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Find the *National Instruments NI 9375* at our website: ***Click HERE***

For user manuals and dimensional drawings, visit the product page resources tab on ni.com.

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NI 9375

24 V, 16 Ch Digital Input, 16 Ch Digital Output Module





- 16 channels, 7 µs sinking digital inputs
- 16 channels, 500 µs sourcing digital outputs
- Compatibility with 24 V logic levels
- 6 V to 30 V output range (based on supplied voltage)
- 60 VDC, CAT I (D-SUB) or 250 Vrms, CAT II (spring terminal) isolation
- -40 °C to 70 °C operating, 5 g vibration, 50 g shock

Overview

The NI 9375 is a combination digital input, digital output module that works with NI CompactDAQ or CompactRIO. Each of the 16 dedicated digital input lines is compatible with 24 V logic levels. All of the 16 dedicated digital output lines are compatible with 6 V to 30 V signals, based on the external power supply. Although the digital input and digital output lines share the same timing engine, note that the digital output line has a maximum propagation delay of 500 µs (see manual for more details). The NI 9375 offers 60 V of isolation between the input and output banks and features 1,000 Vrms withstand isolation from channel to earth ground. It works with industrial logic levels and signals for direct connection to a wide array of industrial switches, transducers, and other devices.

Recommended Accessories
-NI 9923 or other 37-pin D-SUB connector (for D-SUB variant)
-NI 9940 backshell for 36-position connector block (for spring-terminal variant)

Box Contents
-1 NI 9375 C Series module
-1 NI 9375 Operating Instructions and Specifications manual
-1 NI 9974 36-position spring-terminal connector block (for spring-terminal variant)

Back to Top

Comparison Tables

Product Name	Signal Levels	Direction	Channels	Update Rate	Connectivity
NI 9375	24 V	Sinking Input, Sourcing Output	16 In, 16 Out	7 µs In, 500 µs Out	Spring Terminal, 37-Pin D-SUB
NI 9421	24 V	Sinking Input	8	100 µs	Screw Terminal, 25-Pin D-SUB
NI 9425	24 V	Sinking Input	32	7 µs	37-Pin D-SUB
NI 9472	24 V	Sourcing Output	8	100 µs	Screw Terminal
NI 9476	24 V	Sourcing Output	32	500 µs	37-Pin D-SUB

Back to Top

Application and Technology

NI C Series Overview



NI C Series modules are engineered to provide high-accuracy measurements to meet the demands of advanced DAQ and control applications. Each module contains measurement-specific signal conditioning to connect to an array of sensors and signals, bank and channel-to-channel isolation options, and support for wide temperature ranges to meet a variety of application and environmental needs all in a single rugged package. With more than 100 C Series modules for measurement, control, and communication, you can connect your applications to any sensor on any bus.

Most C Series I/O modules work with both the NI CompactDAQ and NI CompactRIO platforms. The modules are identical, and you can move them from one platform to the other with no modification.

NI CompactRIO Platform



Powered by the NI LabVIEW reconfigurable I/O (RIO) architecture, CompactRIO combines an open embedded architecture with small size, extreme ruggedness, and hot-swappable industrial I/O modules. Each system contains an FPGA for custom timing, triggering, and processing with a wide array of available modular I/O to meet any embedded application requirement.

Configure Your Complete NI CompactRIO System

NI CompactDAQ Platform



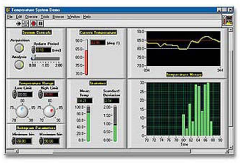
NI CompactDAQ is a portable, rugged data acquisition platform that integrates connectivity and signal conditioning into modular I/O to directly interface to any sensor or signal. Using NI CompactDAQ with LabVIEW, you can easily customize how you acquire, analyze, present, and manage your measurement data. From research to development to validation, NI provides programmable software, high-accuracy measurements, and local technical support to help ensure you meet your exact measurement application requirements.

Configure Your Complete NI CompactDAQ System

Back to Top

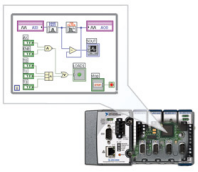
Software Recommendations

LabVIEW Professional Development System for Windows



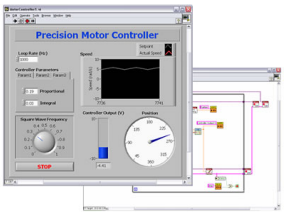
- Advanced software tools for large project development
- Automatic code generation using DAQ Assistant and Instrument I/O Assistant
- Tight integration with a wide range of hardware
- Advanced measurement analysis and digital signal processing
- Open connectivity with DLLs, ActiveX, and .NET objects
- Capability to build DLLs, executables, and MSI installers

NI LabVIEW FPGA Module



- Design FPGA applications for NI reconfigurable I/O (RIO) hardware targets
- Program with the same graphical environment used for desktop and real-time applications
- Execute control algorithms with loop rates up to 300 MHz
- Implement custom timing and triggering logic, digital protocols, and DSP algorithms
- Incorporate existing HDL code and third-party IP including Xilinx CORE Generator functions
- Included in the LabVIEW Embedded Control and Monitoring Suite

NI LabVIEW Real-Time Module



- Design deterministic real-time applications with LabVIEW graphical programming
- Download to dedicated NI or third-party hardware for reliable execution and a wide selection of I/O
- Take advantage of built-in PID control, signal processing, and analysis functions
- Automatically take advantage of multicore CPUs or set processor affinity manually
- Includes real-time OS, development and debugging support, and board support
- Purchase individually or as part of a LabVIEW suite

Back to Top

Support and Services

System Assurance Programs

NI system assurance programs are designed to make it even easier for you to own an NI system. These programs include configuration and deployment services for your NI PXI, CompactRIO, or Compact FieldPoint system. The NI Basic System Assurance Program provides a simple integration test and ensures that your system is delivered completely assembled in one box. When you configure your system with the NI Standard System Assurance Program, you can select from available NI system driver sets and application development environments to create customized, reorderable software configurations. Your system arrives fully assembled and tested in one box with your software preinstalled. When you order your system with the standard program, you also receive system-specific documentation including a bill of materials, an integration test report, a recommended maintenance plan, and frequently asked question documents. Finally, the standard program reduces the total cost of owning an NI system by providing three years of warranty coverage and calibration service. Use the online product advisors at ni.com/advisor to find a system assurance program to meet your needs.

Technical Support

Get answers to your technical questions using the following National Instruments resources.

- **Support** - Visit ni.com/support to access the NI KnowledgeBase, example programs, and tutorials or to contact our applications engineers who are located in NI sales offices around the world and speak the local language.
- **Discussion Forums** - Visit forums.ni.com for a diverse set of discussion boards on topics you care about.
- **Online Community** - Visit community.ni.com to find, contribute, or collaborate on customer-contributed technical content with users like you.

Repair

While you may never need your hardware repaired, NI understands that unexpected events may lead to necessary repairs. NI offers repair services performed by highly trained technicians who quickly return your device with the guarantee that it will perform to factory specifications. For more information, visit ni.com/repair.

Training and Certifications

The NI training and certification program delivers the fastest, most certain route to increased proficiency and productivity using NI software and hardware. Training builds the skills to more efficiently develop robust, maintainable applications, while certification validates your knowledge and ability.

- **Classroom training in cities worldwide** - the most comprehensive hands-on training taught by engineers.
- **On-site training at your facility** - an excellent option to train multiple employees at the same time.
- **Online instructor-led training** - lower-cost, remote training if classroom or on-site courses are not possible.
- **Course kits** - lowest-cost, self-paced training that you can use as reference guides.
- **Training memberships** and training credits - to buy now and schedule training later.

Visit ni.com/training for more information.

Extended Warranty

NI offers options for extending the standard product warranty to meet the life-cycle requirements of your project. In addition, because NI understands that your requirements may change, the extended warranty is flexible in length and easily renewed. For more information, visit ni.com/warranty.

OEM

NI offers design-in consulting and product integration assistance if you need NI products for OEM applications. For information about special pricing and services for OEM customers, visit ni.com/oem.

Alliance

Our Professional Services Team is comprised of NI applications engineers, NI Consulting Services, and a worldwide National Instruments Alliance Partner program of more than 700 independent consultants and integrators. Services range from start-up assistance to turnkey system integration. Visit ni.com/alliance.

Back to Top

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