

Portable USB-Based High-Voltage Digital I/O

NI USB-9421, NI USB-9472, NI USB-9481 **NEW!**

- Small, portable devices (12.1 by 8.6 by 2.5 cm)
- 4 or 8 channels with 24 V logic levels
- High current-switching capacity
- 250 V_{rms} channel-to-earth ground isolation
- Plug-and-play connectivity via USBs
- Screw-terminal and D-Sub connectors for direct wiring to industrial sensors and actuators

Operating Systems

- Windows 2000/XP

Recommended Software

- LabVIEW
- LabWindows/CVI

Measurement Services Software (included)

- NI-DAQmx driver software
- VI Logger Lite data-logging software



Product	Bus	Input Lines	Output Lines	Isolation	Signal Levels	Output Current per Channel	Connector	Driver Software ¹
USB-9421	USB	8 sink	–	Bank	11 to 30 V	–	Screw Terminal, D-Sub	NI-DAQmx
USB-9472	USB	–	8 source	Bank	6 to 30 V	0.75 A	Screw Terminal, D-Sub	NI-DAQmx
USB-9481	USB	–	4 Form A Relay	Bank	60 VDC 250 VAC/VDC	2 A (30 VDC) 1 A (60 VDC)	Screw Terminal	NI-DAQmx

¹For up-to-date information on NI-DAQ, visit ni.com/support/daq/versions.htm.

Table 1. Portable USB DAQ for High-Voltage Digital I/O Selection Guide

Hardware Description

National Instruments USB-9421, USB-9472, and USB-9481 are data acquisition modules with integrated signal conditioning. They provide plug-and-play connectivity via USB for faster setup and measurements, offering four or eight digital input or output channels specifically designed for monitoring and control applications. The NI USB-9421 digital input module accepts high-voltage levels between 11 and 30 V for direct connection to 24 V systems. The NI USB-9472 can source up to 30 V externally powered at 0.75 A of current per channel, and the NI USB-9481 uses electromechanical relays that can switch 2 A at 30 VDC and 1 A at 60 VDC. In addition, these modules include channel-to-earth ground isolation for safety, noise immunity and high common-mode voltage range.

Software Description

The USB-9421, USB-9472, and USB-9481 all use NI-DAQmx high-performance, multithreaded driver software for interactive configuration and data acquisition on Windows OSs. Use NI-DAQmx to test channels, generate code, and apply custom functionality to any of your measurements. All NI data acquisition devices shipped with NI-DAQmx also include VI Logger Lite configuration-based data-logging software.

Recommended Accessories

The USB-9421, USB-9472, and USB-9481 all have built-in screw-terminal connectivity, so no additional accessories are required. The USB-9421 and USB-9472 are also available with D-Sub connector options that connect to the NI 9934 strain relief accessory, or any other standard 25-pin D-Sub connector.

Common Applications

The USB-9421, USB-9472, and USB-9481 are ideal for monitoring and control applications where easy connectivity and portability are essential, such as:

- Portable industrial monitoring and controlling motors, fans, pumps, relays, and limit switches
- Data logging
- Small form-factor applications
- Embedded OEM applications
- In-vehicle data acquisition
- Academic lab use

Information for OEM Customers

For information on special configurations and pricing, please visit ni.com/oem.

Ordering Information

NI USB-9421	
Screw Terminals	779451-01
D-Sub Connector	779452-01
NI USB-9472	
Screw Terminals	779449-01
D-Sub Connector	779450-01
NI USB-9481	779453-01
Accessories	
NI 9934	779104-01

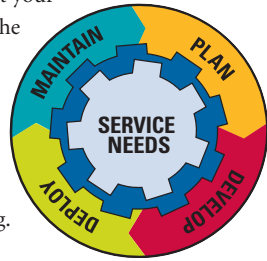
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For complete product specifications, pricing, and accessory information, call (800) 813 3693 (U.S. only) or go to ni.com/oem.



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Hardware Services

NI Factory Installation Services

NI Factory Installation Services (FIS) is the fastest and easiest way to use your PXI or PXI/SCXI combination systems right out of the box. Trained NI technicians install the software and hardware and configure the system to your specifications. NI extends the standard warranty by one year on hardware components (controllers, chassis, modules) purchased with FIS. To use FIS, simply configure your system online with ni.com/pxiadvisor.

Calibration Services

NI recognizes the need to maintain properly calibrated devices for high-accuracy measurements. We provide manual calibration procedures, services to recalibrate your products, and automated calibration software specifically designed for use by metrology laboratories. Visit ni.com/calibration.

Repair and Extended Warranty

NI provides complete repair services for our products. Express repair and advance replacement services are also available. We offer extended warranties to help you meet project life-cycle requirements. Visit ni.com/services.



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