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NI PCI-6284

18-Bit, 500 kS/s (Multichannel), 625 kS/s (1-Channel), 32 Analog Inputs

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48 digital I/O; two 32-bit, 80 MHz counters; analog and digital triggering

Correlated DIO (32 clocked lines, 10 MHz)

Programmable 40 kHz lowpass filters

NI-MCal calibration technology for increased measurement accuracy

NI-DAQmx driver software and NI LabVIEW SignalExpress LE interactive data-logging software

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The NI PCI-6284 is a high-accuracy multifunction M Series data acquisition (DAQ) board optimized for 18-bit analog input accuracy. This resolution is equivalent to 5½ digits for DC measurements. To ensure accuracy, the NI-PGIA 2 amplifier technology is optimized for high linearity and fast settling to 18 bits, and programmable lowpass filters reject high-frequency noise and prevent aliasing.

High-accuracy M Series devices feature programmable offsets and references on the analog output channels to obtain maximum 16-bit resolution on any custom signal. These devices are ideal for applications including device test and characterization, and for sensor and signal measurements requiring instrument-class accuracy. To download the certification certificate for a particular DAQ device, visit ni.com/calibration, select "Generate a copy of your current calibration online," and enter the serial number of the DAQ device.

Driver Software
M Series devices work with multiple OSs using three driver software options: NI-DAQmx, NI-DAQmx Base, and the Measurement Hardware DDK. Browse the information in the Resources tab to learn more about driver software or download a driver. M Series devices are not compatible with the Traditional NI-DAQ (Legacy) driver.

Application Development Environments
With NI LabVIEW, you can create custom data acquisition applications with the ease of graphical programming and power of more than 500 analysis functions and advanced programming tools. LabVIEW Full and Professional Development Systems include LabVIEW SignalExpress for interactive data logging. M Series DAQ devices are compatible with the following versions (or later) of NI application software – LabVIEW 7.x, LabWindows™/CVI 7.x, or Measurement Studio 7.x; LabVIEW SignalExpress 1.x; or LabVIEW with the LabVIEW Real-Time Module 7.1. M Series DAQ devices are also compatible with Visual Studio .NET, ANSI C/C++, and Visual Basic 6.0.

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Specifications Documents

Specifications 🗗

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Specifications Summary

General

Product Name	PCI-6284
Product Family	Multifunction Data Acquisition
Form Factor	PCI
Part Number	779110-01
Operating System/Target	Real-Time , Linux , Mac OS , Windows
LabVIEW RT Support	Yes
DAQ Product Family	M Series
Measurement Type	Frequency , Quadrature encoder , Digital , Voltage
Isolation Type	None
RoHS Compliant	Yes
Signal Conditioning	Low-pass filtering

Analog Input

Channels	32 , 16
Single-Ended Channels	32
Differential Channels	16
Resolution	18 bits
Sample Rate	625 kS/s
Max Voltage	10 V
Maximum Voltage Range	-10 V - 10 V
Maximum Voltage Range Accuracy	980 µV
Maximum Voltage Range Sensitivity	24 µV
Minimum Voltage Range	-100 mV - 100 mV
Minimum Voltage Range Accuracy	28 µV
Minimum Voltage Range Sensitivity	0.8 µV
Number of Ranges	7
Simultaneous Sampling	No
On-Board Memory	4095 samples

Analog Output

Channels	0

Digital I/O

Bidirectional Channels	48
Input-Only Channels	0
Output-Only Channels	0
Timing	Software , Hardware
Clocked Lines	32
Maximum Clock Rate	10 MHz
Logic Levels	TTL
Input Current Flow	Sinking , Sourcing
Output Current Flow	Sourcing , Sinking
Programmable Input Filters	Yes
Supports Programmable Power-Up States?	Yes
Current Drive Single	24 mA
Current Drive All	1 A
Watchdog Timer	No
Supports Handshaking I/O?	No
Supports Pattern I/O?	Yes
Maximum Input Range	0 V - 5 V
Maximum Output Range	0 V - 5 V

Counter/Timers

Counters	2
Number of DMA Channels	2
Buffered Operations	Yes
Debouncing/Glitch Removal	Yes
GPS Synchronization	No
Maximum Range	0 V - 5 V
Max Source Frequency	80 MHz
Pulse Generation	Yes
Resolution	32 bits
Timebase Stability	50 ppm
Logic Levels	TTL

Physical Specifications

Length	15.5 cm
Width	9.7 cm
I/O Connector	68-pin VHDCI female

Timing/Triggering/Synchronization

Triggering	Digital , Analog
Synchronization Bus (RTSI)	Yes

NI PCI-6284 Complete Package

Each NI PCI-6284 requires:

2 Connector Block   2 Cables   **NI PCI-6284**   Software
Roll over icons above to learn why you need each item in the package.

NI PCI-6284 and Accessories

Hardware Subtotal: $ 2,831

NI PCI-6284 - *779110-01*   Qty 1 $ 1,915 each

Required Accessories
Connector Block - Screw Terminal
SCB-68A - *782536-01*   Qty 2 $ 319 each
Cables - Shielded
SHC68-68-EPM Cable (2m) - *192061-02*   Qty 2 $ 139 each

Change Accessories   Learn about all compatible accessories and get recommendations based on your application needs.

Optional Accessories Show

Software

Software Subtotal: $ 0

Note : You should only purchase this device without software if you already own compatible application software.
[View Full List]

☐ **LabVIEW Full Development System for Windows** (English) , 1 year SSP - 776670-35   Qty 0 $ 2,699 each

☐ **LabVIEW Application Builder for Windows** - 776675-35   Qty 0 $ 999 each

Change Software   Learn about all compatible software and get recommendations based on your needs.

Estimated Shipping Days: 5 - 10   **Package Price: $ 2,831**

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Extended Warranties

National Instruments designs and manufactures all products to minimize failures, however unexpected failures can still occur. Extended warranties provide a fixed economical price at the time of system purchase, covering any repair costs for up to three years. In addition, they offer the following benefits:

Significant cost savings compared to individual repair incidents

Fault location, diagnostics, and repair by NI any time the system product fails

All parts and labor costs covered as well as any adjustments needed to restore the hardware to manufacturing specifications

For more information about your warranty options:

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Calibration

NI recognizes the need to maintain properly calibrated devices for high-accuracy measurements. NI provides manual calibration procedures, services to recalibrate your products, and automated calibration software to calibrate many NI measurement products.

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Training

NI training is the fastest, most certain route to productivity with NI tools and successful application development.

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Repair Services

Return your registered product under warranty at no additional labor and parts cost. NI offers fault location, diagnostics, and repair any time the system fails as well as any adjustments needed to restore the hardware to manufacturing specifications.

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Contact NI to obtain a Return Material Authorization (RMA) form and shipping instructions.

View your RMA support request status online.

Register your product.

Technical Support

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Manuals (6)
Dimensional Drawings
Product Certifications

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