45° C (32 ~ 113° F)	0 ~ 45° C (32 ~ 113° F)	-8 ~ 60° C (18 ~ 140° F)	
-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	
CE, FCC, BSMI, CCC	CE, FCC, BSMI, CCC	CE, FCC, BSMI, CCC	CE, FCC, BSMI, CCC	
482 x 173 x 450 mm (18.98" x 6.8" x 17.7")	482 x 173 x 360 mm (18.98" x 6.8" x 17.7")	482 x 173 x 265 mm (18.98" x 6.8" x 10.4")	421 x 282 x 230 mm (16.6" x 11.1" x 9.1")	
18 kg	10 kg	12 kg	9 kg	12 kg
PCA-6186VE PCA-6003VE PCA-6004VE	PCA-6108 PCI-6872 PCI-6881 PCA-6774	PCI-6872F PCI-6870F PCA-6774 PCA-6108 PCA-6751		

Analog I/O & Multifunction Cards

Category			Multifunction						
Bus			PCI						
Model			PCI-1710/1710L	PCI-1710HG/ 1710HGL	PCI-1711/1711L	PCI-1712/17112L	PCI-1716/1716L	PCI-1718HDU/ HGU	PCI-1741U
Analog Input	General Spec.	Resolution	12 bits	12 bits	12 bits	12 bits	16 bits	12 bits	16 bits
		Channels	16 SE/8 Diff.	16 SE/8 Diff.	16 SE	16 SE/8 Diff.	16 SE/8 Diff.	16 SE/8 Diff.	16 SE/8 Diff.
		Onboard FIFO	4096 samples	4096 samples	1024 samples	1024 samples	1024 samples	1024 samples	1024 samples
		Sampling Rate	100 kS/s	100 kS/s	100 kS/s	1 MS/s	250 kS/s	100 kS/s	200 kS/s
		Auto Channel Scanning	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Input Ranges	Unipolar Inputs (V)	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 1, 0 ~ 0.1, 0 ~ 0.01	-	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 0.01 (PCI-1718HGU)	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25**
		Bipolar Inputs (V)	±10, 5, 2.5, 1.25, 0.625	±10, 5, 1, 0.5, 0.1, 0.05, 0.01, 0.005	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625 (PCI-1718HGU) ±10, 5, 1, 0.5, 0.1, 0.05, 0.01, 0.005 (PCI-1718HGU)	±10, 5, 2.5, 1.25, 0.625**
		Configurable Per-Channel	Yes	Yes	Yes	Yes	Yes	Yes	-
	Trigger Mode	Pacer/Software/ External Pulse	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Analog Slope	-	-	-	Yes	-	-	-
		Pretrigger	-	-	-	Yes	-	-	-
		Post-trigger	-	-	-	Yes	-	-	-
	Data Transfer Mode	About-trigger	-	-	-	Yes	-	-	-
		Software	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		DMA	-	-	-	Bus-mastering	Bus-mastering	-	-
Analog Output	Resolution	12 bits	12 bits	12 bits	12 bits	16 bits	12 bits	16 bits	
	Number of Channels	2 (PCI-1710 only)	2 (PCI-1710HG only)	2 (PCI-1711 only)	2 (PCI-1712 only)	2 (PCI-1716 only)	1	1	
	Onboard FIFO	-	-	-	32 K samples	-	-	-	
	Output range (V)	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10	±5, ±10	
	Throughput	Static update	Static update	Static update	1 MS/s	Static update	Static update	Static update	
	DMA transfer	-	-	-	Yes	-	-	-	
Digital I/O	Input Channels	16	16	16	16 (mixed)	16	16	16	
	Output Channels	16	16	16		16	16		
Timer/Counter	Channels	1	1	1	3	1	1	1	
	Resolution	16-bit	16-bit	16-bit	16-bit	16-bit	16-bit	16-bit	
	Time Base	10 MHz	10 MHz	10 MHz	10 MHz	10 MHz	10 MHz	10 MHz	
Isolation Voltage			-	-	-	-	-	-	
Auto Calibration			-	-	-	Yes	Yes	Yes	
BoardID Switch			Yes	Yes	-	-	Yes	Yes	
Dimensions (mm)			175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	
Connector			68-pin SCSI-II	68-pin SCSI-II	68-pin SCSI-II	68-pin SCSI-II	68-pin SCSI-II	DB-37	
Windows 98/2000/XP DLL Driver			Yes	Yes	Yes	Yes	Yes	Yes	
Windows 98/2000/XP Test Utility			Yes	Yes	Yes	Yes	Yes	Yes	
VC++, VB & delphi Examples			Yes	Yes	Yes	Yes	Yes	Yes	
Advantech ActiveDAQ/ActiveDAQ Pro			Yes	Yes	Yes	Yes	Yes	Yes	
Labview I/O Drivers (Ver. 6i and 7.0)			Yes	Yes	Yes	Yes	Yes	Yes	
Mathworks MATLAB Data Acquisition Tool Box 2.5.1			Yes	Yes	Yes	Yes	-	-	
KW Win32 Driver			Yes	Yes	Yes	-	Yes	-	

* Note: SS = Single DMA channel, Single A/D channel scan SM = Single DMA channel, Multiple A/D channel scan

** Note: All channels should be set to the same range.

Multifunction									AI		
PCI	ISA					PC/104			PCI		
PCI-1742U	PCL-711B	PCL-812PG	PCL-818L	PCL-818HD	PCL-818HG	PCM-3718H	PCM-3718HG	PCM-3718HO	PCI-1713	PCI-1714	PCI-1714UL
16 bits	12 bits	12 bits	12 bits	12 bits	12 bits	12 bits	12 bits	12 bits	12 bits	12 bits	12 bits
16 SE/8 Diff.	8 SE	16 SE	16 SE/8 Diff	16 SE/8 Diff	16 SE/8 Diff	16 SE/8 Diff.	16 SE/8 Diff.	16 SE/8 Diff.	32 SE/16 Diff. (Isolation)	4 SE	4 SE
1024 samples	-	-	-	1024 samples	1024 samples	-	-	1024 samples	4096 samples	32,768 samples	8,192 samples
1 MS/s	25 kS/s	30 kS/s	40 kS/s	100 kS/s	100 kS/s	100 kS/s	100 kS/s	100 kS/s*	100 kS/s	30 MS/s	10 MS/s
Yes	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
0 ~ 10, 0 ~ 5 0 ~ 2.5, 0 ~ 0.125	-	-	-	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 1, 0 ~ 0.1, 0 ~ 0.01	0 ~ 10, 0 ~ 5 0 ~ 2.5, 0 ~ 0.125	0 ~ 10, 0 ~ 1 0 ~ 0.1, 0 ~ 0.01	0 ~ 10, 0 ~ 5 0 ~ 2.5, 0 ~ 0.125	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	-	-
±10, 5, 2.5, 1.25 0.625	±5, 2.5, 1.25, 0.625, 0.3125	±10, 5, 2.5, 1.25, 0.625, 0.3125	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	±10, 5, 1, 0.5, 0.1, 0.05, 0.01, 0.005	±10, 5, 2.5, 1.25 0.625	±10, 5, 1, 0.5, 0.1, 0.05, 0.01, 0.005	±10, 5, 2.5, 1.25 0.625	±10, 5, 2.5, 1.25, 0.625	±5, 2.5, 1, 0.5	±5, 2.5, 1, 0.5
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
-	-	-	-	-	-	-	-	-	-	Yes	Yes
-	-	-	-	-	-	-	-	-	-	Yes	Yes
-	-	-	-	-	-	-	-	-	-	Yes	Yes
-	-	-	-	-	-	-	-	-	-	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bus-mastering	-	SS*	SM*	SM*	SM*	SS*	SS*	SS*	-	Bus-mastering	Bus-mastering
16 bits	12 bits	12 bits	12 bits	12 bits	12 bits	-	-	12 bits	-	-	-
2	1	2	1	1	1	-	-	1	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
0 ~ 5, 0 ~ 10 ±5, ±10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10, ±10	0 ~ 5, 0 ~ 10, ±10	-	-	0 ~ 5, 0 ~ 10	-	-	-
Static Update	Static update	Static update	Static update	Static update	Static update	-	-	Static update	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
16	16	16	16	16	16	16	16	16	-	-	-
16	16	16	16	16	16				-	-	-
1	-	1	1	1	1	1	1	1	-	1	-
16 bits	-	16-bit	16-bit	16-bit	16-bit	16 bits	16 bits	16 bits	-	8-bit	1
10 MHz	2 MHz	2 MHz	10 MHz	10 MHz	10 MHz	10 MHz	10 MHz	10 MHz	-	60 MHz	60 MHz
-	-	-	-	-	-	-	-	-	2,500 V _{bc}	-	-
-	-	-	-	-	-	-	-	-	-	Yes	Yes
Yes	-	-	-	-	-	-	-	-	-	Yes	Yes
175 x 100	175 x 100	185 x 100	155 x 100	185 x 100	185 x 100	96 x 90	96 x 90	96 x 90	175 x 100	175 x 100	175 x 100
68-pin SCSI-II	2 x 20-pin	2 x 20-pin	DB-37	DB-37	DB-37	2 x 20-pin	2 x 20-pin	2 x 20-pin	DB-37	4 BNC	4 BNC
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes	-	-
-	-	-	-	-	-	-	-	-	-	-	-

* 80kHz on P4-based (or upper) system

** Note: System-dependent

Analog I/O & Multifunction Cards

Category			AI			AO									
Bus			PCI		ISA	PCI				ISA			PC./104		
Model			PCI-1715U	PCI-1747U	PCL-813B	PCI-1720U	PCI-1721	PCI-1723	PCI-1724	PCI-1727U	PCL-726	PCL-727	PCL-728	PCM-3712	
Analog Input	General Spec.	Resolution	12bits	16 bits	12 bits	-	-	-	-	-	-	-	-	-	
		Channels	32 SE/16 Diff.	64 SE/32 Diff.	32 SE	-	-	-	-	-	-	-	-	-	
		Onboard FIFO	1024 samples	1024 samples	-	-	-	-	-	-	-	-	-	-	
		Sampling Rate	500 kS/s	250 kS/s	25 kS/s	-	-	-	-	-	-	-	-	-	
		Auto Channel Scanning	Yes	Yes	-	-	-	-	-	-	-	-	-	-	
	Input Ranges	Unipolar Inputs (V)	0 ~10, 0 ~ 5, 0 ~ 2.5, 0 ~ 0.125	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	-	-	-	-	-	-	-	-	-	
		Bipolar Inputs (V)	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	-	-	-	-	-	-	-	-	-	
		Configurable Per-Channel	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	
	Trigger Mode	Pacer/ Software/ External Pulse	Yes	Pacer/ Software	Software only	-	-	-	-	-	-	-	-	-	-
		Analog Slope	-	-	-	-	-	-	-	-	-	-	-	-	-
		Pretrigger	-	-	-	-	-	-	-	-	-	-	-	-	-
		Post-trigger	-	-	-	-	-	-	-	-	-	-	-	-	-
		About-trigger	-	-	-	-	-	-	-	-	-	-	-	-	-
	Data Transfer Mode	Software	Yes	Yes	Software only	-	-	-	-	-	-	-	-	-	-
		DMA	Bus-mastering	Bus-mastering	-	-	-	-	-	-	-	-	-	-	-
	Analog Output	Resolution	-	-	-	12 bits	12 bits	16 bits	14 bits	14 bits	12 bits	12 bits	12 bits	12 bits	12 bits
Number of Channels		-	-	-	4 (Isolation)	4 (Waveform Output)	8	32	12	6	12	2 (Isolation)	2	2	
Onboard FIFO		-	-	-	-	1K samples	-	-	-	-	-	-	-	-	
Output range (V)		-	-	-	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA	-10 ~ 10 0 ~ 20 mA, 4 ~ 20 mA	±10, 0 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 4 ~ 20 mA	-0 ~ 5, 0 ~ 10, ±5, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 4 ~ 20 mA	
Throughput		-	-	-	Static update	10M	Static update	Static update	Static update	Static update	Static update	Static update	Static update	Static update	
DMA transfer		-	-	-	-	Bus-mastering	-	-	-	-	-	-	-	-	
Digital I/O	Input Channels	-	-	-	-	16	16	-	16	16	16	-	-		
	Output Channels	-	-	-	-				16	16	16	-	-		
Timer/Counter	Channels	-	1	-	-	1	-	-	-	-	-	-	-	-	
	Resolution	-	16-bit	-	-	16-bit	-	-	-	-	-	-	-	-	
	Time Base	-	10 MHz	-	-	10 MHz	-	-	-	-	-	-	-	-	
Isolation Voltage			2,500 V _{oc}	-	500 V _{oc}	2,500 V _{oc}	-	-	-	-	-	-	500 V _{oc}	-	
Auto Calibration			-	Yes	-	-	Yes	Yes	-	-	-	-	-	-	
BoardID Switch			Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	-	-	-	-	
Dimensions (mm)			175 x 100	175 x 100	219 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	337 x 112	337 x 112	185 x 120	96 x 90	
Connector			DB-37	68-pin SCSI-II	DB-37	DB-37	68-pin SCSI-II	68-pin SCSI-II	DB-62	2 x 20-pin, DB-37	4 x 20-pin	2 x 20-pin, DB-37	2 x DB-9	1 x 10-pin box header	
Windows 98/2000/XP DLL Driver			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Windows 98/2000/XP Test Utility			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
VC++, VB & delphi Examples			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Advantech ActiveDAQ/ActiveDAQ Pro			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Labview I/O Drivers (Ver. 6i and 7.1)			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Mathworks MATLAB Data Acquisition Tool Box 2.5.1			-	-	Yes	Yes	-	-	-	-	Yes	Yes	Yes	-	
KW Win32 Driver			-	-	-	-	-	-	-	-	-	-	-	-	

* Note: SS = Single DMA channel, Single A/D channel scan SM = Single DMA channel, Multiple A/D channel scan

Digital I/O & Counter Cards

Category			Non-Isolated DI/O									
Bus			PCI								ISA	
Model			PCI-1735U	PCI-1736UP	PCI-1737U	PCI-1739U	PCI-1751U	PCI-1753/1753E	PCI-1755	PCI-1757UP	PCL-720+	PCL-722
TTL DI/O	Input Channels		32	24	24	48	48	96	32	24	32	144
	Output Channels		32								32	
	Output Channel	Sink Current	0.5 V @ 24 mA	0.5 V @ 24 mA	0.5 V @ 24 mA	0.5V @ 24 mA	24 mA @ 0.4 V	24 mA @ 0.44 V	48 mA @ 0.5 V	0.5 V @ 24 mA	24 mA @ 0.5 V	24 mA @ 0.5 V
		Source Current	2.0 V @ 15 mA	2.0 V @ 15 mA	2.0 V @ 15mA	2.0 V @ 15 mA	15 mA @ 2.4 V	24 mA @ 3.76 V	15 mA @ 2.4 V	2.0 V @15 mA	3 mA @ 2.4 V	15 mA @ 2.4 V
Isolated DI/O	Input	Channels	-	-	-	-	-	-	-	-	-	-
		Isolation Voltage	-	-	-	-	-	-	-	-	-	-
		Input Range	-	-	-	-	-	-	-	-	-	-
	Output	Channels	-	-	-	-	-	-	-	-	-	-
		Isolation Voltage	-	-	-	-	-	-	-	-	-	-
		Output range	-	-	-	-	-	-	-	-	-	-
		Max. Sink Current	-	-	-	-	-	-	-	-	-	-
	Timer/Counter	Channels	3	-	-	-	3	-	3	-	3	-
Resolution		16 bits	-	-	-	16-bit	-	16-bit	-	16-bit	-	
Time Base		10 MHz	-	-	-	5 MHz	-	10 MHz	-	1 MHz	-	
Advanced Function	Pattern Match		-	-	-	-	-	Yes	Yes	-	-	-
	Change of State		-	-	-	-	-	Yes	Yes	-	-	-
	BoardID Switch		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-
	Channel-Freeze Function		-	-	-	-	-	-	Yes	-	-	-
	Output Status Read Back		Yes	-	Yes	Yes	Yes	Yes	-	Yes	-	-
	Dry/Wet Contact		-	-	-	-	Yes	Yes	-	Yes	-	-
Dimensions (mm)			175 x 100	120 x 65	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	120 x 65	185 x 100	334 x 100
Connectors			5 x 20-pin	1 x DB-44	1 x 50-pin	2 x 50-pin	68-pin SCSI-II	100-pin SCSI-II	100-pin SCSI-II	1 x DB-25	5 X 20- pin	6 x 50-pin
Windows 98/2000/XP DLL Driver			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows 98/2000/XP Test Utility			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VC++, VB & delphi Examples			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Advantech ActiveDAQ/ ActiveDAQ Pro			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Labview I/O Drivers (Ver. 6i and 7.0)			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mathworks MATLAB & Simulink Data Acquisition Tool Box 2.5.1			-	-	-	-	Yes	Yes	-	-	Yes	Yes
KW Win32 Driver			-	-	-	-	-	-	-	-	-	-

Selection Guide

Digital I/O & Counter Cards

Category		Non-Isolated DI/O			Isolated DI/O								
Bus		ISA		PC/104	USB	PCI							
Model		PCL-724	PCL-731	PCM-3724	USB-4761	PCI-1730	PCI-1733	PCI-1734	PCI-1750	PCI-1752	PCI-1754	PCI-1756	PCI-1758UDI PCI-1758UDO
TTL DI/O	Input Channels	-	-	-	-	16	-	-	-	-	-	-	-
	Output Channels	24	48	48	-	16	-	-	-	-	-	-	-
Output Channel	Sink Current	24 mA @ 0.4 V	24 mA @ 0.4 V	0.5 V @ 24 mA	-	8 mA @ 0.5 V	-	-	-	-	-	-	-
	Source Current	15 mA @ 2.4 V	15 mA @ 2.4 V	2.0 V @ 15 mA	-	0.4 mA @ 2.4 V	-	-	-	-	-	-	-
Isolated DI/O	Input												
	Channels	-	-	-	8 (Sink)	16 (Sink)	32 (Sink)	-	16 (Sink)	-	64 (Sink)	32 (Sink)	128
	Isolation Voltage	-	-	-	2,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	-	2,500 V _{DC}	-	2,500 V _{DC}	2,500 V _{DC}	2500 V _{RMS}
	Input Range	-	-	-	5~30 V _{DC}	5 ~ 30 V _{DC}	5 ~ 30 V _{DC}	-	5 ~ 50 V _{DC}	-	10 ~ 50 V _{DC}	10 ~ 50 V _{DC}	5 ~ 25 VDC
Output	Channels	-	-	-	8 x Form C	16 (Sink)	-	32 (Sink)	16 (Sink)	64 (Sink)	-	32 (Sink)	-
	Isolation Voltage	-	-	-	2,500 V _{DC}	2,500 V _{DC}	-	2,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	-	2,500 V _{DC}	2500 V _{RMS}
	Output Range	-	-	-	30 V _{DC} @ 1 A 240 V _{AC} @ 0.25 A	5 ~ 40 V _{DC}	-	5 ~ 40 V _{DC}	5 ~ 40 V _{DC}	5 ~ 40 V _{DC}	-	5 ~ 40 V _{DC}	-
	Max. Sink Current	-	-	-	-	200 mA	-	200 mA	200 mA	200 mA	-	200 mA	90 mA
Timer/Counter	Channels	-	-	-	-	-	-	-	1	-	-	-	-
	Resolution	-	-	-	-	-	-	-	16-bit	-	-	-	-
	Time Base	-	-	-	-	-	-	-	1 MHz	-	-	-	-
Advanced Function	Pattern Match	-	-	-	-	-	-	-	-	-	-	-	-
	Change of State	-	-	-	-	-	-	-	-	-	-	-	-
	BoardID Switch	-	-	-	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes
	Channel-Freeze Function	-	-	-	-	Yes	-	-	-	Yes	-	Yes	-
	Output Status Read Back	-	-	-	-	Yes	-	Yes	-	Yes	-	Yes	Yes
	Dry/Wet Contact	-	-	-	-	Yes	Yes	-	Yes	-	-	-	-
Dimensions (mm)		125 x 100	185 x 100	96 x 90	132 x 80	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	175 x 100
Connectors		1 x 50-pin 2 x 20-pin	2 x 50-pin	2 x 50-pin	2 x opto-22 compatible box header	1 x DB-37 4 x 20-pin	1 x DB-37	1 x DB-37	1 x DB-37	100-pin SCSI-II	100-pin SCSI-II	100-pin SCSI-II	dual 100-pin mini-SCSI dual 100-pin mini-SCSI
Windows 98/2000/XP DLL Driver		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows 98/2000/XP Test Utility		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VC++, VB & delphi Examples		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Advantech ActiveDAQ/ActiveDAQ Pro		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Labview I/O Drivers (Ver. 6i and 7.0)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mathworks MATLAB & Simulink Data Acquisition Tool Box 2.5.1		Yes	Yes	-	-	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes
KW Win32 Driver		-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	-	-

Isolated DI/O												Counter		
PCI					ISA					PC/104		PCI	ISA	PC/104
PCI-1758UDIO	PCI-1760U	PCI-1761	PCI-1762	PCI-1763UP	PCL-725	PCL-730	PCL-733	PCL-734	PCL-735	PCM-3725	PCM-3730	PCI-1780U	PCL-836	PCM-3780
-	-	-	-	-	-	16	-	-	-	8	16	8	16	24
-	-	-	-	-	-	16	-	-	-	8	16	8	16	-
-	-	-	-	-	-	8 mA @ 0.5 V	-	-	-	-	0.5 V @ 8 mA	24 mA @ 0.5 V	8 mA @ 0.5 V	24 mA @ 0.5 V
-	-	-	-	-	-	0.4 mA @ 2.4 V	-	-	-	-	-0.4 mA @ 2.4 V	15 mA @ 2.4 V	0.4 mA @ 2.4 V	15 mA @ 2.0 V
64	8 (Sink)	8 (Sink)	8 (Sink)	8	8 (Sink)	16 (Sink)	32 (Sink)	-	-	8	8	-	-	-
2,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	1,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	-	-	2,500 V _{DC}	2,500 V _{DC}	-	-	-
5 ~ 25 V _{DC}	5 ~ 12 V _{DC}	10 ~ 50 V _{DC}	10 ~ 50 V _{DC}	10 ~ 50 V _{DC}	5 ~ 24 V _{DC}	5 ~ 24 V _{DC}	5 ~ 24 V _{DC}	-	-	10 ~ 50 V _{DC}	5 ~ 24 V _{DC}	-	-	-
64	8 x Form C	4 x Form A 4 x Form C	16 x Form C	8 x Form C	4 x Form A 4 x Form C	16 (Sink)	-	32 (Sink)	12 x Form C	8 x Form C	8	-	-	-
2,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	2,500 V _{DC}	1,000 V _{DC}	1,000 V _{DC}	-	1,000 V _{DC}	1,000 V _{DC}	2,000 V _{DC}	2,500 V _{DC}	-	-	-
5 ~ 40 V _{DC}	120 V _{AC} @ 0.5 A 30 V _{DC} @ 1 A	250 V _{AC} @ 3 A 24 V _{DC} @ 3 A	120 V _{AC} @ 0.5 A 30 V _{DC} @ 1 A	250 V _{AC} @ 3 A 24 V _{DC} @ 3 A	120 V _{AC} @ 0.5 A 30 V _{DC} @ 1 A	5 ~ 40 V _{DC}	-	5 ~ 40 V _{DC}	0.6 A @ 100 V _{DC} 0.6 A @ 125 V _{DC}	240 V _{AC} @ 0.25 A 30 V _{DC} @ 1 A	5 ~ 40 V _{DC}	-	-	-
90 mA	Up CTR for DI 2 X PWM	-	-	-	-	200 mA	-	200 mA	-	200 mA	-	-	-	-
-	16-bit (2,500 Isolation)	-	-	-	-	-	-	-	-	-	-	8 X CTR	6 X CTR 3 X PWM	2
-	500 Hz for Up CTR	-	-	-	-	-	-	-	-	-	-	20 MHz	10 MHz	20 MHz
-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-
-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-
Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	Yes	-	-
-	-	-	Yes	-	-	-	-	-	-	-	-	-	-	-
Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
175 x 100	175 x 100	175 x 100	175 x 100	120 x 65	147 x 95	185 x 100	185 x 100	185 x 100	155 x 100	96 x 90	96 x 90	175 x 100	185 x 100	96 x 90
dual 100-pin mini-SCSI	1 X DB-37	1 X DB-37	1 x DB-62	1 x DB-44	1 x DB-37	1 x DB-37 4 x 20-pin	1 x DB-37	1 x DB-37	1 x DB-37	1 x 20-pin 1 x 50-pin	3 x 20-pin	68-pin SCSI-II	1 x DB-37 2 x 20-pin	1 x 50-pin 1 x 20-pin
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
-	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes	-
-	-	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-

Selection Guide

Terminal Boards

Recommended Cables, I/O Wiring Terminal Boards and Isolated DI/O Terminals for Connecting PCI-bus with CompactPCI DA&C Cards

DA&C Card	Cable	I/O Wiring Terminal Board	Cable	Isolated DI/O Terminal
PCI-1710/1710L/1710HGL/1710HG/1711/1711L/1716/1716L/1741U/1742U	PCL-10168	PCLD-8710 PCLD-8710BNC	PCL-10120	PCLD-782
PCI-1712/1712L	PCL-10168	PCLD-8712	PCL-10120	PCLD-782B
PCI-1721/1723/PCI-1780U MIC-3716/3780	PCL-10168	ADAM-3968		PCLD-785
PCI-1751	PCL-10168	ADAM-3968		PCLD-785B
		ADAM-3968/50	PCL-10150	
		ADAM-3968/20	PCL-10120	
PCI-1713/1715U	PCL-10137	ADAM-3937 PCLD-881B		PCLD-885
PCI-1720U/1727/1730/1733/1734/ 1750/1760U/1761 MIC-3761	PCL-10137	ADAM-3937		PCLD-786
PCI-1784U	PCI-10137H			PCLD-7216
PCI-1753/1753E	PCL-10268	PCLD-8751/8761/8762		PCLD-786
		ADAM-3968		
		ADAM-3968/50	PCL-10150	
		ADAM-3968/20	PCL-10120	
PCI-1752U/1752USQ/1754/1756	PCL-10250	ADAM-3951		
PCI-1724/1762	PCL-10162	ADAM-3962		
PCI-1240U	PCL-10251	ADAM-3952		
		ADAM-3952M		
PCI-1241/1242	PCL-10168	ADAM-3968M		
PCI-1261	PCL-101101	ADAM-39100M		
PCI-1714/1714UL/MIC-3714	PCL-10901	ADAM-3909		
	PCL-1010B			
PCI-1755	PCL-101100	ADAM-39100		
MIC-3753/3756	PCL-10178	ADAM-3978		

Recommended Cables, I/O Wiring Terminal Boards and Isolated DI/O Terminals for Connecting PCI-bus with CompactPCI DA&C Cards

ISA-bus DA&C Card	Cable	I/O Wiring Terminal Board	Isolated DI/O Terminal
PCL-711B/S	PCL-10120 PCL-10120	PCLD-7115	PCLD-782
PCL-818L/818HD/ 818HG	PCL-10137 PCL-10120	PCLD-8115	PCLD-782B
PCL-818H	PCL-10120 PCL-10120	PCLD-8115	PCLD-785
PCL-812PG	PCL-10120		PCLD-785B
PCL-813B	PCL-10137	PCLD-881B	PCLD-786
PCL-726	PCL-10120 PCL-10120	PCLD-780	PCLD-885
			PCLD-786
PCL-727/730/836/839	PCL-10137 PCL-10120	PCLD-880	PCLD-7216
PCL-720+	PCL-10120		
PCL-722/724/731	PCL-10150		
PCL-725/733/734/735	PCL-10137	PCLD-880	

Selection Guide

Industrial USB I/O Modules

Category			Multifunction			Analog Input
Bus			USB	USB	USB	USB
Model			USB-4711	USB-4711A	USB-4716	USB-4718
Analog Input	General Spec.	Resolution	12 bits	12 bits	16 bits	16 bits
		Channels	16 SE	16 S.E./ 8 Diff.	16 SE/8 Diff	8 Diff
		Onboard FIFO	1024 samples	1024 samples	1024 samples	10 S/s
		Sampling Rate	100 kS/s	150 kS/s	200 kS/s	10 S/s
		Auto Channel Scanning	Yes	Yes	Yes	-
	Input Ranges	Unipolar Inputs (V)	-	-	-	J,K,T,E,R,S,B types
		Bipolar Inputs (V)	±10, 5, 2.5, 1.25, 0.625 Yes	±10, 5, 2.5, 1.25	±10, 5, 2.5, 1.25, 0.625 Yes	-
		Configurable Per-Channel	Yes	Yes	Yes	Yes
	Trigger Mode	Pacer/Software/ External Pulse	Yes	Yes	Yes	Software
		Analog Slope	-	-	-	-
		Pretrigger	-	-	-	-
		Post-trigger	-	-	-	-
		About-trigger	-	-	-	-
	Data Transfer Mode	Software	Yes	Yes	Yes	Yes
	Analog Output	DMA	-	-	-	-
Resolution		12 bits	12 bits	16 bits	-	
Number of Channels		2	2	2	-	
Onboard FIFO		-	-	-	-	
Output range (V)		0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10, ±5, ±10	-	
Throughput		Static update	Static update	Static update	-	
Digital I/O	DMA transfer	-	-	-	-	
	Input Channels	8	8	8	8 (Isolated)	
Timer/Counter	Output Channels	8	8	8	8 (Isolated)	
	Channels	1	1	1	-	
	Resolution	16 bits	16 bits	16 bits	-	
	Time Base	1 kHz	1 kHz	1 kHz	-	
	Isolation Voltage	-	-	-	2,500 V _{bc}	
	Auto Calibration	Yes	Yes	Yes	Yes	
BoardID Switch		Software	Software	Software	Software	
Dimensions (mm)		132 x 80 x 32	132 x 80 x 32	132 x 80 x 32	132 x 80 x 32	
Connector		Onboard screw terminal	Onboard screw terminal	Onboard screw terminal	Onboard screw terminal	
Windows 2000/XP DLL Driver		Yes	Yes	Yes	Yes	
Windows 2000/XP Test Utility		Yes	Yes	Yes	Yes	
VC++, VB & delphi Examples		Yes	Yes	Yes	Yes	
Advantech ActiveDAQ/ActiveDAQ Pro		Yes	Yes	Yes	Yes	
Labview I/O Drivers (Ver. 6i and 7.0)		Yes	Yes	Yes	Yes	
Mathworks MATLAB Data Acquisiton Tool Box 2.5.1		-	-	-	-	
KW Win32 Driver		-	-	-	-	

Catagory			Non-Isolated DI/O		Isolated DI/O	
Bus			USB	USB	USB	USB
Model			USB-4751	USB-4751L	USB-4750	USB-4761
TTL DI/O	Input Channels		48	24	-	-
	Output Channels				-	-
	Output Channel	Sink Current	0.4 Yes @ 8 mA	0.4 Yes @ 8 mA	-	-
		Source Current	2.4 Yes @ 4 mA	2.4 Yes @ 4 mA	-	-
Isolated DI/O	Input	Channels	-	-	16	8
		Isolation Voltage	-	-	2,500 V _{DC}	2,500 V _{DC}
		Input Range	-	-	5 ~ 50 V _{DC}	5 ~ 30 V _{DC}
	Output	Channels	-	-	16	8 x Form C
		Isolation Voltage	-	-	2,500 V _{DC}	2,500 V _{DC}
		Output range	-	-	5 ~ 40 V _{DC}	-
		Max. Sink Current	-	-	100 mA max. per channel	30 V _{DC} @ 1A, 240 VAX @ 0.25 A
Timer/Counter		Channels	3	3	1	-
		Resolution	16 bits	16 bits	32 bits	-
		Time Base	10 MHz	10 MHz	1 MHz	-
Advanced Function	Pattern Match		-	-	-	-
	Change of State		-	-	-	-
	BoardID Switch		-	-	-	-
	Channel-Freeze Function		-	-	-	-
	Output Status Read Back		Yes	Yes	Yes	Yes
	Dry/Wet Contact		-	-	-	-
Dimensions			132 x 80 x 32	132 x 80 x 32	132 x 80 x 32	132 x 80 x 32
Connectors			2 x opto-22 compatible box header	1 x opto-22 compatible box header	On board screw terminal	On board screw terminal
Windows 2000/XP DLL Driver			Yes	Yes	Yes	Yes
Windows 2000/XP Test Utility			Yes	Yes	Yes	Yes
VC++, VB & delphi Examples			Yes	Yes	Yes	Yes
Advantech ActiveDAQ/ActiveDAQ Pro			Yes	Yes	Yes	Yes
Labview I/O Drivers (Ver. 6 AND 7.0)			Yes	Yes	Yes	Yes
Mathworks Matlab & Simulink Data Acquisition Tool Box x 2.5.1			-	-	-	-
KW Win32 Driver			-	-	-	-

Selection Guide

Motion Control I/O Modules

Centralized Motion Control Cards

Bus		PCI					ISA		
Category		Pulse type			Voltage type	Encoder card	Pulse type		Encoder card
Model		PCI-1240U	PCI-1242	PCI-1243U	PCI-1241	PCI-1784U	PCL-839+	PCM-3240	PCL-833
Axes	Number of Axes	4	4	4	4	-	3	4	-
	Linear Interpolation	Yes	Yes	-	Yes	-	-	Yes	-
	2-axis Circle Interpolation	Yes	Yes	-	Yes	-	-	Yes	-
	Helical Interpolation	-	Yes	-	Yes	-	-	-	-
Advanced Functions	Encoder Channels	4	5	-	5	4	-	4	3
	Limit Switch Input Channels	8	8	8	8	-	6	8	-
	Home Input Channels	4	4	4	4	-	3	4	-
	Emergency Stop Input Channels	1	1	1	1	-	-	1	-
	Slow Down Limit Switches	8	-	8	-	-	6	8	-
	General Purpose DI Channels	-	-	8	-	4	16	-	2
	Servo On Output Channels	4	4	-	4	-	-	4	-
	General Purpose DO Channels	4	-	8	-	4	16	4	-
	BoardID Switch	Yes	-	Yes	-	Yes	-	Yes	-
	Position Compare Event	Yes	Yes	-	Yes	-	-	-	-
Dimensions (mm)		175 x 100	175 x 100	175 x 100	175 x 100	175 x 100	185 x 100	96 x 90	185 x 100
Connectors		100-pin SCSI-II	68-pin SCSI-II	DB-62	68-pin SCSI-II	DB-37	1xDB-37 2 x 20-pin	2 x 50-pin IDC	1 x DB-25
Wiring Boards		ADAM-3952, ADAM-3952/ J2S ADAM-3952/ PMA	ADAM-3968	ADAM-3962, ADAM-3943	ADAM-3968	ADAM-3937	ADAM-3937 ADAM-3920	ADAM-3950 ADAM-3952 ADAM-3952/ PMA ADAM-3952/ J2S	ADAM-3925

AMONet Distributed Motion Control Cards

Bus		PCI	PC/104+
Category		Remote Card	Remote Card
Model		PCI-1202U	PCM-3202
Axes	Number of Axes	-	-
	Linear Interpolation	-	-
	2-Axis Circle Interpolation	-	-
	3-Axis Circle Interpolation	-	-
Advanced Functions	Encoder Channels	-	-
	Limit Switch Input Channel	-	-
	Home Input Channel	-	-
	Emergency Stop Input Channel	-	-
	Slow Down Limit Switch	-	-
	General Purpose DI Channels	8	-
	Servo On Output Channel	-	-
	General Purpose DO Channels	4	-
	Position Compare Event	-	-
	Remote Motion	Yes	Yes
	Remote I/O	Yes	Yes
Dimensions (mm)		175 x 100	96 x 90
Connectors		2 x RJ45	4 x RJ45
Digital I/O Slave Modules		AMAX-2752 AMAX-2754 AMAX-2756	AMAX-2752 AMAX-2754 AMAX-2756
Motion Slave Modules		AMAX-2210 AMAX-2211/PMA AMAX-2212/J2S AMAX-2213/YS2 AMAX-2242/J2S	AMAX-2210 AMAX-2211/PMA AMAX-2212/J2S AMAX-2213/YS2 AMAX-2242/J2S

Selection Guide

Industrial Ethernet Solutions



Ethernet Switches

Model Name		EKI-6558	EKI-6538	EKI-6728
Description		8-port 10/100 Mbps Industrial Managed Redundant Ethernet Switch	8-port 10/100 Mbps Industrial Smart Ethernet Switch	8-port Gigabit Industrial Ethernet Switch
Communications	Standard	IEEE 802.3, 802.3ad, 802.3u, 802.3x, 802.1p, 802.1Q, 802.1W	IEEE 802.3, 802.3ad, 802.3u, 802.3x, 802.1p, 802.1Q	IEEE 802.3, 802.3u, 802.3x, 802.3ab
	LAN	10/100Base-TX	10/100Base-TX	10/100/1000Base-TX
	I/O Type	2 Digital Input - Logic Level 0 : close to GND Logic Level 1 : open 2 Digital Output - Open collector to 30 V, 200 mA (Max.load)	2 Digital Input - Logic Level 0 : close to GND Logic Level 1 : open 2 Digital Output - Open collector to 30 V, 200 mA (Max.load)	
	Transmission Distance	Up to 100 m	Up to 100 m	Up to 100 m (Cat.5e, Cat.6 RJ-45 cable suggested)
	Transmission Speed	Up to 100 Mbps	Up to 100 Mbps	Up to 1000 Mbps
Interface	Connectors	8 x RJ-45 (Ethernet) 7-pin removable screw terminal (power) 5-pin removable screw terminal (D/O)	8 x RJ-45 7-pin removable screw terminal (power) 5-pin removable screw terminal (DI/O)	8 x RJ-45 7-pin removable screw terminal (power)
	LED Indicators	P1, P2, P-Fail, Fault, LINK, 10/100 Mbps	P1, P2, P-Fail, Fault, LINK, 10/100 Mbps	P1, P2, P-Fail, LINK, 10/100/1000 Mbps
	Console	RS-232 (RJ-48)	RS-232 (RJ-48)	-
Network Management	Redundancy	Advantech Smart Ring (recovery time < 30 ms at full loading), 802.1W RSTP		
	Diagnostics	Push button for port diagnostic Port Mirroring Real-time traffic statistic	Push button for port diagnostic Port Mirroring Real-time traffic statistic	
	VLAN	IEEE 802.1Q tagged VLAN Port-based VLAN	IEEE 802.1Q tagged VLAN Port-based VLAN	
	Configuration	Web browser, Telnet/Serial console, Speed/duplex auto-negotiation	Web browser, RS-232 console, Speed/duplex auto-negotiation	
	SNMP	SNMP v1, Advantech Utility		
	Security	MAC-based security per port	MAC-based security per port	
	Traffic Control	IGMP Snooping for multicast group management IEEE 802.3ad Link Aggregation Rate limit and storm control IEEE 802.1p QoS DSCP/TOS/CoS priority queuing IEEE 802.3x flow control	IEEE 802.3ad Link Aggregation Rate limit and storm control IEEE 802.1p QoS IEEE 802.3x flow control	
	Others	DHCP Client, Trap		
Power	Power Consumption	Max. 8 W	Max. 7 W	Max. 9.5 W
	Power Input	2 x Unregulated 10 ~ 48 V _{DC}	2 x Unregulated 10 ~ 48 V _{DC}	2 x Unregulated 10 ~ 48 V _{DC}
	Power Fault Output	1 Relay Output	1 Relay Output	1 Relay Output
Mechanism	Dimensions (W x H x D)	46 x 162 x 126 mm	46 x 162 x 126 mm	46 x 162 x 126 mm
	Enclosure	IP30, ABS+PC with solid mounting kits	IP30, ABS+PC with solid mounting kits	IP30, ABS+PC with solid mounting kits
	Mounting	DIN 35 rail, Wall	DIN 35 rail, Wall	DIN 35 rail, Wall
Protection	ESD (Ethernet)	4,000 V _{DC}	4,000 V _{DC}	4,000 V _{DC}
	Surge (EFT for power)	3000 V _{DC}	3000 V _{DC}	3000 V _{DC}
	Power Reverse Overload	Yes 4 A/125 V Replaceable Fuse	Yes 4 A/125 V Replaceable Fuse	Yes 4A/125V Replaceable Fuse
Environment	Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)
	Storage Temperature	-10 ~ 70 °C (14 ~ 158 °F)	-10 ~ 70 °C (14 ~ 158 °F)	-10 ~ 70 °C (14 ~ 158 °F)
	Operating Humidity	20 ~ 95 % (non-condensing)	20 ~ 95 % (non-condensing)	20 ~ 95 % (non-condensing)
	Storage Humidity	0 ~ 95 % (non-condensing)	0 ~ 95 % (non-condensing)	0 ~ 95 % (non-condensing)
Certifications	MTBF	230,000 hrs	230,000 hrs	230,000 hrs
	Safety	UL 60950-1, CAN/CSA-C22.2 No.60950 U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4, EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2	UL 60950-1, CAN/CSA-C22.2 No.60950 U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2	UL 60950-1, CAN/CSA-C22.2 No.60950 U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2
	EMC			



EKI-6628F	EKI-7629C	EKI-7528/EKI-7525	EDG-6528 Series
Industrial Gigabit Ethernet Switch with 6 10/100Base-TX Ports & 2 SFP (mini-GBIC) Ports	Industrial Gigabit Ethernet Switch with 8 10/100Base-TX Ports & 2 Combo 10/100/1000Base-TX/ SFP (mini-GBIC) Ports	8/5-port 10/100 Mbps Industrial Unmanaged Ethernet Switch	8-port 10/100 Mbps Industrial Ethernet Switch
IEEE 802.3, 802.3u, 802.3x, 802.3z	IEEE 802.3, 802.3ab, 802.3u, 802.3x, 802.3z	IEEE 802.3, 802.3u, 802.3x	IEEE 802.3, 802.3u, 802.3x
10/100Base-TX, 1000Base-SX/LX	10/100/1000Base-TX, 1000Base-SX/LX	10/100Base-TX	10/100Base-TX
Ethernet : Up to 100 m Gigabit Fiber : Up to 40 km (depends on the SFP module)	Ethernet : Up to 100 m Gigabit Fiber : Up to 40 km (depends on the SFP module)	Up to 100m	Up to 100m
Ethernet : Up to 100 Mbps Gigabit Fiber : Up to 1000 Mbps	Ethernet : Up to 100 Mbps Gigabit Copper : Up to 1000 Mbps Gigabit Fiber : Up to 1000 Mbps	Up to 100 Mbps	Up to 100 Mbps
6 x RJ-45 2 x mini-GBIC socket 7-pin removable screw terminal (power)	8 x RJ-45 2 x mini-GBIC socket 6-pin removable screw terminal (power)	8 x RJ-45 (EKI-7528) or 5 x RJ-45 (EKI-7525)	8 x RJ-45 5-pin removable screw terminal (power)
P1, P2, P-Fail, LINK, 10/100/1000 Mbps	Unit: PWR1, PWR2, P-Fail TXPort: Link/Active, Full duplex/Collision Giga Port: Link/Active	P1, P2, P-Fail	PWR, P1, P2, FAULT, LINK, 10/100 Mbps
Max. 6 W	Max. 6.5 W	EKI-7528: Max. 4 W EKI-7525: Max. 3 W	Max. 3.1 W
2 x Unregulated 10 ~ 48 V _{DC}	2 x Unregulated 10 ~ 48 V _{DC}	2 x Unregulated 10 ~ 48 V _{DC}	EDG-6528/6528L: 2 x Unregulated 10 ~ 48 V _{DC} EDG-6528L: 1 x Unregulated 10 ~ 48 V _{DC}
1 Relay Output	1 Relay Output	1 Relay Output	1 Relay Output (EDG-6528L not equipped)
46 x 162 x 126 mm	72 x 152 x 105 mm	25 x 130 x 95 mm	56 x 134 x 114 mm
IP30, ABS+PC with solid mounting kits	IP30, Metal shell with solid mounting kits	IP30, Metal shell with solid mounting kits	IP30, Metal shell with PC side panel (mounting kits included)
DIN 35 rail, Wall	DIN 35 rail, Wall	DIN 35 rail, Wall	DIN 35 rail, Wall
4,000 V _{DC}	4,000 V _{DC}	4,000 V _{DC}	4,000 V _{DC} (EDG-6528L not equipped)
3000 V _{DC}	3000 V _{DC}	3,000 V _{DC}	3000 V _{DC}
Yes	Yes	Yes	Yes
4 A/125 V Replaceable Fuse	3.2A/60V Resetable Fuse	1.8A/60V Resetable Fuse	-
0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	EDG-6528, EDG-6528L: 0 ~ 70 °C (32 ~ 158 °F) EDG-6528L: -40 ~ 85 °C (-40 ~ 185 °F)
-10 ~ 70 °C (14 ~ 158 °F)	-10 ~ 70 °C (14 ~ 158 °F)	-10 ~ 70 °C (14 ~ 158 °F)	EDG-6528, EDG-6528L: -10 ~ 80 °C (14 ~ 176 °F) EDG-6528L: -50 ~ 95 °C (-58 ~ 203 °F)
20 ~ 95 % (non-condensing)	20 ~ 95 % (non-condensing)	20 ~ 95 % (non-condensing)	20 ~ 95 % (non-condensing)
0 ~ 95 % (non-condensing)	0 ~ 95 % (non-condensing)	0 ~ 95 % (non-condensing)	0 ~ 95 % (non-condensing)
230,000 hrs	295,000 hrs	1,260,000 hrs	1,260,000 hrs
UL 60950-1, CAN/CSA-C22.2 No.60950 U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2	UL 60950-1, CAN/CSA-C22.2 No.60950 U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2	UL 60950-1, CAN/CSA-C22.2 No.60950 U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2	UL 60950-1, CAN/CSA-C22.2 No.60950 U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2

Industrial Ethernet Solutions



Model Name		EKI-6527 Series	ADAM-6520 Series	ADAM-6521 Series
Description		Industrial Ethernet Switch with 6 10/100Base-TX Ports & 1 100Base-FX Fiber Port	5-port 10/100 Mbps Industrial Ethernet Switch	Industrial Ethernet Switch with 4 10/100Base-TX Ports & 1 100Base-FX Fiber Port
Communications	Standard	IEEE 802.3, 802.3u, 802.3x	IEEE 802.3, 802.3u, 802.3x	IEEE 802.3, 802.3u, 802.3x
	LAN	10/100Base-TX, 100Base-FX	10/100Base-TX	10/100Base-TX, 100Base-FX
	I/O Type	-	-	-
	Transmission Distance	Ethernet : Up to 100 m Multi-mode Fiber : Up to 2 km Single-mode Fiber : Up to 15 km	Up to 100m	Ethernet : Up to 100 m Multi-mode Fiber : Up to 2 km Single-mode Fiber : Up to 15 km
	Transmission Speed	Up to 100 Mbps	Up to 100 Mbps	Up to 100 Mbps
Interface	Connectors	6 x RJ-45 1 x SC type fiber connector 7-pin removable screw terminal (power)	5 x RJ-45 2-pin removable screw terminal (power)	4 x RJ-45 1 x SC type fiber connector (ADAM-6521, ADAM-6521S) or 1 x ST type fiber connector (ADAM-6521/ST) 2-pin removable screw terminal (power)
	LED Indicators	P1, P2, P-Fail, LINK, 10/100 Mbps	Power, Link/Speed	Power, Link (100BASE-FX), 100/10M (Ethernet)
Network Management	Console	-	-	-
	Redundancy	-	-	-
	Diagnostics	-	-	-
	VLAN	-	-	-
	Configuration	-	-	-
	SNMP	-	-	-
	Security	-	-	-
	Traffic Control	-	-	-
Power	Others	-	-	-
	Power Consumption	Max. 5W	ADAM-6520, ADAM-6520L: Max. 2.4 W ADAM-6520L: Max. 3 W	ADAM-6521, ADAM-6521/ST: Max. 3 W ADAM-6521S: Max. 4 W
	Power Input	2 x Unregulated 10 ~ 48 V _{DC}	1 x Unregulated 10 ~ 30 V _{DC}	1 x Unregulated 10 ~ 30 V _{DC}
Mechanism	Power Fault Output	1 Relay Output	-	-
	Dimensions (W x H x D)	46 x 162 x 126 mm	70 x 102 x 27 mm	70 x 112 x 27 mm
	Enclosure	IP30, ABS+PC with solid mounting kits	IP30, ABS+PC with solid mounting kits	IP30, ABS+PC with solid mounting kits
	Mounting	DIN 35 rail, Wall	DIN 35 rail, Wall, Stack	DIN 35 rail, Wall, Stack
Protection	ESD (Ethernet)	4,000 V _{DC}	4,000 V _{DC} (ADAM-6520L not equipped)	4,000 V _{DC}
	Surge (EFT for power)	3000 V _{DC}	3000 V _{DC} (ADAM-6520L not equipped)	3000 V _{DC}
	Power Reverse	Yes	-	-
	Overload	4 A/125 V Replaceable Fuse	-	-
Environment	Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)	ADAM-6520: -10 ~ 70 °C (14 ~ 158 °F) -10 ~ 60 °C (14 ~ 140 °F) (Stack) ADAM-6520L: -40 ~ 85 °C (-40 ~ 185 °F) -40 ~ 75 °C (-40 ~ 167 °F) (Stack) ADAM-6520L: 0 ~ 60 °C (32 ~ 140 °F) 0 ~ 50 °C (32 ~ 122 °F) (Stack)	-10 ~ 65 °C (14 ~ 149 °F) -10 ~ 55 °C (14 ~ 131 °F) (Stack)
	Storage Temperature	-10 ~ 70 °C (14 ~ 158 °F)	ADAM-6520: -20 ~ 80 °C (-4 ~ 176 °F) ADAM-6520L: -50 ~ 95 °C (-58 ~ 203 °F) ADAM-6520L: -10 ~ 70 °C (14 ~ 158 °F)	-20 ~ 80 °C (-4 ~ 176 °F)
	Operating Humidity	20 ~ 95 % (non-condensing)	20 ~ 95 % (non-condensing)	20 ~ 95 % (non-condensing)
	Storage Humidity	0 ~ 95 % (non-condensing)	0 ~ 95 % (non-condensing)	0 ~ 95 % (non-condensing)
	MTBF	230,000 hrs	1,580,000 hrs	1,150,000 hrs
	Safety	UL 60950-1, CAN/CSA-C22.2 No.60950	UL 60950-1, CAN/CSA-C22.2 No.60950	UL 60950-1, CAN/CSA-C22.2 No.60950
Certifications	EMC	U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2	U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2	U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2



Ethernet Media Converters

Model Name		ADAM-6841 Series	ADAM-6541 Series	ADAM-6542 Series
Description		Gigabit Ethernet to Fiber Optic Converter	Ethernet to Fiber Optic Converter	Ethernet to WDM Fiber Optic Converter
Communications	Standard	IEEE 802.3ab, 802.3z	IEEE 802.3, 802.3u, 802.3x	IEEE 802.3, 802.3u, 802.3x
	LAN	1000Base-T, 1000Base-SX, 1000Base-LX	10/100Base-TX, 100Base-FX	10/100Base-TX, 100Base-FX
	Transmission Distance	Ethernet : Up to 100m (Cat.5e, Cat.6) Multi-mode Fiber : Up to 2 km Single-mode Fiber : Up to 25 km	Ethernet : Up to 100 m Multi-mode Fiber : Up to 2 km Single-mode Fiber : Up to 20 km	Ethernet : Up to 100 m Fiber : Up to 20 km
	Transmission Speed	Up to 1000 Mbps	Up to 100 Mbps	Up to 100 Mbps
	Link Fault Pass Through	-	ADAM-6541, ADAM-6541/ST: - ADAM-6541P, ADAM-6541S: YES	-
Interface	Connectors	1 x RJ-45 1 x SC type fiber connector 2-pin removable screw terminal (power)	1 x RJ-45 1 x SC type fiber connector (ADAM-6541, ADAM-6541P, ADAM-6541S) or 1 x ST type fiber connector (ADAM-6541/ST) 2-pin removable screw terminal (power)	1 x RJ-45 1 x SC type fiber connector 2-pin removable screw terminal (power)
	LED Indicators	Power, Link/Active (Fiber), Link/Active (Ethernet)	ADAM-6541, ADAM-6541/ST: Power, Full/Link (100BASE-FX), 100/10M (Ethernet) ADAM-6541P, ADAM-6541S: Power, Link/Speed (Fiber), Link/Speed (Ethernet), LFS/Duplex (TX)	Power, Link (100BASE-FX), 100/10M (Ethernet)
Power	Power Consumption	Max. 3.5 W	ADAM-6541, ADAM-6541/ST: Max. 3 W ADAM-6541P, ADAM-6541S: Max. 3.5 W	Max. 3 W
	Power Input	1 x Unregulated 10 ~ 30 V _{DC}	1 x Unregulated 10 ~ 30 V _{DC}	1 x Unregulated 10 ~ 30 V _{DC}
Mechanism	Dimensions (W x H x D)	70 x 112 x 27 mm	70 x 112 x 27 mm	70 x 112 x 27 mm
	Enclosure	IP30, ABS+PC with solid mounting kits	IP30, ABS+PC with solid mounting kits	IP30, ABS+PC with solid mounting kits
	Mounting	DIN 35 rail, Wall, Stack	DIN 35 rail, Wall, Stack	DIN 35 rail, Wall, Stack
Protection	ESD (Ethernet)	4,000 V _{DC}	4,000 V _{DC}	4,000 V _{DC}
	Isolation (Ethernet)	1,500Vrms	1,500Vrms	1,500Vrms
	Surge (EFT for power)	3000 V _{DC}	3000 V _{DC}	3000 V _{DC}
	Power Reverse	Yes	ADAM-6541, ADAM-6541/ST: - ADAM-6541P, ADAM-6541S: YES	-
Environment	Overload	1A/125V Replaceable Fuse	ADAM-6541, ADAM-6541/ST: - ADAM-6541P, ADAM-6541S: 1A/125V Replaceable Fuse	-
	Operating Temperature	0 ~ 60 °C (32 ~ 140 °F) 0 ~ 55 °C (32 ~ 131 °F) (Stack)	0 ~ 60 °C (32 ~ 140 °F) 0 ~ 55 °C (32 ~ 131 °F) (Stack)	0 ~ 60 °C (32 ~ 140 °F) 0 ~ 55 °C (32 ~ 131 °F) (Stack)
	Storage Temperature	-10 ~ 70 °C (14 ~ 158 °F)	-10 ~ 70 °C (14 ~ 158 °F)	-10 ~ 70 °C (14 ~ 158 °F)
	Operating Humidity	20 ~ 95 % (non-condensing)	20 ~ 95 % (non-condensing)	20 ~ 95 % (non-condensing)
Certifications	Storage Humidity	0 ~ 95 % (non-condensing)	0 ~ 95 % (non-condensing)	0 ~ 95 % (non-condensing)
	MTBF	550,000 hrs	550,000 hrs	550,000 hrs
Certifications	Safety	UL 60950-1, CAN/CSA-C22.2 No.60950	UL 60950-1, CAN/CSA-C22.2 No.60950	UL 60950-1, CAN/CSA-C22.2 No.60950
	EMC	U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2	U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2	U.S.A.: FCC Part 15 CISPR 22 EU: EN55011, EN61000-6-4 EN55022 Class A, EN61000-3-2/3 EN55024 IEC61000-4-2/3/4/5/6/8/11 EN61000-6-2

Selection Guide

Industrial Networking

Ethernet Data Gateways

Model Name	Interface	Serial Port	Serial Type	Baud Rate	Connector		Operation Mode	Driver
					Network	Serial		
ADAM-4571	10/100Mbps	1	RS-232/422/485	50 ~ 230 kbps	RJ-45	RJ-48	Virtual COM	Windows NT/2000/XP
ADAM-4571L	10/100Mbps	1	RS-232	50 ~ 230 kbps	RJ-45	RJ-48	Virtual COM	Windows NT/2000/XP
ADAM-4570	10/100Mbps	2	RS-232/422/485	50 ~ 230 kbps	RJ-45	RJ-48	Virtual COM	Windows NT/2000/XP
ADAM-4570L	10/100Mbps	2	RS-232	50 ~ 230 kbps	RJ-45	RJ-48	Virtual COM	Windows NT/2000/XP
EDG-4504	10/100Mbps	4	RS-232/422/485	50 ~ 230 kbps	RJ-45	DB9	Virtual COM	Windows NT/2000/XP
EDG-4508(R)+	10/100Mbps	8	RS-232/422/485	50 ~ 230 kbps	RJ-45	RJ-48	Virtual COM, TCP/UDP server mode, TCP/UDP client mode	Windows NT/2000/XP
EDG-4516(R)+	10/100Mbps	16	RS-232/422/485	50 ~ 230 kbps	RJ-45	RJ-48	Virtual COM, TCP/UDP server mode, TCP/UDP client mode	Windows NT/2000/XP
ADAM-4572	10/100Mbps	1	RS-232/422/485	300 ~ 115.2 kbps	RJ-45	RJ-48	Modbus/TCP	Socket or WinSocket
ADAM-4577	10Mbps	1	RS-232/422/485	50 ~ 230 kbps	RJ-45	RJ-48	TCP/UDP server mode, TCP/UDP client mode	Socket or WinSocket
ADAM-4579	10/100Mbps	2	RS-232/422/485	50 ~ 230 kbps	RJ-45	RJ-48	TCP/UDP server mode, TCP/UDP client mode	Socket or WinSocket

Wireless Data Gateways

Model Name	Interface	Serial Port	Serial Type	Baud Rate	Connector	Operation Mode	Driver
ADAM-4571W	802.11b/g	1	RS-232/422/485	50 ~ 230 kbps	RJ-48	Virtual COM	Windows NT/2000/XP
ADAM-4570W	802.11b/g	2	RS-232/422/485	50 ~ 230 kbps	RJ-48	Virtual COM	Windows NT/2000/XP
ADAM-4577W	802.11b/g	1	RS-232/422/485	50 ~ 230 kbps	RJ-48	TCP/UDP server mode, TCP/UDP client mode	Socket or WinSocket
ADAM-4579W	802.11b/g	2	RS-232/422/485	50 ~ 230 kbps	RJ-48	TCP/UDP server mode, TCP/UDP client mode	Socket or WinSocket

USB to Serial Data Gateways

Model Name	Interface	Serial Port	Serial Type	Baud Rate	Connector		Protection		Driver
					USB	Serial	Isolation	Surge	
ADAM-4561	USB 1.1	1	RS-232/422/485	50 ~ 115.2 kbps	Type B	Screw terminal	3000 V _{oc} (RS-232/422/485)	3000 V _{oc} (RS-485)	Windows NT/2000/XP
ADAM-4562	USB 1.1	1	RS-232	75 ~ 115.2 kbps	Type B	DB9	2500 V _{oc}	-	Windows NT/2000/XP
USB-4602B	USB2.0	2	RS-232	50 ~ 921kbps	Type B	DB9	-	3000 V _{oc}	Windows NT/2000/ XP/2003, Linux
USB-4602BM	USB2.0	2	RS-232/422/485	50 ~ 921kbps	Type B	DB9	-	3000 V _{oc}	Windows NT/2000/ XP/2003, Linux
USB-4604B	USB2.0	4	RS-232	50 ~ 921kbps	Type B	DB9	-	3000 V _{oc}	Windows NT/2000/ XP/2003, Linux
USB-4604BM	USB2.0	4	RS-232/422/485	50 ~ 921kbps	Type B	DB9	-	3000 V _{oc}	Windows NT/2000/ XP/2003, Linux

Selection Guide

Industrial Communication Cards

Bus	Model Name	Ports	Communication Interfaces					Protection		Cable Connector Type
			Current Loop	RS-232	RS-422	RS-485	CAN	Surge	Isolation	
Universal Low Profile PCI	PCI-1602UP	2			Yes	Yes		2500 V _{oc}	2500 V _{oc}	DB9 Male
	PCI-1604UP	2		Yes				2500 V _{oc}		DB9 Male
	PCI-1610UP	4		Yes				2500 V _{oc}		DB9 Male
	PCI-1610AUP	4		Yes						DB9 Male
PCI & Universal PCI	PCI-1601A	2			Yes	Yes		2500 V _{oc}		-
	PCI-1601B	2			Yes	Yes			3000 V _{oc}	-
	PCI-1602A	2			Yes	Yes			3000 V _{oc}	-
	PCI-1602B	2			Yes	Yes		2500 V _{oc}	3000 V _{oc}	-
	PCI-1603	2	Yes	Yes					3000 V _{oc}	-
	PCI-1610A	4		Yes						DB25 Male
	PCI-1610A/9	4		Yes						DB9 Male
	PCI-1610B	4		Yes				3000 V _{oc}		DB25 Male
	PCI-1610B/9	4		Yes				3000 V _{oc}		DB9 Male
	PCI-1610CU	4		Yes				2500 V _{oc}	2500 V _{oc}	DB25 Male
	PCI-1610CU/9	4		Yes				2500 V _{oc}	2500 V _{oc}	DB9 Male
	PCI-1611U	4			Yes	Yes		2500 V _{oc}	2500 V _{oc}	DB25 Male
	PCI-1611U/9	4			Yes	Yes		2500 V _{oc}	2000 V _{oc}	DB9 Male
	PCI-1612A	4		Yes	Yes	Yes				DB25 Male
	PCI-1612A/9	4		Yes	Yes	Yes				DB9 Male
	PCI-1612B	4		Yes	Yes	Yes		2500 V _{oc}		DB25 Male
	PCI-1612B/9	4		Yes	Yes	Yes		2500 V _{oc}		DB9 Male
	PCI-1612AU	4		Yes	Yes	Yes				DB25 Male
	PCI-1612AU/9	4		Yes	Yes	Yes				DB9 Male
	PCI-1612BU	4		Yes	Yes	Yes		2500 V _{oc}		DB25 Male
	PCI-1612BU/9	4		Yes	Yes	Yes		2500 V _{oc}		DB9 Male
	PCI-1612CU	4		Yes	Yes	Yes		2500 V _{oc}	2500 V _{oc}	DB25 Male
	PCI-1612CU/9	4		Yes	Yes	Yes		2500 V _{oc}	2500 V _{oc}	DB9 Male
	PCI-1620A	8		Yes						Optional
	PCI-1620B	8		Yes				3000 V _{oc}		Optional
	PCI-1620AU	8		Yes						Optional
	PCI-1620BU	8		Yes				2500 V _{oc}		Optional
	PCI-1622CU	8			Yes	Yes		2500 V _{oc}	2500 V _{oc}	Optional
	PCI-1625U *	8		Yes	Yes**			2500 V _{oc}		Optional
	PCI-1680U	2					Yes		2500 V _{oc}	-
ISA	PCL-740	1	Yes	Yes	Yes	Yes				-
	PCL-741	2	Yes	Yes					2500 V _{oc}	-
	PCL-743B	2				Yes	Yes			-
	PCL-743S	2				Yes	Yes	2500 V _{oc}		-
	PCL-745B	2				Yes	Yes		3000 V _{oc}	-
	PCL-745S	2				Yes	Yes	2500 V _{oc}	3000 V _{oc}	-
	PCL-841	2					Yes		1000 V _{oc}	-
	PCL-746+	4		Yes	Yes	Yes				DB25 Male
	PCL-746+/9	4		Yes	Yes	Yes				DB9 Male
	PCL-846A	4			Yes	Yes			1000 V _{oc}	DB9 Male
	PCL-846B	4			Yes	Yes		2000 V _{oc}	1000 V _{oc}	DB9 Male
	PCL-849A	4		Yes						DB25 Male
	PCL-849A/9	4		Yes						DB9 Male
	PCL-849B	4		Yes				3000 V _{oc}		DB25 Male
	PCL-849B/9	4		Yes				3000 V _{oc}		DB9 Male
	PCL-849+	4		Yes				3000 V _{oc}		DB25 Male
	PCL-849+/9	4		Yes				3000 V _{oc}		DB9 Male
	PCL-849L	4		Yes						DB25 Male
	PCL-849L/9	4		Yes						DB9 Male
	PCL-844+*	8		Yes	Yes**					Optional
	PCL-858A	8		Yes						Optional
	PCL-858B	8		Yes				3000 V _{oc}		Optional
PC/104	PCM-3610	2		Yes	Yes	Yes			1000 V _{oc}	-
	PCM-3612	2			Yes	Yes				-
	PCM-3680	2					Yes		1000 V _{oc}	-
	PCM-3614	4			Yes	Yes		1000 V _{oc}		-
	PCM-3640/3641	4		Yes		Yes				-
	PCM-3618	8			Yes	Yes		1000 V _{oc}		-

Accessories

Model Name	Connectors Side 1	Connectors Side 2	Length	Type	Use With
OPT8AP	1 x DB62 Male	8 x DB25 Female	1.5 m	Connection Box	PCI-1620A/B/AU/BU PCI-1625U PCL-844+ PCL-858A/B
OPT8BP	1 x DB62 Male	8 x DB25 Male	1.5 m	Connection Box	
OPT8FP	1 x DB62 Male	8 x DB25 Female	1.5 m	Connection Box	
OPT8C	1 x DB62 Male	8 x DB25 Male	1 m	Cable	
OPT8H	1 x DB62 Male	8 x DB9 Male	1 m	Cable	
OPT8I	1 x DB78 Male	8 x DB25 Male	1 m	Cable	PCI-1622CU
OPT8J	1 x DB78 Male	8 x DB9 Male	1 m	Cable	

* Intelligent Communication Card, ** Link with OPT8FP can support RS-422