

Advantech Data Acquisition Solutions

A Broad Selection of Form Factors to
Satisfy All Your DAQ Needs

- ✓ DAQ Software - DAQNav
- ✓ Machine Condition Monitoring Software - WebAccess/MCM
- ✓ DAQ-embedded Computer
- ✓ PCI /PCI Express Cards
- ✓ USB Modules
- ✓ Signal Conditioners
- ✓ Communication Cards
- ✓ PC/104 & PCI-104 Modules
- ✓ CompactPCI
- ✓ EtherCAT Remote I/O Module



WebAccess/MCM

DAQNav

ADVANTECH

Enabling an Intelligent Planet

www.advantech.com

Advantech Data Acquisition Solutions Overview

As a leading supplier of data acquisition products worldwide, Advantech offers a wide range of I/O devices with various interfaces and functions based on PC technology, from legacy ISA to modern USB, from signal-conditioning to graphical software tools.

Advantech's industrial I/O products are reliable, accurate, affordable, and suitable for many industrial automation applications, such as T&M (Test & Measurement) and laboratory applications such as monitoring, control, machine automation and production testing.

Signal Sensing

Signal Conditioning

Data Acquiring



Signal Conditioners

Advantech signal conditioners provide sensor and signal conditioning on a per-module basis for variant type sensors or signals.

DAQ-embedded Computer

MIC-1800 series units are standalone embedded computers with integrated data acquisition modules and signal conditioning to provide digital I/O, analog I/O, and counter functions. The palm-sized design with built-in terminals is suitable for space-limited applications.

Equipment

Sensor



Analog Signal



Conditioned Signal



Physical Phenomenon



Hardware

Data Acquiring Software



DAQ Cards

Advantech offers dedicated products for USB, PCI, PCI Express, ISA, CompactPCI, PC/104 or PCI-104 interfaces. So regardless if the platform is an IPC, embedded PC, desktop computer or laptop, customer requirements are covered.



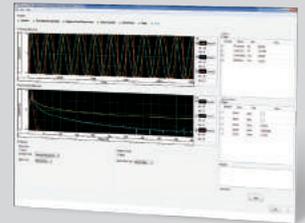
USB DAQ Modules

Advantech's USB DAQ modules are famous for user-friendly design and ability to replace traditional serial and parallel devices as they eliminate the need for external power and allow hot swapping.

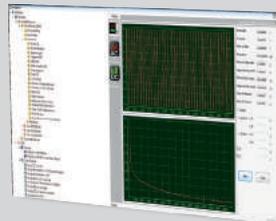
Machine Condition Monitoring Software

WebAccess/MCM is Machine Condition Monitoring software that provides easy sensor signal acquisition, signal analysis, feature extraction, data management and interpretation, and sends alerts.

WebAccess/MCM



DAQNavi



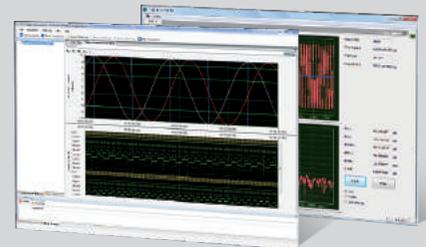
Software Development Package

DAQNavi, Advantech's next-generation driver package, delivers higher performance, compatibility, and reliability through a brand new driver and SDK.

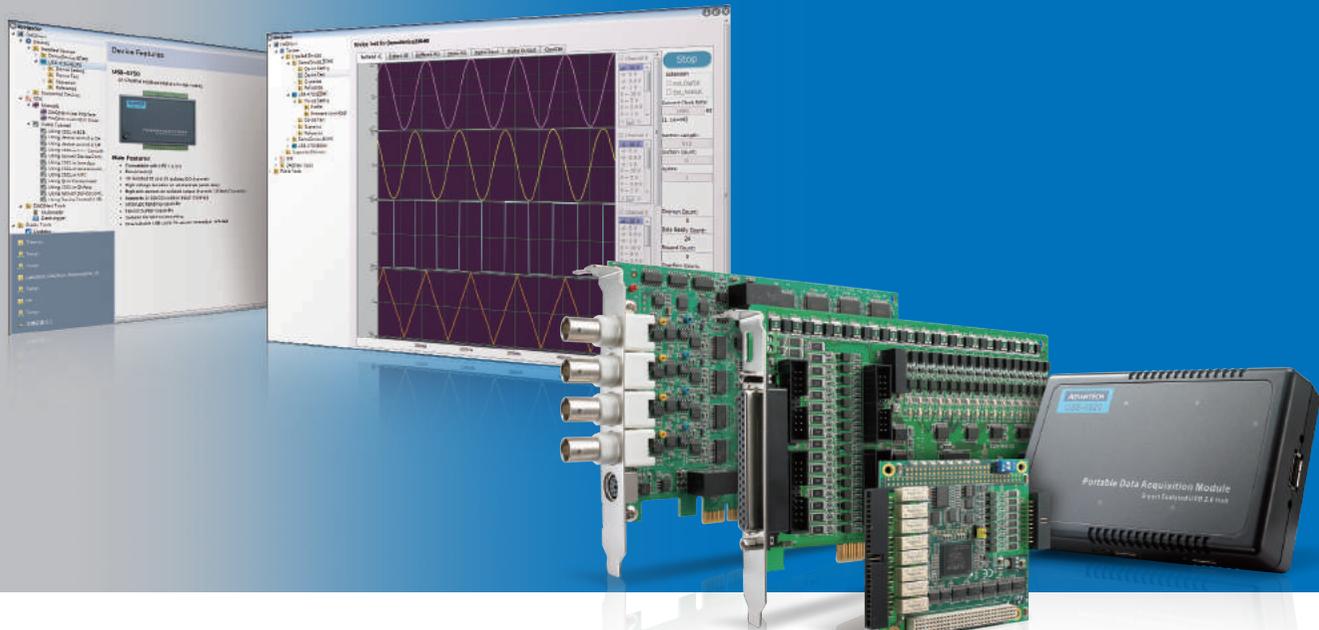
Configurable Data Logging / Signal Analysis Software

DataLogger helps engineers to leverage to perform data logging, recording, and display while SignalMeter includes Scope, AC Performance and DC Performance functions to assist engineers in analyzing signals.

DataLogger / SignalMeter



DAQNavi Greatly Reduces Costs and Improves Performance

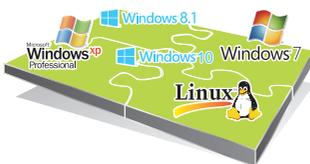


Features



Guaranteed Reliable Execution for Multi-Thread Programming

Multi-thread programming is now widely-used in DAQ applications. But without careful handling, it can cause unexpected problems like system crashes or data errors. Thread-safe programming technology prevents such problems. DAQNavi has thread-safe mechanisms built into its design, relieving programmers of multi-thread programming problems.



Latest Operating System Support

DAQNavi adheres to the latest Windows (32-bit and 64-bit) and Linux operating system requirements. In addition, DAQNavi software design helps programmers easily migrate their DAQ applications between OSs, without spending lots of time solving OS-compatibility issues.



Supports Multiple Programming Languages

For DAQ application development, DAQNavi supports 10 popular programming languages, including C/C++, Visual Basic, C#, VB.NET, Delphi, Qt, Borland C++ Builder (BCB), Java, MATLAB and LabVIEW. DAQNavi saves programmer development time when it is necessary to change programming languages.

What is DAQNav?

DAQNav, Advantech's next-generation driver package, delivers higher performance, compatibility, and reliability through a brand new driver and SDK; programmers benefit from many new user-friendly templates and shortened development times.

DAQNav Software Architecture

	Native Code				Managed Code	
	Examples	Examples	Examples	Examples	Examples	Tools
Apps	Java UI	C++Console MFC Qt/BCB	LabVIEW	ANSI C	C#Console C# VB.NET MATLAB Delphi	Navigator Plug-in DataLogger Multi-meter SignalMeter WebAccess/ MCM
Interpreter	Java Class Library	C++ class library	LabVIEW VIs	ANSI C API	.NET component	
Core	integrated DLL (BioDAQ.DLL for Windows 10, Windows 8, Windows 7, QNX, Linux)					
	DAQ Device Driver (Windows 10, Windows 8, Windows 7, QNX, Linux)					



LabVIEW Programming Support

LabVIEW programmers can easily build DAQ applications with DAQNav Assistant and Polymorphic VI DAQNav Assistant, based on LabVIEW Express VI technology, provides an intuitive wizard window that helps complete configuration programming quickly. DAQNav Polymorphic VI delivers more programming flexibility to experienced LabVIEW programmers.



Component-based Programming

Rapidly changing application requirements challenge DAQ developers, who are pressed to shorten development times. DAQNav delivers reusable, component-based libraries that can save up to 70% on programming code. Programmers can ignore many detailed low-level hardware settings, and concentrate on major parameter configurations. For Visual Studio, BCB and Delphi users, DAQNav offers step-by-step wizards that complete configurations without coding.



Easy-to-Use Utility

DAQNav provides an integrated utility, Advantech Navigator, where programmers can perform hardware configurations and functionality testing without programming. Hardware manual, software library documentation, and sample source codes are also provided. Everything necessary for DAQ programming is provided in this utility.

Jump from Fix-on-Fail to Proactive and Predictive Maintenance

WebAccess/MCM[™] Machine Condition Monitoring Software



Intelligent
Inspection



Condition
Monitoring



Oscilloscope



Real-time Online Condition Monitoring

- Acquires and analyzes massive quantities of dynamic signals
- Data interpretation and alarm function
- Provides data management such as storage, search, comparison, and playback



Reduce Maintenance Cost; Increase Machine Uptime

- Keeps abreast of machine condition to reduce downtime
- Monitors key component life instead of replacing parts based on a calendar or routine system



Save Development Time and Human Resources

- Easy setup without programming
- Provides plenty of algorithms for data analysis

Implement a Successful Predictive Maintenance System by Integrating Advantech's WebAccess/MCM

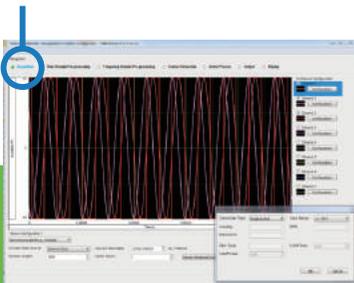
WebAccess/MCM is Machine Condition Monitoring software that provides easy sensor signal acquisition, signal analysis, feature extraction, data management and interpretation, and sends alerts. Engineers or system integrators can configure settings to meet the needs of different applications.

WebAccess/MCM helps customers to quickly install Advantech's DAQ modules and implement predictive maintenance in their factories. This helps improve equipment uptime, performance and safety, while greatly reducing maintenance costs.

■ User-guided Graphical Interface for Easy Setup of Machine Condition Maintenance

1

Acquire Signals from Sensors



Quickly configure the signal acquisition settings, such as channel, range, single ended / differential inputs, sampling rate, memory size and trigger. No programming required.

2

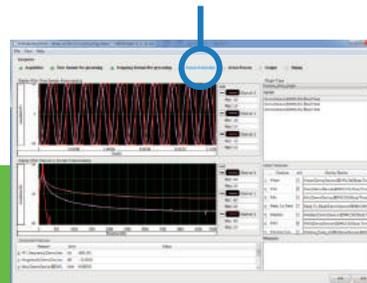
Optimize the Data



Provides multiple algorithms like FFT, IFFT, a variety of filters, smoothers, and mixers to optimize the data.

3

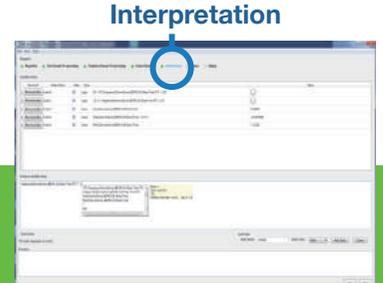
Extract Key Features



Provides various settings like the Max/Min/Median/Mean, RMS, Pulse Width/Frequency, Time, FFT Frequency to extract data features for later analysis.

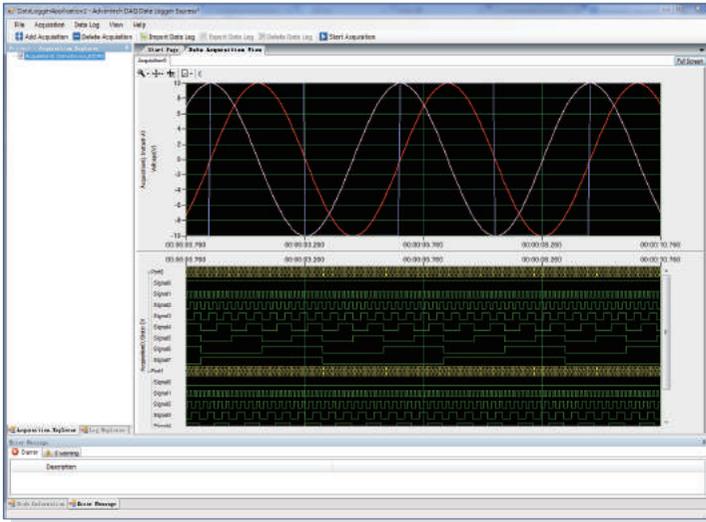
4

Set up the Criteria for Machine Condition Interpretation



Offers simple mathematical and logical calculation settings for interpreting the features and taking actions based on the results, such as sending signals to other equipment or sending alerts to administrators.

DataLogger - Configurable Data Logging Software



Features

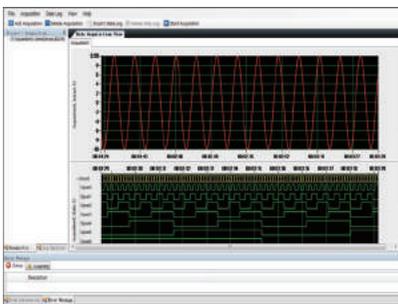
- Data logging, display and recording without programming
- Instant AI, buffered AI and static DI data logging
- Intuitive hardware channel parameters configuration wizard
- Supports simulated device operation
- Save configurations into a project file for future re-use
- Real-time display with zoom and pan operation
- Supports data recording to store as file to local disk
- Recorded data playback to view historical data
- Supports both analog graph and digital graph display

Introduction

Advantech DataLogger is ready-to-use application software; engineers can leverage its easy-to-use interface to perform data logging, display, and recording. Without spending any time on programming, engineers benefit from flexibility to acquire and store data from various Advantech data acquisition devices for their data logging tasks.

Details

Before data logging measurements begin, engineers can do all necessary analog and digital input channel configuration using the built-in DAQNAVI wizard. Step-by-step instructions help engineers easily complete related settings. In addition to actual data acquisition devices, DataLogger also offers simulated devices that let engineers test all operations before sensor signals are available.



Configuration Management by Project Files

The engineer can create and edit a project to include one or several data logging tasks. Within one project, data can be acquired and displayed from one or multiple data acquisition devices. Current input channel configurations and logging settings can be saved as a specific project file. Afterwards, the engineer can open any saved project file to load all configurations and start data logging tasks immediately.

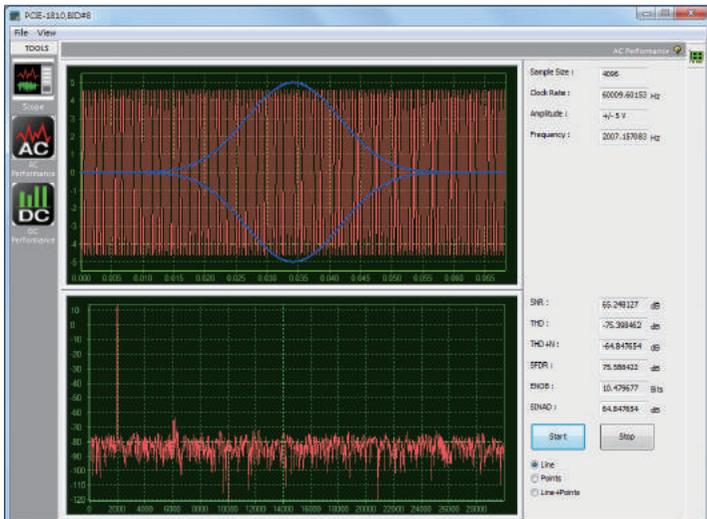
Real-time Data Logging, Display and Recording

After data acquisition configuration is done, engineers can immediately start data acquisition and display the logging data on a real-time graph. The graph can be zoomed or panned dynamically during data logging. Engineers can decide if they want to record the data (save data into a pre-defined file) during data logging.

Historical Data Playback

Previously recorded data can be loaded back into DataLogger software and viewed through the Playback function. Zoom in, zoom out, and pan operations are also available for historical data display.

SignalMeter - Signal Analysis Software



Features

- Easy to use; no programming required
- Provides DC and AC performance measurement
- Cursor measurement for signal analysis
- Enables Windows function for AC signal
- Real-time displays of frequency spectrum based on zoom and pan operations in the time domain
- Automatic amplitude, average, peak-to-peak, and frequency measurements
- Free tool

Introduction

SignalMeter is ready-to-use application software that provides three functions for Advantech DAQ devices. It includes Scope, AC Performance and DC Performance functions to assist engineers in analyzing signals. Engineers can use one configuration to control three function settings, with a simple, user-friendly interface.

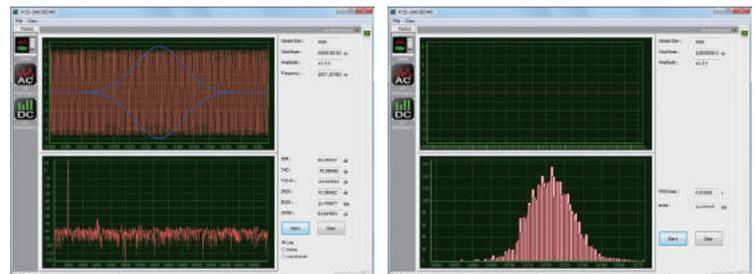
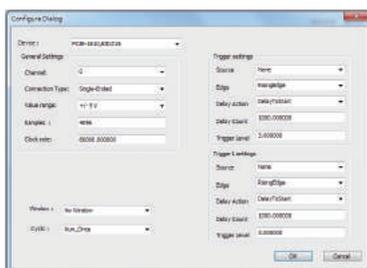
Details

Data Acquisition Device Configuration

Before using SignalMeter, engineers can easily set the necessary acquisition parameters through the configuration dialog. The configuration interface includes device selection, general settings, trigger settings and start mode. Engineers can use one configuration to control the three function modes.

AC and DC Performance Mode

The AC Performance function enables automatic calculation of the SNR, THD, and SIMAD — important information for data acquisition. For a DC signal, the DC Performance function will display the RMS noise and plot a histogram. The interface is simple and easy to navigate.



Scope Mode

Scope offers simple oscilloscope features:

- Amplitude: Returns the difference between the signal high and low
- Average: This is the mean vertical level of the entire captured waveform
- Peak to Peak: Returns the difference between the extreme maximum and minimum values
- Frequency: The period is the average completion time for a cycle using the entire waveform in the capture window. Frequency is the inverse of period.

The Scope function not only shows the time and frequency domains simultaneously, but also enables synchronous zoom on the time and frequency domains.

Industry First Embedded Data Acquisition Computer

DAQ-embedded Computer



A Palm-sized DAQ-embedded Computer for space-limited Applications

Advantech's MIC-1800 series, MIC-1810 and MIC-1816, are industrial embedded computers and data acquisition modules integrated into a PC-based control platform. The MIC-1800 series was made palm-sized by removing some unnecessary system functions and adopting a fanless design. The built-in terminal block enables direct connection with the sensor signal line, which saves space and eliminates some wiring. Moreover, MIC-1800 series with multiple I/O channels acquires electrical signals for real-time monitoring through analog input channels; it controls workpiece motion via digital input and output channels, and uploads machine information to the Cloud via the Ethernet port for remote monitoring.

Key Features



Compact

The MIC-1800 series is a palm-sized, fanless DAQ embedded system that occupies only 165 x 130 x 59 mm, for easy in-cabinet placement.



Integrated

All the analog input, analog output, digital input, and digital output functions are integrated into each unit in the MIC-1800 series.



Convenient

The built-in wiring terminals facilitate the operations without using any wiring cables or terminal boards.



Software support

Advantech provides a free software development kit to help customers develop applications easily.



MIC-1810 NEW

12-bit, 500 KS/s, 12-ch DAQ platform with Core™ i3/ Celeron® processor



Features

- 16 analog inputs, up to 500 kS/s, 12-bit resolution
- 2 analog outputs, up to 500 kS/s, 12-bit resolution
- Support for digital trigger and analog trigger
- 24 programmable digital I/O lines
- Two 32-bit programmable counter/timers
- Onboard FIFO memory (4k samples)
- 2 x RS-232 ports
- 2 x 10/100/1000 Base-T RJ-45 LAN ports
- 2 x USB 2.0 and 2 x USB 3.0 ports
- MIC-1810-S4A1E
 - Intel® Celeron® 1047UE Processor, 1.4GHz
- MIC-1810-S6A1E
 - Intel® Core™ i3-3217UE Processor, 1.6GHz

Ordering Information

- MIC-1810-S4A1E Data Acquisition Computer with Intel® Celeron® 1047UE processor
- MIC-1810-S6A1E Data Acquisition Computer with Intel® Core™ i3-3217UE processor

Accessories

- 1700001714 Power Cord BSMI 3P 7A 125V 18AWG 180CM
- 1702002600 Power Cord 3P UL/CSA(USA) 125V 10A 1.83M 180D
- 1700023535-01 Power Cord CCC 3P 16A 250V 183cm
- 1960077844N001 Table Mount (W x L: 130 x 175 mm)
- 2070014966 Image WES7P MIC-1810 64bit

OS Support



MIC-1816 NEW

16-bit, 1MS/s, 16-ch DAQ platform with Core™ i3/ Celeron® processor



Features

- 16 analog inputs, up to 1 MS/s, 16-bit resolution
- 2 analog outputs, up to 3 MS/s, 16-bit resolution
- Support for digital trigger and analog trigger
- 24 programmable digital I/O lines
- Two 32-bit programmable counter/timers
- Onboard FIFO memory (4k samples)
- 2 x RS-232 ports
- 2 x 10/100/1000 Base-T RJ-45 LAN ports
- 2 x USB 2.0 and 2 x USB 3.0 ports
- MIC-1816-S4A1E
 - Intel® Celeron® 1047UE Processor, 1.4GHz
- MIC-1816-S6A1E
 - Intel® Core™ i3-3217UE Processor, 1.6GHz

Ordering Information

- MIC-1816-S4A1E Data Acquisition Computer with Intel® Celeron® 1047UE processor
- MIC-1816-S6A1E Data Acquisition Computer with Intel® Core™ i3-3217UE processor

Accessories

- 1700001714 Power Cord BSMI 3P 7A 125V 18AWG 180CM
- 1702002600 Power Cord 3P UL/CSA(USA) 125V 10A 1.83M 180D
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- 2070015202 Image WES7P MIC-1816 64 bit

OS Support



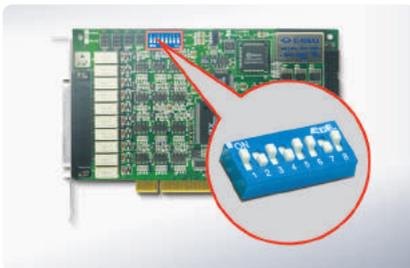
Complete PCI and PCI Express Card Range to Meet any Machine and Test Equipment Need



One Source for All High-precision PC-based Applications

With over 20 years of plug-in DAQ card design and manufacturing experience, Advantech has become a global leader, providing a full range of industrial data acquisition and control products. The most requested features for industrial and laboratory applications, such as monitoring, control, data acquisition, and automated testing, are included.

Key Features

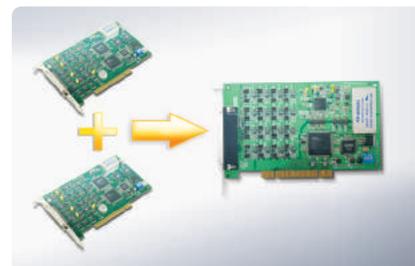


BoardID Switch

The BoardID DIP switch defines each card's unique identity when multiple identical PCI cards are installed in the same computer. BoardID switch settings easily identify and provide access to each card for hardware configuration and software programming.

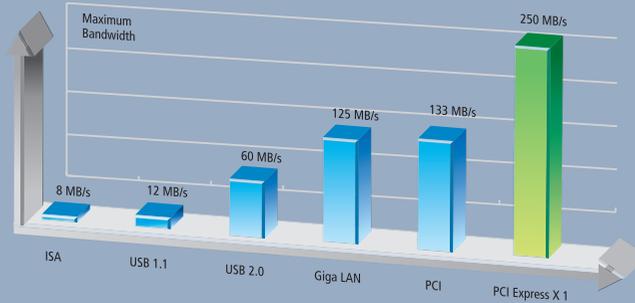
High Density

High density means many input/output functions are packed onto one PCI card. In the past, customers were often forced to buy more than one card to fulfill their functions, but now they can achieve their goals with just one card. The advantages are: saved space, and more efficient installation.



New Generation Interface for DAQ: PCI Express

PCI Express is a computer expansion bus standard that was designed to replace the older PCI bus standard. The PCI Special Interest Group (PCI-SIG) preserved and developed the PCI specification and released the new PCI Express standard (PCIe 1.0a) in 2003. PCI Express delivers 30 times the bandwidth of the PCI bus, with a per-lane data rate of 250 MB/s and a transfer rate of 2.5 GT/s. This new generation interface features high speed point-to-point architecture, high throughput performance, software backward compatibility, I/O simplification, and more. In accord with this technological trend, Advantech offers a series of PCI Express data acquisition cards with the same development software as a PCI card, to satisfy a variety of automation needs.

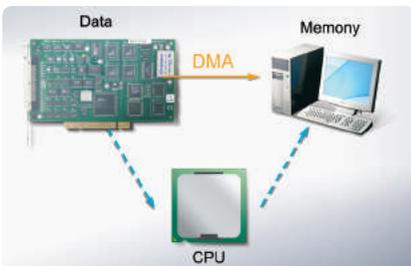
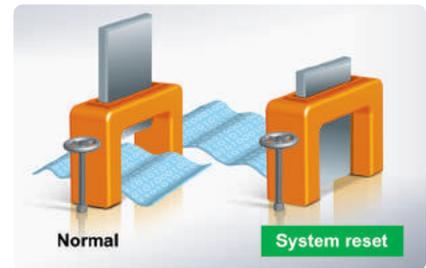


Auto Calibration

The built-in auto-calibration circuitry corrects gain and offset errors in analog input and analog output channels, thereby eliminating the need for external equipment and user adjustments.

Keeping the Output Values after System Reset

When the system is hot reset (with no power shutoff), Advantech's DAQ cards with this function can either retain the last digital (or analog) output values, or return to their default configurations, depending on jumper settings. This practical function eliminates any danger caused by misoperation during unexpected system resets.



DMA - Direct Memory Access

This is a method of transferring data to or from memory at a high rate without involving the CPU. DMA is the hardware/software technique that allows the highest rate of data transfer to or from RAM. DMA provides the means to read or write data at precise times, without restricting the microprocessor's tasks.

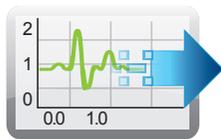
New Generation Instrumentation Solutions for Test & Measurement

PCI / PCI Express Cards

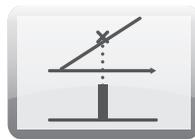


Powerful PCI Express Multi-Function Data Acquisition Card

Advantech offers multifunction DAQ cards that combine high performance signal measurement, arbitrary wave generation, digital I/O, and counter functionality. All these DAQ cards are equipped with both digital trigger and high-resolution analog trigger, so users can easily and flexibly define when to start or stop data acquisition.



Waveform Generator



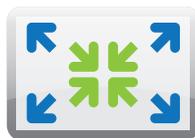
16-bit Analog Trigger



Double Clock



500kS/1MS Sample Rate



Flexible Trigger Option



Auto-calibration

High-Speed PCI Express Digitizer

PCIE-1840 can perform extremely high speed measurements with 16-bit resolution. Its four channels can all acquire signals at a 125 MS/s sampling rate, or the user can cascade all channels into a single channel, and push the sampling rate to 500 MS/s. With its re-trigger function and time-stamp ability, the user can get relative timing information when performing measurements.

PCI Express Dynamic Signal Analyzer

PCIE-1802, with high precision 24-bit resolution, is an ideal solution for sound, audio, and vibration measurements, as well as machine condition monitoring applications. Its high density, 8-channel analog inputs can connect to IEPE and TEDS sensors directly, and can perform simultaneous 256 kS/s sampling acquisition, with an anti-alias filter.

Model Name	Analog Input			Analog Output			Digital I/O	Counter
	Channels	Sampling Rate	Resolution	Channels	Update Rate	Resolution	Channels	Channels
PCIE-1810	16 SE/8 DI	Single-ch: 800 kS/s Multiple-ch: 500 kS	12-bit	2	500 kS/s	12-bit	24	2
PCIE-1816	16 SE/8 DI	Single-ch: 1 MS/s Multiple-ch: 500 kS	16-bit	2	3 MS/s	16-bit	24	2
PCIE-1816H	16 SE/8 DI	Single-ch: 5 MS/s Multiple-ch: 1 MS	16-bit	2	3 Ms/s	16-bit	24	2
PCIE-1812	8 DI	250KS/s per channel	16-bit	2	3 MS/s	16-bit	32	4
PCIE-1813	4 DI	38.4KS/s per channel	26-bit	2	3 MS/s	16-bit	32	4
PCIE-1840	4 SE	125 MS/s per channel	16-bit	-	-	-	-	-
PCIE-1840L	4 SE	80 MS/s per channel	16-bit	-	-	-	-	-
PCIE-1802	8 DI	216 kS/s per channel	24-bit	-	-	-	3	-
PCIE-1802L	4 DI	216 kS/s per channel	24-bit	-	-	-	3	-

Model Name	TTL DIO		Isolated DIO		Relay Output	Timer/Counter
	Input Channels	Output Channels	Input Channels	Output Channels	Channels	Channels
PCIE-1730	16	16	16	16	-	-
PCIE-1751	48		-	-	-	3
PCIE-1752	-	-	-	64	-	-
PCIE-1753	96		-	-	-	-
PCIE-1754	-	-	64	-	-	-
PCIE-1756	-	-	32	32	-	-
PCIE-1760	-	-	8	-	8	8

PCI / PCI Express Cards Selection Guide

Model Name	Analog Input			Analog Output	
	Sampling Rate	Resolution	Channel	Resolution	Channel
PCI-1710U	100 kS/s	12-bit	16 SE/ 8 DI	12-bit	2
PCI-1710UL	100 KS/s	12-bit	16 SE/ 8 DI	-	-
PCI-1710HGU*	100 kS/s	12-bit	16 SE/ 8 DI	12-bit	2
PCI-1711U	100 kS/s	12-bit	16 SE	12-bit	2
PCI-1711UL	100 kS/s	12-bit	16 SE	-	-
PCI-1712	1 MS/s	12-bit	16 SE/ 8 DI	12-bit	2
PCI-1712L	1 MS/s	12-bit	16 SE/ 8 DI	-	-
PCI-1716	250 kS/s	16-bit	16 SE/ 8 DI	16-bit	2
PCI-1716L	250 kS/s	16-bit	16 SE/ 8 DI	-	-
PCI-1706U	250 kS/s	16-bit	8 DI	12-bit	2
PCI-1742U	1 MS/s	16-bit	16 SE/ 8 DI	16-bit	2
PCI-1747U	250 kS/s	16-bit	64 SE/ 32 DI	-	-
PCI-1718HDU	100 kS/s	12-bit	16 SE/ 8 DI	12-bit	1
PCI-1713U	100 kS/s	12-bit	32 SE/ 16 DI	-	-
PCI-1715U	500 kS/s	12-bit	32 SE/ 16 DI	-	-
PCI-1714UL	10 MS/s	12-bit	4 SE	-	-
PCI-1714U	30 MS/s	12-bit	4 SE	-	-
PCI-1720U	-	-	-	12-bit	4
PCI-1721	-	-	-	12-bit	4
PCI-1723	-	-	-	16-bit	8
PCI-1724U	-	-	-	14-bit	32
PCI-1727U	-	-	-	14-bit	12
PCI-1730U	-	-	-	-	-
PCI-1735U	-	-	-	-	-
PCI-1737U	-	-	-	-	-
PCI-1757UP	-	-	-	-	-
PCI-1739U	-	-	-	-	-
PCI-1751	-	-	-	-	-
PCI-1753	-	-	-	-	-
PCI-1755	-	-	-	-	-
PCI-1750	-	-	-	-	-
PCI-1733	-	-	-	-	-
PCI-1734	-	-	-	-	-
PCI-1752U	-	-	-	-	-
PCI-1754	-	-	-	-	-
PCI-1756	-	-	-	-	-
PCI-1758UDI	-	-	-	-	-
PCI-1758UDO	-	-	-	-	-
PCI-1758UDIO	-	-	-	-	-
PCI-1760U	-	-	-	-	-
PCI-1761	-	-	-	-	-
PCI-1762	-	-	-	-	-
PCI-1780U	-	-	-	-	-
PCI-1671UP	-	-	-	-	-

*Note: PCI-1710HGU offers more gain options than PCI-1710U, for increased measurement accuracy.

Model Name	Digital Input	Digital Output	Timer/Counter	Connector
	Channel	Channel	Channel	
PCI-1710U	16 TTL	16 TTL	1	68-pin SCSI
PCI-1710UL	16 TTL	16 TTL	1	68-pin SCSI
PCI-1710HGU*	16 TTL	16 TTL	1	68-pin SCSI
PCI-1711U	16 TTL	16 TTL	1	68-pin SCSI
PCI-1711UL	16 TTL	16 TTL	1	68-pin SCSI
PCI-1712	16 TTL (shared)		3	68-pin SCSI
PCI-1712L	16 TTL (shared)		3	68-pin SCSI
PCI-1716	16 TTL	16 TTL	1	68-pin SCSI
PCI-1716L	16 TTL	16 TTL	1	68-pin SCSI
PCI-1706U	16 TTL (shared)		2	68-pin SCSI
PCI-1742U	16 TTL	16 TTL	1	68-pin SCSI
PCI-1747U	-	-	-	68-pin SCSI
PCI-1718HDU	16 TTL	16 TTL	1	1 x DB37, 2 x 20-pin
PCI-1713U	-	-	-	DB37
PCI-1715U	-	-	-	DB37
PCI-1714UL	-	-	-	4 x BNC
PCI-1714U/ PCIE-1744	-	-	-	4 x BNC
PCI-1720U	-	-	-	DB37
PCI-1721	16 TTL (shared)		1	68-pin SCSI
PCI-1723	16 TTL (shared)		-	68-pin SCSI
PCI-1724U	-	-	-	DB62
PCI-1727U	16 TTL	16 TTL	-	1 x DB37, 2 x 20-pin
PCI-1730U/ PCIE-1730/ PCIE-1730H	16 TTL, 16 Isolated	16 TTL, 16 Isolated	-	1 x DB37, 4 x 20-pin
PCI-1735U	32 TTL	32 TTL	3	5 x 20-pin
PCI-1737U	24 TTL (shared)		-	1 x 50-pin, 2 x 20-pin
PCI-1757UP	24 TTL (shared)		-	DB25
PCI-1739U	48 TTL (shared)		-	2 x 50-pin
PCI-1751	48 TTL (shared)		3	68-pin SCSI
PCI-1753	96 TTL (shared)		-	100-pin SCSI
PCI-1755	32 TTL (shared, high speed)		-	100-pin SCSI
PCI-1750/ PCI-1750USO	16 isolated	16 isolated	1	DB37
PCI-1733	32 isolated	-	-	DB37
PCI-1734	-	32 isolated	-	DB37
PCI-1752U/ PCI-1752USO/ PCIE-1752	-	64 isolated	-	100-pin SCSI
PCI-1754 / PCIE-1754	64 isolated	-	-	100-pin SCSI
PCI-1756/ PCIE-1756/ PCIE-1756H	32 isolated	32 isolated	-	100-pin SCSI
PCI-1758UDI	128 isolated	-	-	dual 100-pin mini-SCSI
PCI-1758UDO	-	128 isolated	-	dual 100-pin mini-SCSI
PCI-1758UDIO	64 isolated	64 isolated	-	dual 100-pin mini-SCSI
PCI-1760U /PCIE-1760	8 isolated	6 x Form A, 2 x Form C	10 (PCI), 2 (PCIE)	DB37
PCI-1761	8 isolated	4 x Form A, 4 x Form C	-	DB37
PCI-1762	16 isolated	16 Relay	-	DB62
PCI-1780U	8 TTL	8 TTL	8	68-pin SCSI
PCI-1671UP	-	-	-	24-pin IEEE 488

PCI / PCI Express Cards

PCI Express

PCIE-1730

32-ch TTL and 32-ch Isolated Digital I/O PCI Express Card



Features

- 16-ch isolated DI and 16-ch isolated DO
- 16-ch 5V/TTL DI and 16-ch 5V/TTL DO
- Supports DI Interrupt
- 2,500 V_{DC} isolation protection
- High sink current on isolated output channels (500mA max./ch)

Ordering Information

- | | |
|----------------------|--|
| • PCIE-1730-AE | 32-ch Isolated Digital I/O PCIe Card |
| • PCL-10120-1E/2E | 20-pin Flat Cable, 1 m/2 m |
| • ADAM-3920-AE | 20-pin DIN-rail Flat Cable Wiring Board |
| • PCLD-782-BE | 16-ch Isolated DI Board with 1m 20-pin Flat Cable |
| • PCLD-885-AE | 16-ch Power Relay Board with 20p & 50p Flat Cables |
| • PCLD-785-AE | 16-ch Relay Board with 1m 20-pin Flat Cable |
| • ADAM-3937-BE | DB37 DIN-rail Wiring Board |
| • PCL-10137-1E/2E/3E | DB37 Cable, 1 m/2 m/3 m |

OS Support



PCIE-1730H NEW

32-Ch TTL, 32-Ch Isolated Digital I/O PCIe Card with Digital Filter and Interrupt Function



Features

- 32-ch isolated DI/O (16-ch digital input, 16-ch digital output)
- 32-ch TTL DI/O (16-ch digital input, 16-ch digital output)
- High output driving capacity
- Interrupt handling capability
- Selectable digital filter time
- D-type connector for isolated input and output channels
- High-voltage isolation on output channels (2,500 VDC)

Ordering Information

- | | |
|----------------------|--|
| • PCIE-1730H-AE | 32-ch Isolated Digital I/O PCIe Card |
| • PCL-10120-1E/2E | 20-pin Flat Cable, 1 m/2 m |
| • ADAM-3920-AE | 20-pin DIN-rail Flat Cable Wiring Board |
| • PCLD-782-BE | 16-ch Isolated DI Board with 1m 20-pin Flat Cable |
| • PCLD-885-AE | 16-ch Power Relay Board with 20p & 50p Flat Cables |
| • PCLD-785-AE | 16-ch Relay Board with 1m 20-pin Flat Cable |
| • ADAM-3937-BE | DB37 DIN-rail Wiring Board |
| • PCL-10137-1E/2E/3E | DB37 Cable, 1 m/2 m/3 m |

OS Support



PCIE-1751

48-ch Digital I/O and 3-ch Counter PCI Express Card



Features

- Supports 5V/TTL and dry contact
- Programmable DI filter
- Keeps DIO port configuration and DO state after system reset
- Supports DI interrupt, Pattern Match and Change of States
- 3-ch counter: 32-bit, up to 10 MHz
- Event counting, frequency and pulse width measure, pulse train and PWM output

Ordering Information

- | | |
|-------------------|---|
| • PCIE-1751-AE | 48-ch Digital I/O and 3-ch Counter PCI Express Card |
| • PCL-10168-1E/2E | 68-pin SCSI Shielded Cable, 1 m/2 m |
| • ADAM-3968-AE | 68-pin DIN-rail SCSI Wiring Board |
| • ADAM-3968/20-AE | 68-pin to 3 20-pin Box Header Board |
| • ADAM-3968/50-AE | 68-pin to 2 50-pin Box Header Board |
| • PCLD-8751-AE | 48-ch Isolated DI Board |
| • PCLD-8761-AE | 24-ch Relay/Isolated DI Board |
| • PCLD-8762-AE | 48-ch Relay Board |

OS Support



PCIE-1752

64-ch Isolated Digital Output PCI Express Card



Features

- Wide output range (5 ~ 40 V_{DC})
- High sink current on isolated output channels (500mA max./ch)
- 2,500 V_{DC} isolation protection

Ordering Information

- PCIE-1752-AE 64-ch Isolated Digital Output PCI Express Card
- PCL-10250-1E/2E 100-pin SCSI to Two 50-pin SCSI Cable, 1 m/2 m
- ADAM-3951-BE 50-pin DIN-rail Wiring Board with LED Indicators
- PCL-101100M-1E/2E/3E 100-pin SCSI to 100-pin SCSI Cable, 1 m/2 m/3 m
- ADAM-3951-BE 100-pin DIN-rail Wiring Board

OS Support



PCIE-1753

96-ch Digital I/O PCI Express Card



Features

- Supports 5V/TTL and dry contact
- Programmable DI filter
- Keeps DIO port configuration and DO state after system reset
- Supports DI interrupt, Pattern Match and Change of State

Ordering Information

- PCIE-1753-AE 96-ch Digital I/O PCI Express Card
- PCL-10268-1E/2E 100-pin to Two 68-pin SCSI Shielded Cable, 1 m/2 m
- ADAM-3968-AE 68-pin DIN-rail SCSI Wiring Board
- ADAM-3968/20-AE 68-pin to 3 20-pin Box Header Board
- ADAM-3968/50-AE 68-pin to 2 50-pin Box Header Board
- PCLD-8751-AE 48-ch Isolated DI Board
- PCLD-8761-AE 24-ch Relay/Isolated DI Board
- PCLD-8762-AE 48-ch Relay Board

OS Support



PCIE-1754

64-ch Isolated Digital Input PCI Express Card



Features

- Wide input range (10 ~ 30 V_{DC})
- High over-voltage protection (70 V_{DC})
- 2,500 V_{DC} isolation protection
- Supports DI interrupt

Ordering Information

- PCIE-1754-AE 64-ch Isolated Digital Input PCI Express Card
- PCL-10250-1E/2E 100-pin SCSI to Two 50-pin SCSI Cable, 1 m/2 m
- ADAM-3951-BE 50-pin DIN-rail Wiring Board with LED Indicators
- PCL-101100M-1E/2E/3E 100-pin SCSI to 100-pin SCSI Cable, 1 m/2m/3 m
- ADAM-3951-BE 100-pin DIN-rail Wiring Board

OS Support



PCI / PCI Express Cards

PCI Express

PCIE-1756

64-ch Isolated Digital Input/Output PCI Express Card



Features

- Wide input range (10 ~ 30 V_{DC}) and output range (5 ~ 40 V_{DC})
- High sink current on isolated output channels (500mA max./ch)
- Supports DI interrupt
- High over-voltage protection (70 V_{DC})
- 2,500 V_{DC} isolation protection

Ordering Information

- PCIE-1756-AE 64-ch Isolated Digital I/O PCI Express Card
- PCL-10250-1E/2E 100-pin SCSI to Two 50-pin SCSI Cable, 1 m/2 m
- ADAM-3951-BE 50-pin DIN-rail Wiring Board with LED Indicators
- PCL-101100M-1E/2E/3E 100-pin SCSI to 100-pin SCSI Cable, 1m/2m/3m
- ADAM-39100-BE 100-pin DIN-rail Wiring Board

OS Support



PCIE-1756H NEW

64-Ch Isolated Digital I/O PCIe Card with Digital Filter and Interrupt Function



Features

- 32-ch isolated digital input
- 32-ch isolated digital output with wide output range (5 ~ 40 V_{DC})
- Interrupt handling capability
- Software-selectable digital filter time for all DI channels (PCIE-1756H only)
- Output status read back
- Retains the output settings and values after system hot reset

Ordering Information

- PCIE-1756-AE 64-ch Isolated Digital I/O PCI Express Card
- PCL-10250-1E/2E 100-pin SCSI to Two 50-pin SCSI Cable, 1 m/2 m
- ADAM-3951-BE 50-pin DIN-rail Wiring Board with LED Indicators
- PCL-101100M-1E/2E/3E 100-pin SCSI to 100-pin SCSI Cable, 1m/2m/3m
- ADAM-3951-BE 100-pin DIN-rail Wiring Board

OS Support



PCIE-1760

8-ch Relay and 8-ch Isolated Digital Input PCI Express Card with 2-ch Counter/Timer



Features

- Relay Type: 2 x Form C, 6 x Form A
- Contact Rating: 0.5 A @ 125 V_{AC}, 1 A @ 30 V_{DC}
- 8-ch counter input and 2-ch PWM output
- Isolated DI supports both dry or wet contact (jumper selectable)
- LED indicators to show activated relays
- Programmable DI filter
- Supports DI Interrupt, Pattern Match and Change of Status

Ordering Information

- PCIE-1760-AE 8-ch Relay and 8-ch Isolated DI PCIe Card with 2-ch Counter/Timer
- PCL-10137-1E/2E/3E DB37 Cable, 1 m/2 m/3 m
- ADAM-3937-AE DB37 DIN-rail Wiring Board

OS Support



PCIE-1810

800 kS/s, 12-bit, 16-ch PCI Express Multifunction DAQ Card



Features

- 16-ch AI: 12-bit, 800 kS/s (single-channel), 500 kS/s (multiple-channel)
- 2-ch AO: 12-bit, 500 kS/s
- Supports both digital trigger and analog trigger (12-bit)
- 5V/TTL DIO: 24 input/output (direction programmable)
- 2-ch counter: 32-bit, up to 10 MHz
- Event counting, frequency and pulse width measure, pulse train and PWM output
- Support DI Interrupt, Pattern Match and Change of Status

OS Support Windows 10 Windows 8.1 Windows 8

Ordering Information

- PCIE-1810-AE 800 kS/s, 12-bit Multifunction Card
- PCL-10168-1E/2E 68-pin SCSI Shielded Cable, 1 m/2 m
- ADAM-3968-AE 68-pin DIN-rail SCSI Wiring Board
- PCLD-8810E-AE DIN-rail Wiring Board with CJC
- PCLD-8811-AE Low-Pass Active Filter Board



PCIE-1816

1 MS/s, 16-bit, 16-ch PCI Express Multifunction DAQ Card



Features

- 16-ch AI: 16-bit, 1 MS/s (single-channel), 500 kS/s (multiple-channel)
- 2-ch AO: 16-bit, 3 MS/s
- Supports both digital trigger and analog trigger (16-bit)
- 5V/TTL DIO: 24 input/output (direction programmable)
- 2-ch counter: 32-bit, up to 10 MHz
- Event counting, frequency and pulse width measure, pulse train and PWM output
- Supports DI Interrupt, Pattern Match and Change of Status

OS Support Windows 10 Windows 8.1 Windows 8

Ordering Information

- PCIE-1816-AE 1 MS/s, 16-bit Multifunction Card
- PCL-10168H-1E/2E 68-pin SCSI Shielded Cable with Noise Rejection, 1 m/2 m
- ADAM-3968-AE 68-pin DIN-rail SCSI Wiring Board
- PCLD-8810E-AE DIN-rail Wiring Board with CJC
- PCLD-8811-AE Low-Pass Active Filter Board



PCIE-1816H

5 MS/s, 16-bit, 16-ch PCI Express Multifunction DAQ Card



Features

- 16-ch AI: 16-bit, 5 MS/s (single-channel), 1 MS/s (multiple-channel)
- 2-ch AO: 16-bit, 3 MS/s
- Supports both digital trigger and analog trigger (16-bit)
- 5V/TTL DIO: 24 input/output (direction programmable)
- 2-ch counter: 32-bit, up to 10 MHz
- Event counting, frequency and pulse width measure, pulse train and PWM output
- Supports DI Interrupt, Pattern Match and Change of Status

OS Support Windows 10 Windows 8.1 Windows 8

Ordering Information

- PCIE-1816H-AE 5 MS/s, 16-bit Multifunction Card
- PCL-10168H-1E/2E 68-pin SCSI Shielded Cable with Noise Rejection, 1 m/2 m
- ADAM-3968-AE 68-pin DIN-rail SCSI Wiring Board
- PCLD-8810E-AE DIN-rail Wiring Board with CJC
- PCLD-8811-AE Low-Pass Active Filter Board



PCI / PCI Express Cards

PCI Express

PCIE-1812 **NEW**

250 kS/s, 16-Bit, 8-Ch, Simultaneous Sampling Multifunction PCI Express DAQ Card



Features

- 8 differential simultaneous sampling analog inputs, up to 250 kS/s, 16-bit
- resolution
- 2 analog outputs, up to 3 MS/s, 16-bit resolution
- Full automatic calibration
- 2 analog triggers and 2 digital triggers for analog I/O
- 32 programmable DI/Os with interrupt functions
- Four 32-bit programmable counters/ timers/ encoders
- Board ID switch
- Supports Microsoft® Windows 10, 8, and 7

OS Support Windows 10 Windows 8.1 Windows 8

Ordering Information

- PCIE-1812-AE 250 kS/s, 16-bit, 8-ch simultaneous sampling multifunction card
- PCL-101100R-1E 100-pin SCSI shielded cable, female to male, 1 m
- PCL-101100R-2E 100-pin SCSI shielded cable, female to male, 2 m
- ADAM-39100-BE 100-pin DIN rail SCSI wiring board



PCIE-1813 **NEW**

38.4 kS/s, 26-Bit, 4-Ch, Simultaneous Sampling, Universal Bridge Multifunction PCI Express Card



Features

- 4 simultaneous sampling analog inputs, up to 38.4 kS/s, 26-bit resolution
- Full, half, and quarter-bridge sensor input with built-in anti-aliasing filter
- 2 analog outputs, up to 3 MS/s, 16-bit resolution
- Four 32-bit programmable encoder counters/ timers/ encoder counters
- 32 programmable DI/Os with interrupt functions
- Board ID switch
- Full automatic calibration
- Supports Microsoft® Windows 10, 8, and 7

OS Support Windows 10 Windows 8.1 Windows 8

Ordering Information

- PCIE-1813-AE 38.4 kS/s, 26-bit, 4-ch, simultaneous sampling, universal bridge input, multifunction PCI Express card
- PCL-101100R-1E 100-pin SCSI shielded cable, female to male, 1 m
- PCL-101100R-2E 100-pin SCSI shielded cable, female to male, 2 m
- ADAM-39100-BE 100-pin DIN rail SCSI wiring board



PCIE-1840

4-ch 16-bit 125 MS/s High Speed PCI Express Digitizer



Features

- 4-ch simultaneous AI: 16-bit, 125 MS/s per channel
- Cascade channels to achieve higher sampling rate 250 MS/s (2-ch only), 500 MS/s (1-ch only)
- Non-stop data streaming capable
- 2 GB on-board memory
- Onboard anti-aliasing filter
- 1M or 50 Ohm selectable input impedance

OS Support Windows 10 Windows 8.1 Windows 8

Ordering Information

- PCIE-1840-AE 4-ch 16-bit 125 MS/s High Speed PCI Express Digitizer
- PCL-1010B-1E BNC Cable, 1 m
- PCLD-8840-AE 20-pin DIN-rail HDMI Cable Wiring Board for PCIE-1802 and PCIE-1840
- PCL-10119-1E HDMI cable



PCIE-1840L NEW

4-Ch, 16-Bit, 80 MS/s Digitizer



Features

- 4 simultaneous analog inputs, up to 80 MHz, 16-bit resolution
- 320 MHz time-interleaved sampling
- Non-stop data streaming capabilities
- 2 GB of onboard memory
- 1M or 50 Ohm selectable input impedence
- Built-in tunable anti-aliasing filter
- AC/DC coupling support

Ordering Information

- PCIE-1840L-AE 4-ch 16-bit 80 MS/s High Speed PCI Express Digitizer
- PCL-1010B-1E BNC Cable, 1 m
- PCLD-8840-AE 20-pin DIN-rail HDMI Cable Wiring Board for PCIE-1802 and PCIE-1840
- PCL-10119-1E HDMI cable

OS Support



PCIE-1802

24-bit, 8-ch PCI Express Dynamic Signal Analyzer



Features

- 8-ch simultaneous AI: 24-bit, 216 kS/s per channel
- 6 gains settings: input ranges from ± 0.2 V to ± 10 V
- IEPE and TEDS smart sensors support
- 0 - 10 mA excitation, software selectable per channel
- AC or DC coupling, software selectable per channel
- digital trigger and analog trigger (24-bit)
- anti-aliasing filter
- onboard FIFO size: 4096 samples
- DC offset null adjustment
- 5V/TTL DIO: 1 input, 1 output

Ordering Information

- PCIE-1802-AE 216 kS/s, 24-bit, 8-ch Dynamic Signal Analyzer Card
- PCLD-8840-AE 20-pin DIN-rail HDMI Cable Wiring Board for PCIE-1802 and PCIE-1840
- PCL-108BNC-50E Mini-SCSI to 8-BNC Cable
- PCL-10119-1E HDMI Cable

OS Support



PCIE-1802L NEW

4-Ch, 24-Bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card



Features

- 4 simultaneously sampled analog inputs, up to 216 kS/s
- 6 gains settings: input ranges from ± 0.2 V to ± 10 V
- IEPE and TEDS smart sensors support
- 0 - 10 mA excitation, software selectable per channel
- AC or DC coupling, software selectable per channel
- digital trigger and analog trigger (24-bit)
- anti-aliasing filter
- onboard FIFO size: 4096 samples
- DC offset null adjustment
- 5V/TTL DIO: 1 input, 1 output

Ordering Information

- PCIE-1802L-AE 216 kS/s, 24-bit, 4-ch Dynamic Signal Analyzer Card
- PCLD-8840-AE 20-pin DIN-rail HDMI Cable Wiring Board for PCIE-1802 and PCIE-1840
- PCL-104BNC-50E Mini-SCSI to 4-BNC Cable
- PCL-10119-1E HDMI Cable

OS Support



PCI / PCI Express Cards

Multifunction

PCI-1710U/UL/HGU

100 kS/s, 12-bit, 16-ch PCI Multifunction Card



Features

- 16 single-ended / 8 differential AI: 12-bit, 100 kS/s
- 2-ch AO: 12-bit, static update (PCI-1710U and PCI-1710HGU only)
- 5V/TTL DIO: 16 inputs, 16 outputs
- 1-ch counter: 16-bit, up to 10 MHz
- Event counting, pulse train output

Ordering Information

- PCI-1710U-DE 100 kS/s, 12-bit Multifunction Card
- PCI-1710UL-DE 100 kS/s, 12-bit Multifunction Card w/o AO
- PCI-1710HGU-DE 100 kS/s, 12-bit High-gain Multifunction Card (For precise small-signal measurement)
- PCLD-8710-AE DIN-rail Wiring Board with CJC
- PCL-10168-1E/2E 68-pin SCSI Shielded Cable, 1 m/2 m
- ADAM-3968-AE 68-pin DIN-rail SCSI Wiring Board
- PCLD-8810I-AE DIN-rail Wiring Board with CJC
- PCLD-8811-AE Low-Pass Active Filter Board

OS Support



PCI-1711U/UL

Entry-level 100 kS/s, 12-bit, 16-ch PCI Multifunction Card



Features

- 16 single-ended AI: 12-bit, 100 kS/s
- 2-ch AO: 12-bit, static update (PCI-1711U only)
- 5V/TTL DIO: 16 inputs, 16 outputs
- 1-ch counter: 16-bit, up to 10 MHz
- Event counting, pulse train output

Ordering Information

- PCI-1711U-CE 100 kS/s, 12-bit Multifunction Card
- PCI-1711UL-CE 100 kS/s, 12-bit Multifunction Card w/o AO
- PCLD-8710-AE DIN-rail Wiring Board with CJC
- PCL-10168-1E/2E 68-pin SCSI Shielded Cable, 1 m/2 m
- ADAM-3968-AE 68-pin DIN-rail SCSI Wiring Board
- PCLD-8810I-AE DIN-rail Wiring Board with CJC
- PCLD-8811-AE Low-Pass Active Filter Board

OS Support



PCI-1712/L

1 MS/s, 12-bit, 16-ch PCI Multifunction Card



Features

- 16 single-ended / 8 differential AI: 12-bit, 1 MS/s
- 2-ch AO: 12-bit, 1 MS/s (PCI-1712 only)
- 5V/TTL DIO: 16 inputs / outputs (direction programmable)
- 3-ch counter: 16-bit, up to 10 MHz
- Event counting, frequency and pulse width measure, pulse train output

Ordering Information

- PCI-1712-AE 1 MS/s, 12-bit Multifunction Card
- PCI-1712L-AE 1 MS/s, 12-bit Multifunction Card w/o AO
- PCLD-8712-AE DIN-rail Wiring Board for PCI-1712/L
- PCL-10168-1E/2E 68-pin SCSI Shielded Cable, 1 m/2 m
- ADAM-3968-AE 68-pin DIN-rail SCSI Wiring Board

OS Support



PCI-1716/L

250 kS/s, 16-bit, 16-ch PCI Multifunction Card



Features

- 16 single-ended / 8 differential AI: 16-bit, 250 kS/s
- 2-ch AO: 16-bit, static update (PCI-1716 only)
- 5V/TTL DIO: 16 inputs, 16 outputs
- 1-ch counter: 16-bit, up to 10 MHz
- Event counting, pulse train output

Ordering Information

- PCI-1716-AE 250 kS/s, 16-bit Multifunction Card
- PCI-1716L-AE 250 kS/s, 16-bit Multifunction Card w/o AO
- PCLD-8710-AE DIN-rail Wiring Board with CJC
- PCL-10168H-1E/2E 68-pin SCSI Shielded Cable with Noise Rejection, 1 m/2 m
- ADAM-3968-AE 68-pin DIN-rail SCSI Wiring Board
- PCLD-8810I-AE DIN-rail Wiring Board with CJC
- PCLD-8811-AE Low-Pass Active Filter Board

OS Support



PCI-1706U

250 kS/s, 16-bit, Simultaneous 8-ch Universal PCI Multifunction Card



Features

- 8 differential AI: 16-bit, 250kS/s for each channel (simultaneously sampling)
- 2-ch AO: 12-bit, static update (PCI-1706U only)
- 5V/TTL DIO: 16 inputs, 16 outputs
- 2-ch counter: 32-bit, up to 10 MHz
- Event Counting, pulse train output, frequency input, PWM input, PWM output

Ordering Information

- PCI-1706U-AE 250 KS/s, 16-bit Simultaneous Multifunction Card
- PCL-10168H-1E/2E 68-pin SCSI Shielded Cable with Noise Rejection, 1 m/2 m
- ADAM-3968AE 68-pin DIN-rail SCSI Wiring Board

OS Support



PCI-1742U

1 MS/s, 16-bit, 16-ch PCI Multifunction Card



Features

- 16 single-ended / 8 differential AI: 16-bit, 1 MS/s
- 2-ch AO: 16-bit, static update
- 5V/TTL DIO: 16 inputs, 16 outputs
- 1-ch counter: 16-bit, up to 10 MHz
- Event counting, pulse train output

Ordering Information

- PCI-1742U-AE 1 MS/s, 16-bit, 16-ch Multifunction Card
- PCL-10168H-1E/2E 68-pin SCSI Shielded Cable with Noise Rejection, 1 m/2 m
- ADAM-3968-AE 68-pin DIN-rail SCSI Wiring Board
- PCLD-8710-AE DIN-rail Wiring Board with CJC
- PCLD-8810I-AE DIN-rail Wiring Board with CJC
- PCLD-8811-AE Low-Pass Active Filter Board

OS Support



PCI / PCI Express Cards

Analog Input PCI-1713U

100 kS/s, 12-bit, 32-ch Isolated Analog Input PCI Card



Features

- 32 single-ended / 16 differential AI: 12-bit, 100 kS/s
- 2,500 V_{DC} isolation protection
- 4,096 onboard FIFO

Ordering Information

- PCI-1713U-BE 100 kS/s, 12-bit, 32-ch Isolated AI Card
- ADAM-3937-BE DB37 Cable, 1 m/2 m/3 m
- PCL-10137-1E/2E/3E DB37 DIN-rail Wiring Board

OS Support



PCI-1714U/UL

30/10 MS/s, 12-bit, Simultaneous 4-ch Analog Input PCI Card



Features

- 4 A/D converters simultaneously sampling
- 4 single-ended AI: 12-bit
PCI-1714UL: 10 MS/s per channel
PCI-1714U: 30 MS/s per channel
- Supports digital trigger
- Onboard FIFO:
PCI-1714UL: 8,192 samples per channel
PCI-1714U: 32,768 samples per channel

Ordering Information

- PCI-1714U-BE 30 MS/s, 12-bit, Simultaneous 4-ch AI Card
- PCI-1714UL-BE 10 MS/s, 12-bit, Simultaneous 4-ch AI Card
- ADAM-3909-AE DB9 DIN-rail Wiring Board
- PCL-1010B-1E BNC to BNC Wiring Cable, 1 m
- PCL-10901-1E/3E PS/2 to DB9 Cable, 1 m/3 m

OS Support



PCI-1715U

500 kS/s, 12-bit, 32-ch Isolated Analog Input PCI Card



Features

- 32 single-ended / 16 differential AI: 12-bit, 100 kS/s
- 2,500 V_{DC} isolation protection
- 1,024 onboard FIFO

Ordering Information

- PCI-1715U-BE 500 kS/s 12-bit, 32-ch Isolated AI Card
- ADAM-3937-BE DB37 Cable, 1 m/2 m/3 m
- PCL-10137-1E/2E/3E DB37 DIN-rail Wiring Board

OS Support



Analog Output PCI-1720U

12-bit, 4-ch Isolated Analog Output PCI Card



Features

- 4-ch AO: 12-bit, static update
- 2,500 V_{DC} isolation protection
- Keeps the output settings and values after system hot reset

Ordering Information

- | | |
|----------------------|-------------------------------|
| • PCI-1720U-BE | 12-bit, 4-ch Isolated AO Card |
| • PCL-10137-1E/2E/3E | DB37 Cable, 1 m/2 m/3 m |
| • ADAM-3937-BE | DB37 DIN-rail Wiring Board |

OS Support



PCI-1723

16-bit, 8-ch Analog Output PCI Card with 16-ch Digital I/O



Features

- 8-ch AO: 16-bit, static update
- Keeps the output settings and values after system hot reset
- 5V/TTL DIO: 16 input/output (direction programmable)
- Supports DI Interrupt

Ordering Information

- | | |
|-------------------|--|
| • PCI-1723-AE | 16-bit, 8-ch AO Card |
| • PCL-10168-1E/2E | 68-pin SCSI Shielded Cable with Noise Rejection, 1 m/2 m |
| • ADAM-3968-AE | 68-pin DIN-rail SCSI Wiring Board |

OS Support



PCI-1724U

14-bit, 32-ch Isolated Analog Output PCI Card



Features

- 32-ch AO: 14-bit, static update
- Keeps the output settings and values after system hot reset

Ordering Information

- | | |
|-------------------|--------------------------------|
| • PCI-1724U-AE | 14-bit, 32-ch Isolated AO Card |
| • PCL-10162-1E/3E | DB62 Cable, 1 m/3 m |
| • ADAM-3962-AE | DB62 DIN-rail Wiring Board |

OS Support



PCI / PCI Express Cards

Digital I/O & Counter

PCI-1730U

32-ch Isolated Digital I/O PCI Card



Features

- 16-ch isolated DI and 16-ch isolated DO
- 16-ch TTL DI and 16-ch TTL DO
- Support DI Interrupt
- 2,500 V_{DC} isolation protection
- Isolated DO current: max. 300 mA / channel
- Keeps DIO port configuration and DO state after system reset

Ordering Information

- | | |
|----------------------|--|
| • PCI-1730U-BE | 32-ch Isolated Digital I/O PCI Card |
| • PCL-10120-1E/2E | 20-pin Flat Cable, 1 m/2 m |
| • ADAM-3920-AE | 20-pin DIN-rail Flat Cable Wiring Board |
| • PCLD-885-AE | 16-ch Power Relay Board with 20p & 50p Flat Cables |
| • PCLD-785-AE | 16-ch Relay Board with 1m 20-pin Flat Cable |
| • PCLD-782-BE | 16-ch Isolated DI Board with 1m 20-pin Flat Cable |
| • ADAM-3937-BE | DB37 DIN-rail Wiring Board |
| • PCL-10137-1E/2E/3E | DB37 Cable, 1 m/2 m/3 m |

OS Support



Windows 10



Windows 8.1



Windows 8



PCI-1733/1734

32-ch Isolated Digital Input / Digital Output PCI Card



Features

- PCI-1733: 32-ch isolated DI
PCI-1734: 32-ch isolated DO
- Supports DI Interrupt (PCI-1733 only)
- 2,500 V_{DC} isolation protection
- Isolated DO current: (PCI-1734 only)
max. 200 mA / channel

Ordering Information

- | | |
|----------------------|--|
| • PCI-1733-BE | 32-ch Isolated Digital Input PCI Card |
| • PCI-1734-CE | 32-ch Isolated Digital Output PCI Card |
| • ADAM-3937-BE | DB37 DIN-rail Wiring Board |
| • PCL-10137-1E/2E/3E | DB37 Cable, 1 m/2 m/3 m |

OS Support



Windows 10



Windows 8.1



Windows 8



PCI-1750

32-ch Isolated Digital I/O and 1-ch Counter PCI Card



Features

- 16-ch isolated DI & 16-ch isolated DO
- Supports DI Interrupt
- 2,500 V_{DC} isolation protection
- Isolated DO current:
max. 200 mA / channel
- 1-ch counter: 16-bit, up to 1 MHz
- Event counting, pulse train output

Ordering Information

- | | |
|----------------------|--|
| • PCI-1750-BE | 32-ch Isolated DIO and 1-ch Counter PCI Card |
| • PCL-10137-1E/2E/3E | DB37 Cable, 1 m/2 m/3 m |
| • ADAM-3937-BE | DB37 DIN-rail Wiring Board |

OS Support



Windows 10



Windows 8.1



Windows 8



PCI-1751

48-ch Digital I/O and 3-ch Counter PCI Card



Features

- Supports 5V/TTL and dry contact
- Supports DI Interrupt
- Keeps DIO port configuration and DO state after system reset
- 3-ch counter: up to 10 MHz
- Event counting, pulse train output

Ordering Information

- | | |
|-------------------|---|
| • PCI-1751-BE | 48-ch Digital I/O and Counter PCI Card |
| • PCL-10168-1E/2E | 68-pin SCSI Shielded Cable, 1 m/2 m |
| • ADAM-3968-AE | 68-pin DIN-rail SCSI Wiring Board |
| • ADAM-3968/20-AE | 68-pin SCSI to 3 20-pin Box Header Terminal |
| • ADAM-3968/50-AE | 68-pin SCSI to 2 50-pin Box Header Terminal |
| • PCLD-8751-AE | 48-ch Isolated Digital Input Board |
| • PCLD-8761-AE | 24-ch Replay/ Isolated Digital Input Board |
| • PCLD-8762-AE | 48-ch Relay Board |

OS Support



PCI-1752U

64-ch Isolated Digital Output Universal PCI Card



Features

- 2,500 V_{DC} isolation protection
- Wide output range (5 ~ 40 V_{DC})
- Isolated DO current:
max. 200 mA / channel
- Keeps DO state after system reset

Ordering Information

- | | |
|------------------------|--|
| • PCI-1752U-BE | 64-ch Isolated Digital Output Universal PCI Card |
| • PCL-10250-1E/2E | 100-pin SCSI to Two 50-pin SCSI Cable, 1 m/2 m |
| • ADAM-3951-BE | 50-pin DIN-rail Wiring Board with LED Indicators |
| • PCL-101100M-1E/2E/3E | 100-pin SCSI to 100-pin SCSI Cable, 1 m/2 m/3 m |
| • ADAM-39100-BE | 100-pin DIN-rail Wiring Board |

OS Support



PCI-1753

96-ch Digital I/O PCI Card



Features

- Supports 5V/TTL and dry contact
- Keeps DIO port configuration and DO state after system reset
- Supports DI interrupt, Pattern Match and Change of States

Ordering Information

- | | |
|-------------------|---|
| • PCI-1753-CE | 96-ch Digital I/O PCI Card |
| • ADAM-3968-AE | 68-pin DIN-rail SCSI Wiring Board |
| • ADAM-3968/20-AE | 68-pin SCSI to 3 20-pin Box Header Terminal |
| • ADAM-3968/50-AE | 68-pin SCSI to 2 50-pin Box Header Terminal |
| • PCLD-8751-AE | 48-ch Isolated Digital Input Board |
| • PCLD-8761-AE | 24-ch Replay/ Isolated Digital Input Board |
| • PCLD-8762-AE | 48-ch Relay Board |
| • PCL-10268-1E/2E | 100-pin to Two 68-pin SCSI Cables, 1 m/2 m |

OS Support



PCI / PCI Express Cards

PCI-1756

64-ch Isolated Digital I/O PCI Card



Features

- 2,500 V_{DC} isolation protection
- 70 V_{DC} over-voltage protection for DI
- Supports DI Interrupt
- Isolated DO current: max. 200 mA / channel
- Keeps DIO port configuration and DO state after system reset

Ordering Information

- | | |
|------------------------|--|
| • PCI-1756-BE | 64-ch Isolated Digital I/O PCI Card |
| • PCL-10250-1E/2E | 100-pin SCSI to Two 50-pin SCSI Cable, 1 m/2 m |
| • ADAM-3951-BE | 50-pin DIN-rail Wiring Board with LED Indicators |
| • PCL-101100M-1E/2E/3E | 100-pin SCSI to 100-pin SCSI Cable, 1 m/2 m/3 m |
| • ADAM-3951-BE | 100-pin DIN-rail Wiring Board |

OS Support



Windows 10



Windows 8.1



Windows 8



PCI-1758UDI

128-ch Isolated Digital Input Universal PCI Card



Features

- 2,500 V_{DC} isolation protection
- Supports DI Interrupt
- Programmable DI filter

Ordering Information

- | | |
|---------------------|---------------------------------------|
| • PCI-1758UDI-AE | 128-ch Isolated DI Universal PCI Card |
| • PCL-101100S-1E/2E | 100-pin SCSI Cable, 1 m/2 m |
| • ADAM-39100-AE | 100-pin DIN-rail SCSI Wiring Board |

OS Support



Windows 10



Windows 8.1



Windows 8



PCI-1758UDO

128-ch Isolated Digital Output Universal PCI Card



Features

- 2,500 V_{DC} isolation protection
- Isolated DO current: max. 90 mA / channel
- Keeps DO state after system reset

Ordering Information

- | | |
|---------------------|---------------------------------------|
| • PCI-1758UDO-AE | 128-ch Isolated DO Universal PCI Card |
| • PCL-101100S-1E/2E | 100-pin SCSI Cable, 1 m/2 m |
| • ADAM-39100-AE | 100-pin DIN-rail SCSI Wiring Board |

OS Support



Windows 10



Windows 8.1



Windows 8



PCI-1760U

8-ch Relay and 8-ch Isolated Digital Input Universal PCI Card with 10-ch Counter/Timer



Features

- Relay Type: 2 x Form C, 6 x Form A
- Contact Rating: 0.5 A @ 125 V_{AC}, 1 A @ 30 V_{DC}
- LED indicators to show activated relays
- Programmable DI filter
- 2,500 V_{DC} isolation protection for DI
- DI support for both wet and dry contacts
- Supports DI interrupt, Pattern Match and Change of States
- 8-ch counter: 16-bit, up to 500 Hz for event counting
- 2-ch PWM output

Ordering Information

- | | |
|----------------------|--|
| • PCI-1760U-BE | 8-ch Relay and 8-ch Isolated DI PCI Card |
| • PCL-10137-1E/2E/3E | DB37 Cable, 1 m/2 m/3 m |
| • ADAM-3937-BE | DB37 DIN-rail Wiring Board |

OS Support



PCI-1761

8-ch Relay and 8-ch Isolated Digital Input PCI Card



Features

- Relay Type: 4 x Form A, 4 x Form C
- Contact Rating: 2 A @ 250 V_{AC}, 2 A @ 30 V_{DC}
- LED indicators to show activated relays
- 3,750 V_{DC} isolation protection for DI
- Supports DI Interrupt

Ordering Information

- | | |
|----------------------|--|
| • PCI-1761-BE | 8-ch Relay and 8-ch Isolated DI PCI Card |
| • PCL-10137-1E/2E/3E | DB37 Cable, 1 m/2 m/3 m |
| • ADAM-3937-BE | DB37 DIN-rail Wiring Board |

OS Support



PCI-1780U

8-ch, 16-bit Counter/Timer Universal PCI Card



Features

- 8-ch counter: 16-bit, up to 20 MHz
- Event counting, frequency and pulse width measure, pulse train output
- 8-ch PWM output
- 5V/TTL DIO: 8 inputs, 8 outputs
- Supports DI Interrupt
- Keeps DO state after system reset

Ordering Information

- | | |
|-------------------|-------------------------------------|
| • PCI-1780U-AE | 8-ch, 16-bit Counter/Timer PCI Card |
| • PCL-10168-1E/2E | 68-pin SCSI Shielded Cable, 1 m/2 m |
| • ADAM-3968-AE | 68-pin DIN-rail SCSI Wiring Board |

OS Support



Compatibility Chart

Recommended Cables, I/O Wiring Terminal Boards and Isolated Digital I/O Terminals for Connecting to Data Acquisition Products:

PCI and PCI Express Card PC/104, PCI-104 Module



Cable



PCI-1710U/1710UL/1710HGU, PCI-1711U/1711UL, PCI-1716/1716L, PCI-1741U, PCI-1742U, PCIE-1810, PCIE-1816, PCIE-1816H	PCL-10168, PCL-10168H
PCI-1712/1712L	PCL-10168, PCL-10168H
PCI-1718HDU/HGU	PCL-10137
PCI-1727U, PCI-1730U, PCIE-1730	PCL-10120, PCL-10121
PCI-1751, PCIE-1751	PCL-10137 ADAM-3937, PCLD-880
PCI-1753	PCL-10168
PCI-1713U, PCI-1715U	PCL-10268
PCI-1720U, PCI-1733, PCI-1734, PCI-1750, PCI-1760U, PCIE-1760, PCI-1761, USB-4702	PCL-10137
PCI-1784U	PCL-10137
PCI-1752U, PCI-1754, PCI-1756 PCIE-1752, PCIE-1754, PCIE-1756	PCL-10137
PCI-1724U, PCI-1762	PCL-10250
PCI-1737U, PCI-1739U, USB-4751/L	PCL-10162
PCI-1714U/1714UL, PCIE-1744	PCL-10150
PCI-1757UP	PCL-10901
PCI-1747U, PCI-1721, PCI-1723, PCI-1780U	PCL-1010B
PCI-1735U	PCL-10125
PCI-1755	PCL-10168
PCI-1758UDI/1758UDO/1758UDIO	PCL-10120, PCL-10121
USB-4671	PCL-10501+, PCL-10137, ADAM-3937
PCM-3718H/HO/HG, PCM-3730	PCL-101100
PCM-3724, PCM-3753I	PCL-101100S
PCM-3725, PCM-3780, PCM-3761I	PCL-10488
PCM-3810I	PCL-10120, PCL-10121
PCM-3730I	PCL-10150
	PCL-10120, PCL-10121
	PCL-10150
	PCL-10126
	PCL-10150
	PCL-10120, PCL-10121

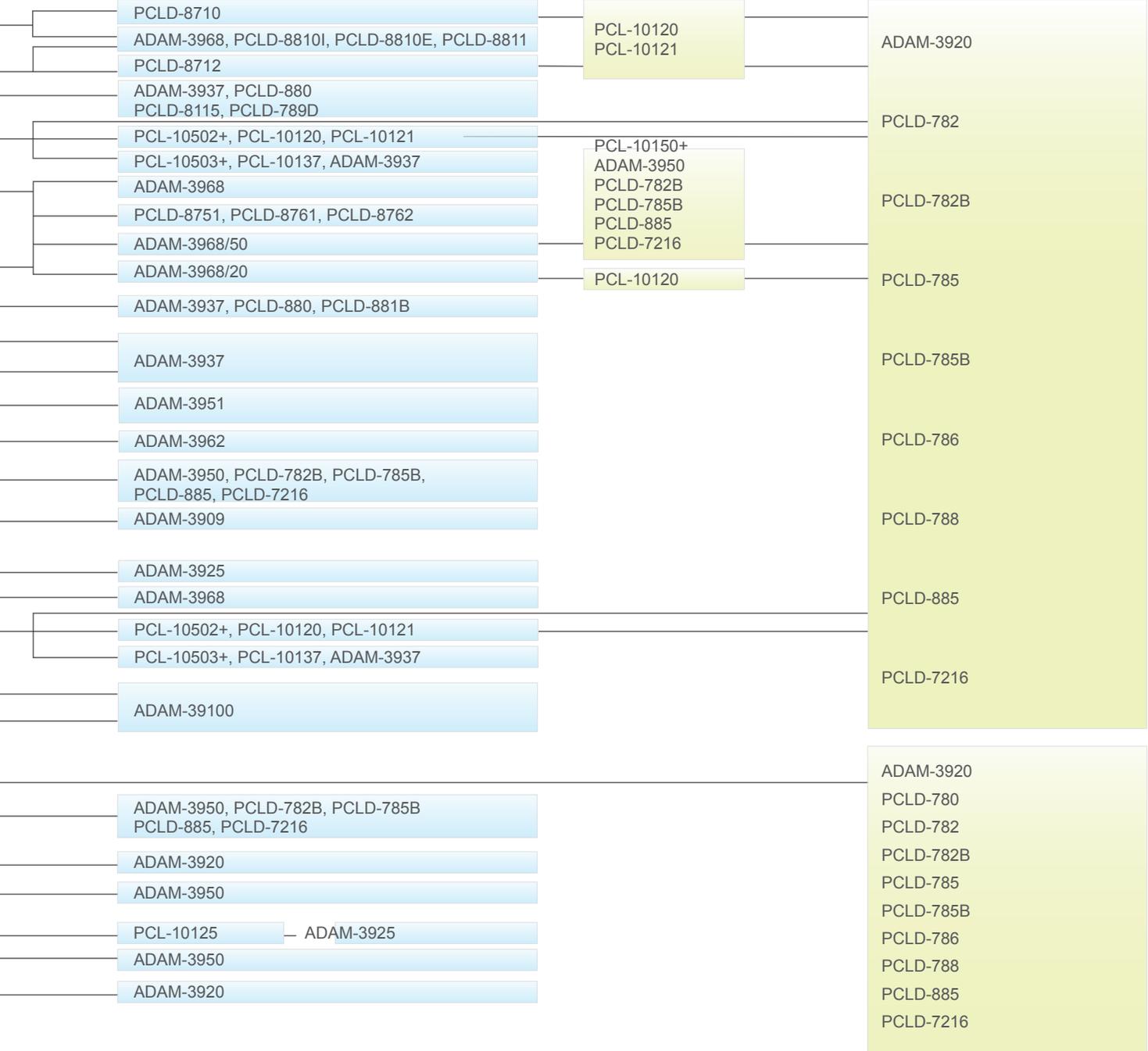
I/O Wiring Terminal Board



Extension Cable



Digital I/O Terminal Board



Think Outside the Box



Portable, Robust & Versatile USB DAQ Modules

Advantech's USB DAQ modules are known for their user-friendly designs and their ability to replace traditional serial and parallel devices, which eliminates the need for external power supplies and allows hot swapping. Through the Advantech USB DAQ series, users can easily upgrade their computing platforms with cutting-edge technologies and realize cost-effective maintenance while allowing the data acquisition devices to operate as usual. By adding industrial-grade features, including lockable cables, multiple mounting methods, and advanced detection functions, Advantech's USB data acquisition devices are a great fit for any industrial application.

Key Features



Lockable USB Cable

Reliable connections are critical to automation control and online production. While the standard USB cable is designed for convenience, Advantech provides lockable USB cables that provide solid, secure connections.

480Mbps High Speed Data Transfer

Advanced data acquisition functions are covered. And up to 200 kS/s sampling rate, 16-bit resolution, 16-ch analog input, 48-ch digital I/O specifications, as well as interrupt, event counter, and pulse width modulation (PWM) functions are available on Advantech's USB data acquisition modules.



Mounting Schemes



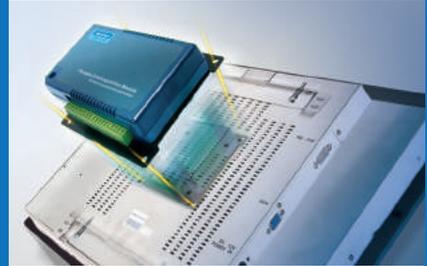
DIN-rail Mount

Advantech's USB DAQ modules come with a bracket that facilitates DIN-rail mounting in industry standard streamlined systems.



Wall/Panel Mount

The wallmount kit helps users hang their modules on walls or other flat surfaces.

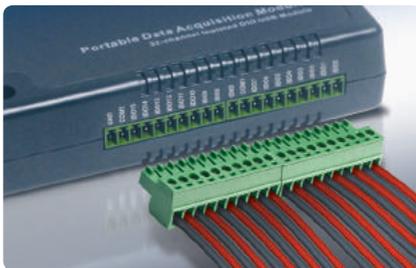


VESA Mount

The VESA bracket can mount the USB data acquisition module to VESA-ready appliances, such as Advantech's touch panel computers (TPC series) and flat panel monitors (FPM series).

Bus-powered

With no need for external power, these devices are highly mobile as they derive power from system USB ports, freeing users from the inconvenience of finding additional power sources.



Detachable Screw Terminal & On-Module Pin Assignment Index

Detachable screw terminals save space and money. Significant savings are realized by not having to buy additional cables and/or wiring boards, and extra space is saved as well. Furthermore, Advantech's on-module pin assignment simplifies maintenance efforts and reduces incorrect connections that can put systems at risk.

Device Identification

Identification assignment of each Advantech USB DAQ module is easily made through the provided utility. This ensures that application programs control the correct modules, even if the computer is changed or the USB DAQ modules are switched or rearranged at the USB hub. This feature shortens development time for each control site and reduces duplicate programs.



USB Modules

USB-4711A

150 kS/s, 12-bit, 16-ch Multifunction USB Module



Features

- 16 single-ended / 8 differential AI: 12-bit, 150 kS/s
- 2-ch AO: 12-bit, static update
- 5V/TTL DIO: 8 inputs, 8 outputs
- 1-ch counter: 32-bit, up to 1 kHz
- Event counting, frequency measurement
- One lockable USB cable for secure connection included

Ordering Information

- USB-4711A-AE 150 kS/s, 12-bit, 16-ch Multi. USB Module
- 1960004544 Wall Mount Bracket
- 1960005788 VESA Mount Bracket

OS Support



USB-4716

200 kS/s, 16-bit, 16-ch Multifunction USB Module



Features

- 16 single-ended / 8 differential AI: 16-bit, 200 kS/s
- 2-ch AO: 16-bit, static update
- 5V/TTL DIO: 8 inputs, 8 outputs
- 1-ch counter: 32-bit, up to 1 kHz
- Event counting, frequency measurement
- One lockable USB cable for secure connection included

Ordering Information

- USB-4716-AE 200 kS/s, 16-bit, 16-ch Multi. USB Module
- 1960004544 Wall Mount Bracket
- 1960005788 VESA Mount Bracket

OS Support



USB-4718

8-ch Thermocouple Input USB Module with 8-ch Isolated Digital Input



Features

- 8 differential AI: 16-bit, 10 S/s
- Supports voltage, current and thermocouple inputs
- 8-ch isolated DI & 8-ch isolated DO
- 2,500 V_{DC} isolation protection
- One lockable USB cable for secure connection included

Ordering Information

- USB-4718-AE 8-ch Thermocouple Input USB Module
- 1960004544 Wall Mount Bracket
- 1960005788 VESA Mount Bracket

OS Support



USB-4750

32-ch Isolated Digital I/O USB Module



Features

- 16-ch isolated DI & 16-ch isolated DO
- Isolated DO current: max. 200 mA / channel
- Supports DI Interrupt
- 2-ch isolated counter: 32-bit, up to 1 MHz
- Event counting and frequency measurement
- 2,500 V_{DC} isolation protection

Ordering Information

- USB-4750-BE 32-ch Isolated Digital I/O USB Module
- 1960004544 Wall Mount Bracket
- 1960005788 VESA Mount Bracket

OS Support



USB-4751/L

48/24-ch Digital I/O USB Module



Features

- USB-4751L: 24-ch TTL DIO
- USB-4751: 48-ch TTL DO
- Supports both dry and wet contact
- Supports DI Interrupt
- 2-ch counter: 32-bit, up to 8 MHz
- Event counting, frequency measurement, pulse train and PWM output
- One lockable USB cable for secure connection included

Ordering Information

- USB-4751-AE 48-ch Digital I/O USB Module
- USB-4751L-AE 24-ch Digital I/O USB Module
- PCL-10150-1.2E 50-pin Flat Cable, 1.2 m
- ADAM-3950-AE 50-pin DIN-rail Flat Cable Wiring Board
- PCLD-782B-AE 24-ch IDI Board w/ 20-pin & 50-pin Flat Cables
- PCLD-785B-AE 24-ch Relay Board w/ 20-pin & 50-pin Flat Cables

OS Support



USB-4761

8-ch Relay and 8-ch Isolated Digital Input USB Module



Features

- LED indicators to show activated relays
- Relay type: 8 x Form C
- Contact Rating: 0.25 A @ 250 V_{AC}, 1 A @ 30 V_{DC}
- 8-ch Isolated DI with 5 - 30 V_{DC} range
- Supports DI Interrupt
- 2,500 V_{DC} protection for Isolated DI on input channels
- One lockable USB cable for secure connection included

Ordering Information

- USB-4761-BE 8-ch Relay and 8-ch Isolated DI USB Module
- 1960004544 Wall Mount Bracket
- 1960005788 VESA Mount Bracket

OS Support



USB Modules

USB-4702

10 kS/s, 12-bit, 8-ch Multifunction USB Module



Features

- 8 single-ended / 4 differential AI: 12-bit, 10 kS/s
- 2-ch AO: 12-bit, static update
- 5V/TTL DIO: 8 inputs, 8 outputs
- 1-ch counter: 32-bit, up to 5 MHz
- Event counting, frequency measurement

Ordering Information

- USB-4702-AE 10 kS/s, 12-bit, Multifunction. USB Module
- PCL-10137-1E DB37 Cable, 1m
- PCL-10137-2E DB37 Cable, 2m
- PCL-10137-3E DB37 Cable, 3m
- ADAM-3937-BE DB37 DIN-rail Wiring Board

OS Support



USB-4704

48 kS/s, 14-bit, 8-ch Multifunction USB Module



Features

- 8 single-ended / 4 differential AI: 14-bit, 48 kS/s
- 2-ch AO: 12-bit, static update
- 5V/TTL DIO: 8 inputs, 8 outputs
- 1-ch counter: 32-bit, up to 5 MHz
- Event counting, frequency measurement
- Suitable for DIN-rail mounting

Ordering Information

- USB-4704-AE 48 kS/s, 14-bit, Multifunction. USB Module
- 1960004544 Wall Mount Bracket
- 1960005788 VESA Mount Bracket

OS Support



USB-4620

5-port Full-speed Isolated USB 2.0 Hub



Features

- 5 downstream USB 2.0 ports
- Compatible with USB 2.0 full-speed, USB 1.1, USB 1.0
- Up to 12 Mbps data transfer rate
- 3,000 V_{DC} voltage isolation for each downstream port
- Suitable for DIN-rail mounting
- One lockable USB cable included
- 10 ~ 30 V_{DC} power input (power adapter not included)

Ordering Information

- USB-4620-AE 5-port Full-speed Isolated USB 2.0 Hub
- 96PS-A40WDIN DIN-rail Power Supply
- 1960004544 Wallmount Bracket
- 1960005788 VESA Mounting Bracket
- USB-LOCKCABLE-AE 1.8 M Lockable USB 2.0 Cable with Screw Kit

USB-4622

5-port USB 2.0 Hub



Features

- Compatible with USB 2.0 high speed, USB 2.0 full-speed, USB 1.1, USB 1.0
- Up to 480 Mbps data transfer rate
- LED indicator
- Suitable for DIN-rail mounting
- One lockable USB cable included
- 10 ~ 30 V_{DC} power input (power adapter not included)

Ordering Information

- | | |
|--------------------|---|
| • USB-4622-CE | 5-port USB 2.0 Hub |
| • 96PS-A40WDIN | DIN-rail Power Supply |
| • 1960004544 | Wallmount Bracket |
| • 1960005788 | VESA Mounting Bracket |
| • USB-LOCKCABLE-AE | 1.8 M Lockable USB 2.0 Cable with Screw Kit |

USB-4630

4-Port SuperSpeed Isolated USB 3.0 Hub



Features

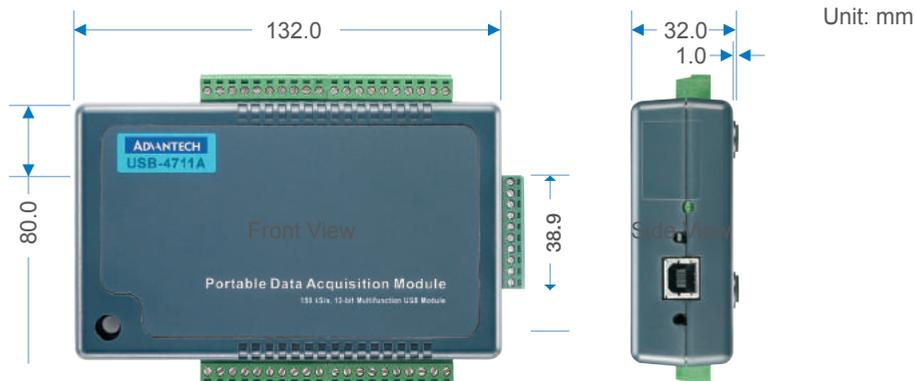
- 2,500 VDC voltage isolation for upstream port
- 4 downstream USB 3.0 SuperSpeed ports
- Supplied by external 10 ~ 30 VDC power or by USB bus power only
- Suitable for DIN-rail mounting
- LED indicators for power-on and speed of each downstream port

Ordering Information

- | | |
|-----------------|---------------------------|
| • USB-4630-AE | 5-port USB 3.0 Hub |
| • 96PS-A40WDIN | DIN-rail Power Supply |
| • 1960004544 | Wallmount Bracket |
| • 1960005788 | VESA Mounting Bracket |
| • 1700026157-01 | 1M Lockable USB 3.0 Cable |



Dimensions



DIN-rail Mountable Signal Conditioning Modules



Compact Design with 3-way Isolation Protection and Multiple Input Types

The ADAM-3000 Series consists of the most cost-efficient, field configurable, isolation-based, signal conditioners on the market today. The modules are easily installed to protect your instruments and process signals from the harmful effects of ground loops, motor noise, and other electrical interference.

Products

ADAM-3011

Isolated Thermocouple Input Module



Specifications

- Input Type: J, K, T, E, S, R, B Type Thermocouple
- Output Type: 0~10 V

Ordering Information

- ADAM-3011-AE Isolated Thermocouple Input Module

ADAM-3013

Isolated RTD Input Module



Specifications

- Input Type: Pt or Ni Type RTD
- Output Type: 0~5 V, 0~10 V, 0~20 mA

Ordering Information

- ADAM-3013-AE Isolated RTD Input Module

ADAM-3014

Isolated DC Input/ Output Module



Specifications

- Input Type: ± 10 mV, ± 50 mV, ± 100 mV, ± 0.5 V, ± 1 V, ± 5 V, ± 10 V, 0~10 mV, 0~50 mV, 0~100 mV, 0~0.5 V, 0~1 V, 0~5 V, 0~10 V, 0~20mA, ± 20 mA

Ordering Information

- ADAM-3014-AE Isolated DC Input/ Output Module

Key Features



Three-way Signal Isolation

Three-way (input/output/power) 1,000 V_{DC} isolation.



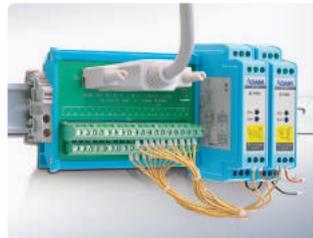
Easy Daisy Chain Power Wiring

Power can be connected conveniently from adjacent modules.



Field Configurable I/O Range

The I/O range can be configured on-site with switches inside the module.



Small Dimensions & DIN-rail Mounting

Saves space and can be easily mounted on a DIN-rail.

ADAM-3016

Isolated Strain Gauge Input Module



Specifications

- Input Type:
Electrical input: ± 10 , ± 20 , ± 30 , ± 100 mV
Excitation voltage: 1~10 V (60 mA max.)
- Output Type: ± 5 V, ± 10 V, 0~10 V, 0~20 mA

Ordering Information

- ADAM-3016 Isolated Strain Gauge Input Module

ADAM-3017 NEW

External Powered IEPE Signal Conditioner



Specifications

- Upper Cut-Off Frequency (for all couple settings)
x1, x10 gain (-5%) 100 kHz/x100 gain (-1%) 50 kHz
- Lower Cut-Off Frequency
(-3dB, 1 M Ω load, for all gain settings)
DC Couple DC/AC Couple (1 μ F) 0.58 Hz/AC Couple
(47 μ F) 0.012 Hz

Ordering Information

- ADAM-3017-AE External Powered IEPE Signal Conditioner

PCLD-8810I/ 8810E

68-pin SCSI DIN-rail Wiring Board with CJC



Specifications

- 16-single-ended or 8 differential AI inputs, programmable
- On-board CJC circuit for direct thermocouple measurement
- Reserved space for signal-conditioning circuit such as PCLD-8811

Ordering Information

- PCLD-8810I-AE • 68-pin SCSI Wiring Board for PCI
- PCLD-8810E-AE • 68-pin SCSI Wiring Board for PCIE

PCLD-8811

Bandwidth-Configurable Filter Board



Specifications

- Offset Error ± 1 LSB
- Gain Error ± 1 LSB
- Filter Frequency -3dB, 10Hz, 50Hz, 100Hz, 500Hz, 1KHz, 5KHz, 10KHz, 40KHz
- Max. Input Voltage ± 10 V
- Input Impedance 1G Ω / 2pF

Ordering Information

- PCLD-8811-AE Bandwidth-Configurable Filter Board

Diverse PCI and PCI Express Cards for Reliable Communication



PCI-1602/1604

2-Port RS-232 or RS-232/422/485 PCI Communication Card



Features

- Universal PCI v2.2
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 2 x RS-232 or RS- 232/422/485 ports
- Supported operating systems: Windows XP/7/8/10, and Linux.
- XR17V352 UART with 256-byte FIFOs
- 1KV Surge protection / 3KV Isolation protection

Ordering Information

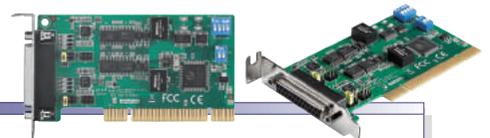
- PCI-1602B-CE 2-port RS-232/422/485 PCI Comm. Card w/Surge
- PCI-1602C-AE 2-port RS-232/422/485 PCI Comm. Card w/Surge & Isolation
- PCI-1604C-AE 2-port RS-232 PCI Comm. Card w/ Surge & Isolation

OS Support



PCI-1602UP NEW

2-port RS-232/422/485 Low-Profile PCI Comm. Card w/ Isolation Protection



Features

- Low-profile PCI 119.91 x 64.41 mm (low-profile MD1)
- Universal PCI v2.2
- Speeds up to 921.6 kbps for extremely fast data transmission
- 2 x RS- 232/422/485 ports
- Supported operating systems: Windows XP/7/8/10, and Linux.
- Level 4 ESD protection
- 3KV Isolation protection

Ordering Information

- PCI-1602UP-CE 2-port RS-232/422/485 Low-Profile PCI Comm.Card w/ Isolation Protection
- Note: PCI-1602UP includes one DB25 to 2 x DB9 cable

OS Support



Full Range of Communication Cards with Isolation Protection

Advantech provides a full range of PCI and PCI-Express cards to satisfy all automation and equipment monitoring needs. Equipped with isolation protection, Advantech's PCI and PCI-Express cards are ideal for demanding industrial environments.

Suitable for Multiple Applications



Factory Automation



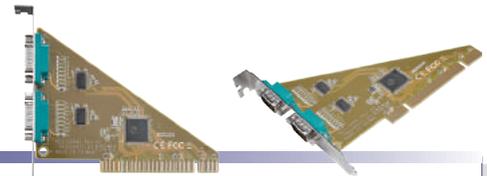
Machine Automation



Distributed Monitoring and Control Systems

PCI-1604L NEW

2-port RS-232 Economical PCI Communication Card



Features

- Universal PCI v2.2
- Speeds up to 921.6 kbps for extremely fast data transmission
- 2 x RS-232 ports
- Supported operating systems: Windows XP/7/8/10, and Linux.
- Level 4 ESD protection
- Operating Temperature -20 ~ 60°C

Ordering Information

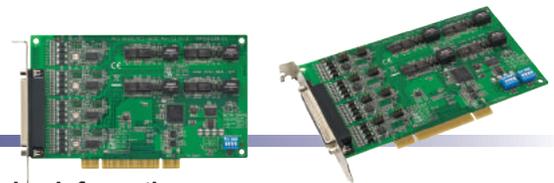
- PCI-1604L-AE 2-port RS-232 PCI Comm. Card

OS Support



PCI-1610/1612

4-Port RS-232 or RS-232/422/485 PCI Communication Card



Features

- Universal PCI v2.2
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 4 x RS-232 or RS-232/422/485 ports
- Supported operating systems: Windows XP/7/8/10, and Linux.
- XR17V354 UART with 256-byte FIFOs
- 1KV Surge protection / 3KV Isolation protection

Ordering Information

- PCI-1610B-DE 4-port RS-232 PCI Comm. Card w/Surge
- PCI-1610C-CE 4-port RS-232 PCI Comm. Card w/ Surge & Isolation Protection
- PCI-1612B-DE 4-port RS-232/422/485 PCI Comm. Card w/Surge
- PCI-1612C-CE 4-port RS-232/422/485 PCI Comm. Card w/Surge & Isolation

Note: this series includes cable OPT4A.

OS Support



Communication Cards

PCI-1620/1622

8-Port RS-232 or RS-232/422/485 PCI Communication Card



Features

- Universal PCI v2.2
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 8 x RS-232 or RS- 232/422/485 ports
- Supported operating systems: Windows XP/7/8/10, and Linux.
- XR17V358 UART with 256-byte FIFOs
- 1KV Surge protection / 3KV Isolation protection

OS Support Windows 10 Windows 8.1 Windows 8

Ordering Information

- PCI-1620A-DE 8-port RS-232 PCI Comm. Card
- PCI-1622B-DE 8-port RS-232/422/485 PCI Comm. Card w/ Surge Protection
- PCI-1622C-DE 8-port RS-232/422/485 PCI Comm. Card w/ Surge & Isolation Protection



PCIE-1602/1604

2-Port RS-232 or RS-232/422/485 PCIe Communication Card



Features

- PCI Express bus 2.0 compliant
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 2 x RS-232 or RS- 232/422/485 ports
- Supported operating systems: Windows 7/8/10, and Linux.
- XR17V352 UART with 256-byte FIFOs
- 1KV Surge protection / 3KV Isolation protection

OS Support Windows 10 Windows 8.1 Windows 8

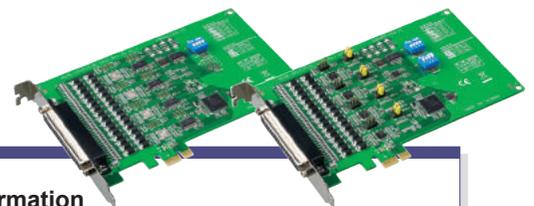
Ordering Information

- PCIE-1602B-AE 2-port RS-232/422/485 PCI Express Comm. Card w/Surge
- PCIE-1602C-AE 2-port RS-232/422/485 PCI Express Comm. Card w/Surge & Isolation
- PCIE-1604B-AE 2-port RS-232 PCI Express Comm. Card w/Surge
- PCIE-1604C-AE 2-port RS-232 PCI Express Comm. Card w/Surge & Isolation



PCIE-1610/1612

4-Port RS-232 or RS-232/422/485 PCIe Communication Card



Features

- PCI Express bus 2.0 compliant
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 4 x RS-232 or RS- 232/422/485 ports
- Supported operating systems: Windows XP/7/8/10, and Linux.
- XR17V354 UART with 256-byte FIFOs
- 1KV Surge protection / 3KV Isolation protection

OS Support Windows 10 Windows 8.1 Windows 8

Ordering Information

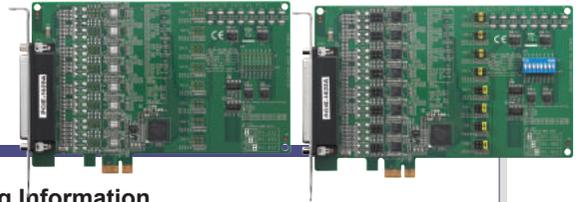
- PCIE-1610B-AE 4-port RS-232 PCI Express Comm. Card w/Surge
- PCIE-1612B-AE 4-port RS-232/422/485 PCI Express Comm. Card w/Surge
- PCIE-1612C-AE 4-port RS-232/422/485 PCI Express Comm. Card w/Surge & Isolation

Note: this series includes cable OPT4A.



PCIE-1620/1622

8-Port RS-232 or RS-232/422/485 PCIe Communication Card



Features

- PCI Express bus 2.0 compliant
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 8 x RS-232 or RS- 232/422/485 ports
- Supported operating systems: Windows XP/7/8/10, and Linux.
- XR17V358 UART with 256-byte FIFOs
- 1KV Surge protection / 3KV Isolation protection

Ordering Information

- PCIE-1620A-BE 8-port RS-232 PCI-express Comm. Card
- PCIE-1622B-BE 8-port RS-232/422/485 PCI-express Comm. Card w/ Surge Protection
- PCIE-1622C-AE 8-port RS-232/422/485 PCI-express Comm. Card w/ Isolation Protection
- OPT8C-AE DB62 0x1 to DB25 x8 Cable, 1m
- OPT8H-AE DB62 x1 to DB9 x8 Cable, 1m
- OPT8J-AE DB78 x1 to DB9 x8 Cable, 1m

OS Support  Windows 10  Windows 8.1  Windows 8



PCI-1680U

2-Port CAN-Bus Universal PCI Card with Isolation Protection



Features

- Operates two separate CAN networks simultaneously
- High speed transmission up to 1 Mbps
- Optical isolation protection of 2.5KV
- Windows DLL library and examples included
- I/O address automatically assigned by PCI PnP
- Supports 32-bit/64-bit Windows XP/7/8/10 and Linux

Ordering Information

- PCI-1680U-BE 2-port CAN Uni-PCI COMM Card with Isolation

PCIE-1680

2-Port CAN-Bus PCIe Card with Isolation Protection



Features

- PCIe bus specification 1.2 compliant
- Operates two separate CAN networks at the same time
- High speed transmission up to 1 Mbps
- Optical isolation protection of 2.5KV
- Transmit/Receive status LED indicators
- Windows DLL library and examples included
- Supports 32-bit/64-bit Windows XP/7/8/10 and Linux

Ordering Information

- PCIE-1680-AE 2-Port CAN-Bus PCIe card with Isolation Protection

Enhance Embedded Systems with PC/104 and PCI-104 Modules

PC/104 & PCI-104 Modules



Advantech Offers Comprehensive Range of DAQ and Serial Communication Cards

Embedded computers are at the heart of many industrial, transportation, military, and aerospace applications. Due to their compact size, expansion capabilities, reliability, anti-vibration, wide operating temperature range and high-speed throughput, PC/104 and PCI-104 are the standard form factors used in embedded computing platforms. Advantech provides a wide variety of PC/104 and PCI-104 module options, such as isolated digital I/O, analog I/O, relay, counter, and multifunction cards.

Key Features

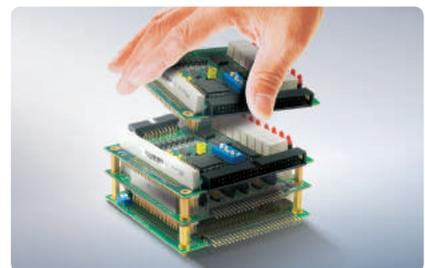


Anti-Vibration

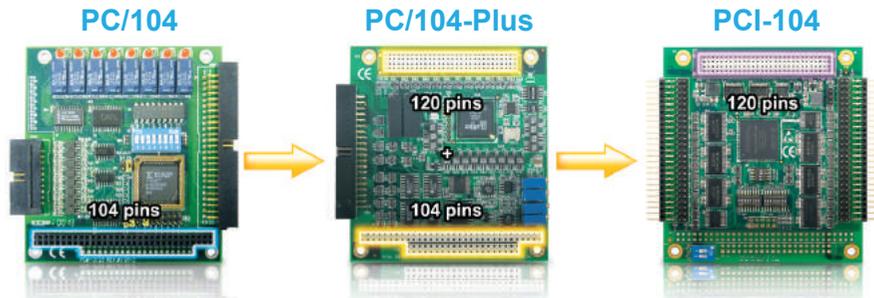
PC/104 and PCI-104 products support 104 pin, 120 pin, or both, for signal and data transmission. Each pin mates with its corresponding connector so firmly that data integrity is assured, along with a high level of vibration resistance.

Stackable for Easy Expansion

The PC/104 and PCI-104 family supports standard ISA/PCI interfaces, uses open architectures, and is easy to expand upon. The consistent form factor allows different modules to be stacked on top of one another, providing the versatility to easily expand I/O and functionality.



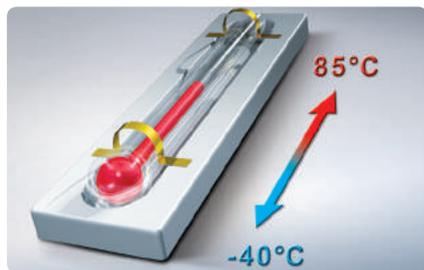
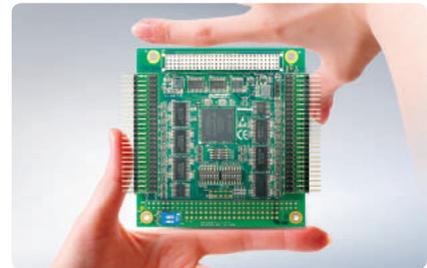
Form Factors



Form Factor	PC/104	PC/104-Plus	PCI-104
Release Year	1992	1997	2003
Connector	ISA (AT and XT)	ISA and PCI	PCI
Current Version	2.5	2.0	1.0

Compact Size

With standard dimensions of 96 x 90 mm (L x H), the design of the PC/104 and PCI-104 takes less space than traditional I/O cards and is also a perfect solution for compact embedded systems.



Wide Operating Temperature

Unlike traditional IPCs, the PC/104 and PCI-104 form factors are capable of operating in temperatures from -40~85 °C (-40~185 °F) for reliable operation in harsh environments.

Fast Read/Write Speeds

While PCI-104 products use the standard PC/104 form factor, they have dropped the ISA interface, providing more bandwidth for data transmission and allowing faster read/ write speeds than traditional ISA cards.



PC/104 & PCI-104 Modules

PCI-104 Form Factors

PCM-3730I

32-ch Isolated Digital I/O PCI-104 Module



Features

- 16-ch Isolated DI and 16-ch Isolated DO
- 2,500 V_{DC} Isolation Protection
- Supports DI Interrupt
- 70 V_{DC} over voltage protection on input channels
- Isolated DO current: max. 250 mA / channel
max. 200 mA / channel (all channel used)

Ordering Information

- PCM-3730I-AE 32-ch Isolated DI/O Module
- ADAM-3920-AE 20-pin DIN-rail Wiring Board
- PCL-10120-2E 20-pin Flat Cable, 1 m/ 2m

OS Support Windows 10 Windows 8.1 Windows 8



PCM-3753I

96-ch Digital I/O PCI-104 Module



Features

- Supports 5V/TTL and dry contact
- Keeps DIO port configuration and DO state after system reset
- Supports DI interrupt, Pattern Match and Change of States
- Wide operating temperature range (-20 ~ 70°C, -4 ~ 158°F)

Ordering Information

- PCM-3753I -AE 96-ch DI/O Module
- PCL-10150-1.2E 50-pin Flat Cable, 1.2 m
- ADAM-3950-AE 50-pin DIN-rail Flat Cable Wiring Board
- PCLD-782B-AE 24-ch Isolated DI Board with 20-pin & 50-pin Flat Cables
- PCLD-785B-AE 24-ch Relay Board with 20-pin & 50-pin Flat Cables

OS Support Windows 10 Windows 8.1 Windows 8



PCM-3761I

8-ch Relay and 8-ch Isolated Digital Input PCI-104 Module



Features

- Relay Type: 8 x Form C (SPDT)
- Contact Rating: 0.25 A @ 250 V_{AC}, 2 A @ 30 V_{DC}
- 2,500 V_{DC} isolation protection for DI
- 70 V_{DC} over voltage protection for DI

Ordering Information

- PCM-3761I -AE 8-ch Relay and 8-ch Isolated DI Module
- ADAM-3920-AE 20-pin DIN-rail Flat Cable Wiring Board
- ADAM-3950-AE 50-pin DIN-rail Flat Cable Wiring Board
- PCL-10150-1.2E 50-pin Flat Cable, 1.2 m
- PCL-10120-2E 20-pin Flat Cable, 1 m/ 2 m

OS Support Windows 10 Windows 8.1 Windows 8



PCM-3810I

250 kS/s, 12-bit, 16-ch Multifunction PCI-104 Module



Features

- 16-ch single-ended / 8-ch differential AI: 12-bit, 250 kS/s
- 2-ch AO: 12-bit, 250 kS/s
- 5V/TTL DIO: 16 input / output
- 3-ch counter: 24-bit, up to 10 MHz
- Event counting, frequency and pulse width measure, pulse train and PWM output

Ordering Information

- PCM-3810I-AE 250 kS/s, 12-bit Multifunction Module
- PCL-10150-1.2E 50-pin Flat Cable, 1.2 m
- ADAM-3950-AE 50-pin DIN-rail Flat Cable Wiring Board

OS Support

 Windows 10  Windows 8.1  Windows 8



PCM-3612I

4-port RS-232/422/485 PCI-104 Module



Features

- Automatic RS-485 data flow control
- LED indicators: TX, RX
- Powerful and easy-to-use utility (ICOM Tools)

Ordering Information

- PCM-3612I-AE 4-port RS-232/422/485 PCI-104 Module

OS Support

 Windows 10  Windows 8.1  Windows 8



PC/104 & PCI-104 Modules

PCI-104 Form Factors

PCM-3724

48-ch Digital I/O PC/104 Module



Features

- Supports 5V/TTL
- Supports DI Interrupt

Ordering Information

- PCM-3724-BE 48-ch Digital I/O Module
- PCL-10150-1.2E 50-pin Flat Cable, 1.2 m
- ADAM-3950-AE 50-pin DIN-rail Flat Cable Wiring Board
- PCLD-782B-AE 24-ch Isolated DI Board with 20-pin & 50-pin Flat Cable
- PCLD-785B-AE 24-ch Relay Board with 20-pin & 50-pin Flat Cable

OS Support Windows 10 Windows 8.1 Windows 8



PCM-3730

16-ch Isolated Digital I/O PC/104 Module



Features

- 8-ch Isolated DI and 8-ch Isolated DO
- 16-ch 5V/TTL DI and 16-ch 5V/TTL DO
- 2,500 V_{DC} isolation protection for isolated DIO
- Supports DI Interrupt
- Isolated DO current: max. 200 mA / channel
max. 150 mA / channel (all channel used)

Ordering Information

- PCM-3730-BE 16-ch Isolated Digital I/O Module
- PCL-10120-2E 20-pin Flat Cable, 1 m/2 m
- ADAM-3920-AE 20-pin DIN-rail Flat Cable Wiring Board
- PCLD-785B-AE 16-ch Relay Board with 20-pin Flat Cable
- PCLD-885-AE 16-ch Power Relay Board with 20-pin & 50-pin Flat Cable

OS Support Windows 10 Windows 8.1 Windows 8



PCM-3780

2-ch Counter/Timer with 24-ch Digital I/O PC/104 Module



Features

- 2-ch counter: 16-bit, up to 20 MHz
- 5V/TTL DIO: 24 input / output
- Supports DI Interrupt

Ordering Information

- PCM-3780-AE 2-ch Counter and 24-ch Digital I/O Module
- PCL-10120-1E 20-pin Flat Cable, 1 m
- PCL-10150-1.2E 50-pin Flat Cable, 1.2 m
- ADAM-3920-AE 20-pin DIN-rail Flat Cable Wiring Board
- ADAM-3950-AE 50-pin DIN-rail Flat Cable Wiring Board

OS Support Windows 10 Windows 8.1 Windows 8



PCM-3718H/HO/HG

100 kS/s, 12-bit, 16-ch PC/104 Multifunction Module



Features

- 16-ch single-ended / 8-ch differential AI: 12-bit, 100 kS/s
- 1-ch AO: 12-bit, 100 kS/s (PCM-3718HO only)
- 5V/TTL DIO: 16 input / output
- 1-ch counter: 16-bit (PCM-3718HO only, for event counting, frequency measure, pulse train output)

Ordering Information

- PCM-3718H-CE 12-bit Multifunction Module
- PCM-3718HG-CE 12-bit High-gain Multifunction Module
- PCM-3718HO-BE 12-bit Multifunction with AO Module
- ADAM-3920-AE 20-pin DIN-rail Flat Cable Wiring Board
- PCLD-780-BE Screw Terminal Board with Two 20-pin Flat Cables
- PCL-10120-2E 20-pin Flat Cable, 1 m / 2 m

OS Support Windows 10 Windows 8.1 Windows 8



PCM-3725

8-ch Relay and 8-ch Isolated Digital Input PC/104 Module



Features

- Relay Type: 8 x Form C (SPDT)
- Relay contact rating: 30 V_{DC} @ 1.5 A
- 2,500 V_{DC} isolation protection for DI
- 70 V_{DC} over voltage protection for DI

Ordering Information

- PCM-3725-BE 8-ch Relay and 8-ch Isolated DI Module
- PCL-10120-2E 20-pin Flat Cable, 1 m / 2m
- PCL-10150-1.2E 50-pin Flat Cable, 1.2 m
- ADAM-3920-AE 20-pin DIN-rail Flat Cable Wiring Board
- ADAM-3950-AE 50-pin DIN-rail Flat Cable Wiring Board

OS Support Windows 10 Windows 8.1 Windows 8



PCM-3614

4-port RS-422/485 High-speed PC/104 Module



Features

- Automatic RS-485 data flow control
- Shared IRQ settings for each ports
- LED indicators: TX, RX
- Powerful and easy-to-use utility (ICOM Tools)

Ordering Information

- PCM-3614-AE 4-port RS-422/485 High-speed Module

OS Support Windows 10 Windows 8.1 Windows 8



New Generation of CompactPCI



Reliable PC-based Computing Platform for Mission-critical Applications

This industrial CompactPCI features front-end access, high shock and vibration tolerance, automatic cooling system, fault resilience, and hot swap capability. Advantech leverages 3U CompactPCI as the industrial high-end computing platform, providing Pentium® 4-grade CPU modules, 8-slot chassis, high-speed IO, and serial communication modules. Advantech is a one-stop provider for industrial CompactPCI solutions.

Selection Guide CompactPCI



Model	MIC-3106-00-AE	MIC-3111-00-AE	MIC-3121-00-AE
Power Type	ATX		
Input Voltage	100-240VAC		200-240VAC
Wattage	180W		300W
System Slot		1, on the right	
Peripheral Slot	2 Slots	7 Slots	7 Slots
PCI Bus	32-bit 33MHz	32-bit 33MHz	32-bit 33MHz
Dimensions (W x H x D mm)	134 x 177 x 238	234 x 177 x 258	482 x 177 x 310
Weight (kg)	4.33	6.14	9.65
Temperature	Operating	0 ~ 50°C	
	Non-Operating	-20 ~ 60°C	
Vibration (5 ~ 500 Hz)	Operating	2Grms (without HDD)	
	Non-Operating	2G	
Shock (11ms)	Operating	10G	
	Non-Operating	30G	
Regulatory Compliance	CE, FCC, CCC, UL, RoHS, BSMI PICMG 2.0 Rev. 3.0		

CompactPCI CPU Options

		L1	L2	H1	H2
Processor	CPU	Intel Atom N455, 1.66GHz	Intel Atom D525, 1.8GHz	Intel 3rd Gen. Core i3-3217UE, 1.6GHz	Intel 3rd Gen. Core i7-3517UE, 1.7 GHz
	Memory	2GB On board	2GB On board	4GB On board	4GB On board
	Storage	1 x CompactFlash Type II 1 x 2.5" SATA HDD	1 x CompactFlash Type II 1 x 2.5" SATA HDD	1 x CFast 1 x 2.5" SATA HDD	1 x CFast 1 x 2.5" SATA HDD
Front I/O	VGA	1 x DB15 port	1 x DB15 port	1 x DB15 port	1 x DB15 port
	Ethernet	2 x 10/100/1000 Mbps, RJ45 connector	2 x 10/100/1000 Mbps, RJ45 connector	2 x 10/100/1000 Mbps, RJ45 connector	2 x 10/100/1000 Mbps, RJ45 connector
	USB 2.0	3 x Type A	3 x Type A	2 x Type A	2 x Type A
	Serial	2 x RS-232, DB9 connector	2 x RS-232, DB9 connector	2 x RS-232, RJ45 connector	2 x RS-232, RJ45 connector
	PS/2	1	1	1	1

CompactPCI



Category			CPCI			
Model			MIC-3716/3-AE	MIC-3714/3-AE	MIC-3723/3-AE	MIC-3720-AE
Analog Input	General Spec.	Resolution (bit)	16	12	-	-
		Channels	16SE/8 Diff	4SE	-	-
		FIFO (samples)	1024	32768	-	-
		Sampling Rate (S/s)	250 K	30 M	-	-
	Input Ranges	Unipolar Inputs (V)	0~10, 0~5, 0~2.5, 0~1.25	-	-	-
		Bipolar Inputs (V)	±10, 5, 2.5, 1.25, 0.625	±5, 2.5, 1, 0.5	-	-
Configurable Per-Channel		✓	✓	-	-	
Analog Output	Resolution (bit)		16	-	16	12
	Channels		2	-	8	4
	FIFO (sample)		-	-	-	-
	Output Range (V)		0~5, 0~10, ±5, ±10	-	±10, 0~20mA, 4~20mA	0~5, 0~10, ±5, ±10, 0~20mA, 4~20mA
	Output Rate		Static update	-	Static update	Static update
	DMA Transfer		-	-	-	-
Digital I/O	Input Channels		16	-	16 (shared)	-
	Output Channels		-	-	-	-
DAQNavii Driver	Windows 10/ 8/ 7		✓	✓	✓	✓
	Linux		✓	✓	-	-
	LabVIEW Driver		✓	✓	✓	✓



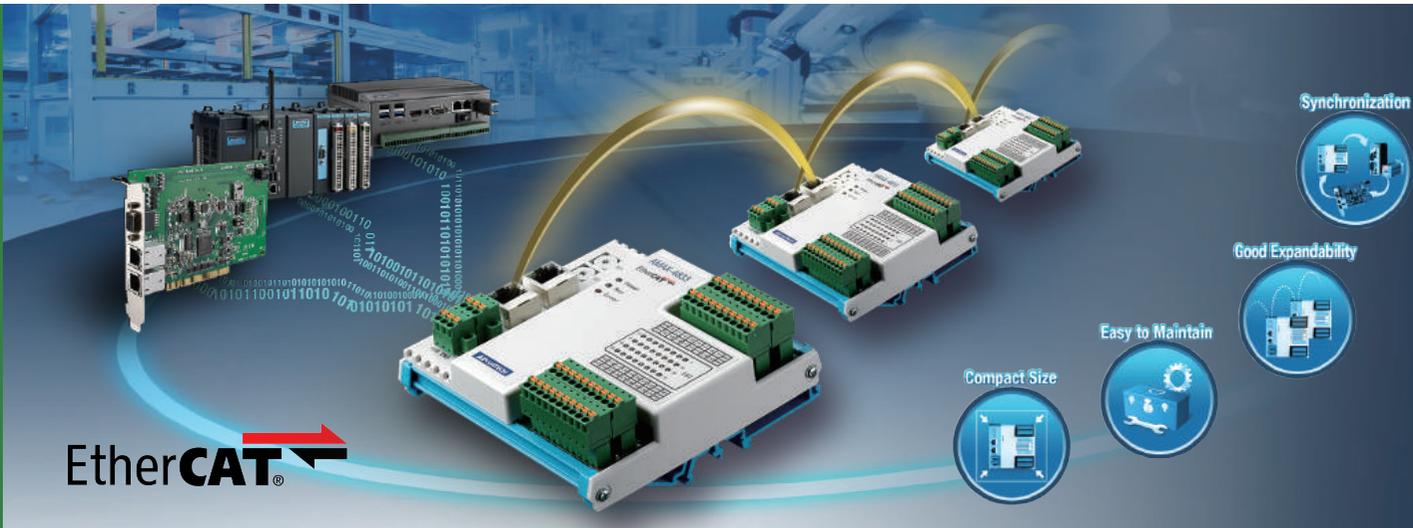
Category		CPCI	
Model		MIC-3612/3-BE	MIC-3680/3-AE
Number of Ports		4	2
Communication Interfaces	RS-232	✓	-
	RS-422	✓	-
	RS-485	✓	-
	CAN	-	✓
Protection	ESD (V _{DC})	-	-
	Isolation (V _{DC})	-	2,500
Cable Connector Type		DB9 Male	-



Category			CPCI				
Model			MIC-3753/3-A1E	MIC-3756-BE	MIC-3758/3-AE	MIC-3761/3-AE	MIC-3780/3-A1E
TTL DI/O	Input Channels		72	-	-	-	8
	Output Channels		(shared)	-	-	-	8
	Output Channel	Sink Current	24mA@0.44V	-	-	-	24mA@0.5V
		Source Current	24mA@3.76V	-	-	-	15mA@2.4V
Isolated DI/O	Input	Channels	-	32 (sink)	64	8 (sink)	-
		Isolation Voltage (V _{DC})	-	2,500	2,500	3750	-
		Input Range	-	10 ~ 50	5 ~ 25	5 ~ 50	-
	Output	Channels	-	32 (sink)	64	4 x FormA 4 x FormC	-
		Isolation Voltage (V _{DC})	-	2,500	2,500	2,500	-
		Output Range (V _{DC})	-	5 ~ 40	5 ~ 40	3A@250VAC	-
		Max. Sink Current	-	200mA	90mA	3A@24VDC	-

Distributed Control System with EtherCAT Remote I/O Modules

EtherCAT Remote I/O Module



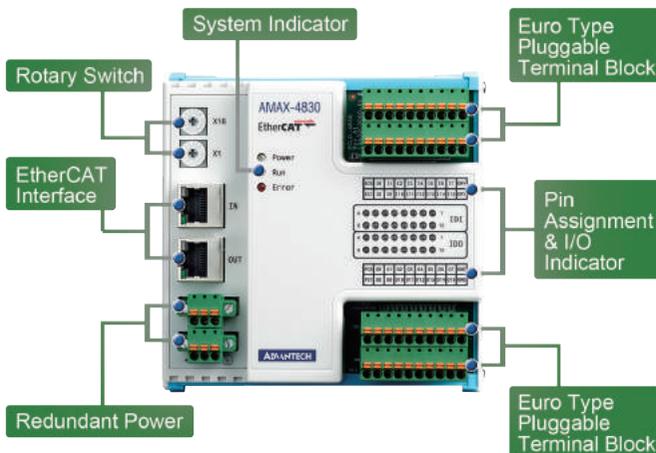
EtherCAT Slave I/O Modules for Machine Automation Solutions

The AMAX-4800 series comprises industrial EtherCAT slave modules equipped with the EtherCAT protocol. The compact size and integrated DIN-rail mounting kit ensure easy installation in cabinets. Euro type pluggable terminal blocks and LED indicators facilitate system setup and maintenance. All modules are protected by an isolation circuit for demanding industrial applications.

AMAX-4800 Series NEW

More Features

- Suitable for EtherCAT networks
- Supports EtherCAT Distributed Clock (DC) mode and oSyncManager mode
- Wide input and output voltage range
- Isolation protection to 2500 V_{DC}



Specifications	
Interface	EtherCAT
Analog Input	Resolution : 16 bits Voltage input range : 0 ~ 10 V, ±10 V Common-mode voltage range : ±275 V Measuring error : < ±0.1% Isolation protection : 2,500 V _{DC}
Analog Output	Resolution : 16 bits Voltage output range : 0 ~ 5 V, 0 ~ 10 V, ±5 V, ±10 V Current output range : 0 ~ 20 mA, 4 ~ 20 mA Load : > 1 kΩ (voltage output); < 625 Ω (current output) Output error : < ±0.1% Isolation protection : 2,500 V _{DC}
Isolated Digital Input	Logic 0 : 3 V max. Logic 1 : 10 V min. (30 V max.) Protection : 2,500 V _{DC}
Isolated Digital Output	Output voltage range : 5 ~ 40 V _{DC} Output Current : 350mA/ch (sink) @ 25°C Protection : 2,500 V _{DC}
PhotoMOS Relay Output	Relay type : PhotoMOS SPST(Form A) Load Voltage : 60V (AC peak or DC) Load current : 1.2A
Relay Output	Relay Type : Form A Contact Rating (resistive) : 2A@250V _{AC} , 2A@30V _{DC} Max. Switching Power : 500VA, 60W
Dimensions	120 mm x 120 mm x 40 mm 168 mm x 120 mm x 40 mm (for AMAX-4855/4856/4862)
Operating Temperature	-20 ~ 60°C (32 ~ 140°F)

Selection Guide



Category			EtherCAT Slave			
Model			AMAX-4830-AE	AMAX-4833-AE	AMAX-4834-AE	AMAX-4856-AE
Analog Input	Input	Channels	16	32	-	32
		Input Range	Logic 0: 3 V max. Logic 1: 10 V min. (30 V max.)	Logic 0: 3 V max. Logic 1: 10 V min. (30 V max.)	-	Logic 0: 3 V max. Logic 1: 10 V min. (30 V max.)
		Isolation Protection	2500V _{dc}	2500V _{dc}	2500V _{dc}	2500V _{dc}
	Output	Channels	16	-	32	32
		Load Voltage	5 ~ 40 V _{dc}	-	5 ~ 40 V _{dc}	5 ~ 40 V _{dc}
		Load Current	350mA/ch (sink) @ 25°C 250mA/ch (sink) @ 60°C	-	350mA/ch (sink) @ 25°C 250mA/ch (sink) @ 60°C	350mA/ch (sink) @ 25°C 250mA/ch (sink) @ 60°C
		Isolation Protection	2500V _{dc}	-	2500V _{dc}	2500V _{dc}
Opto-Isolator Response Time	100us	-	100us	100us		
Communication Cycle Time			100us	100us	100us	100us
Dimensions			120 mm x 120 mm x 40 mm	120 mm x 120 mm x 40 mm	120 mm x 120 mm x 40 mm	168 mm x 120 mm x 40 mm



Category			EtherCAT Slave			
Model			AMAX-4850-AE	AMAX-4855-AE	AMAX-4860-AE	AMAX-4862-AE
Isolated Digital Input	Channels	16	32	8	16	
	Input Range	Logic 0: 3 V max. Logic 1: 10 V min. (30 V max.)	Logic 0: 3 V max. Logic 1: 10 V min. (30 V max.)	Logic 0: 3 V max. Logic 1: 10 V min. (30 V max.)	Logic 0: 3 V max. Logic 1: 10 V min. (30 V max.)	
	Isolation Protection	2500V _{dc}	2500V _{dc}	2500V _{dc}	2500V _{dc}	
Analog Input	"PhotoMOS SPST (Form A)"	Channels	8	16	-	-
		Load Voltage	60V (AC peak or DC)	60V (AC peak or DC)	-	-
		Load Current	1.2A/ch	1.2A/ch	-	-
		Isolation Protection	1500V _{dc}	1500V _{dc}	-	-
		Response Time	Turn-on : 1ms typical Turn-off : 0.6ms typical	Turn-on : 1ms typical Turn-off : 0.6ms typical	-	-
	"Relay Output Form A"	Channels	-	-	8	16
		"Contact Rating (resistive) "	-	-	2A@250V _{ac} , 2A@30V _{dc}	2A@250V _{ac} , 2A@30V _{dc}
		Max. Switching Power	-	-	500VA , 60W	500VA , 60W
		Max. Switching Voltage	-	-	270V _{ac} , 125V _{dc}	270V _{ac} , 125V _{dc}
		Response Time	-	-	Operating Time : Max. 10ms Releasing Time : Max. 5ms	Operating Time : Max. 10ms Releasing Time : Max. 5ms
Communication Cycle Time			100us	100us	100us	100us
Dimensions			120 mm x 120 mm x 40 mm	168 mm x 120 mm x 40 mm	120 mm x 120 mm x 40 mm	168 mm x 120 mm x 40 mm



Category			EtherCAT Slave	
Model			AMAX-4817-AE	AMAX-4820-AE
Analog Input	Analog Input	Channels	8	-
		Resolution	16 bits	-
		Input Range	0 ~ 10 V, ±10 V	-
		Common-mode Voltage Range	±275 V	-
		Measuring Error	< ±0.1%	-
		Isolation Protection	2500V _{dc}	-
	Analog Output	Channels	-	4
		Resolution	-	16 bits
		Voltage Output Range	-	0 ~ 5V, 0 ~ 10V, ±5V, ±10V
		Current Output Range	-	0 ~ 20 mA, 4 ~ 20 mA
		Load	-	> 1 k Ω (voltage output) < 625 Ω (current output)
		Output Error	-	< ±0.1%
		Isolation Protection	-	2500V _{dc}
Communication Cycle Time			100us	100us
Dimensions			120 mm x 120 mm x 40 mm	120 mm x 120 mm x 40 mm

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