PRODUCT FLYER

PC-Based Sound and Vibration Devices

CONTENTS

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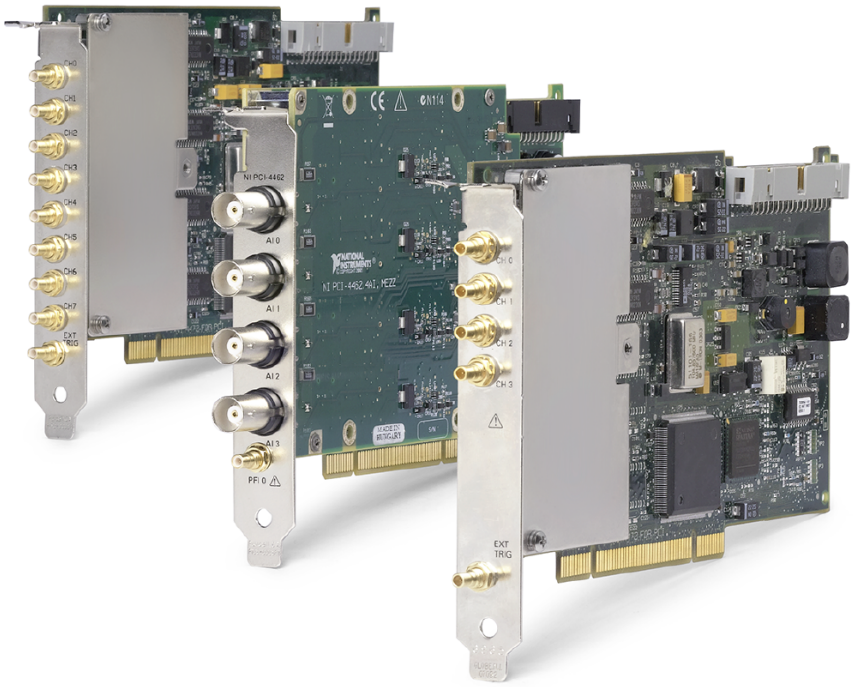
Sound and Vibration Device

PCI-4461, PCI-4462, PCI-4472, PCI-4472B, PCI-4474, USB-4431, USB-4432



- **Software:** Includes DAQExpress™ interactive measurement software as well as API support for LabVIEW and text-based languages, shipping examples, and detailed help files
- Dynamic sensor measurements at 102.4 kS/s or 204.8 kS/s
- Built-in high pass filtering
- Per-channel, software-selectable AC input coupling
- Available with analog output channels for dynamic signal generation
- USB or PCI bus connectivity

Reliably Characterize Dynamic Signals

Sound and Vibration Devices are designed specifically for applications like audio test and measurement; noise and vibration diagnostics; machine condition monitoring; automotive test, noise, vibration, and harshness (NVH) analysis; and laboratory research. Different models provide options for software-configurable AC/DC coupling, antialiasing filters, and IEPE conditioning to ensure precision measurements with microphones, accelerometers, and other transducers with large dynamic ranges.

These devices provide best-in-class low-noise and distortion measurements for designing test and measurement systems on standard PC computing platforms.

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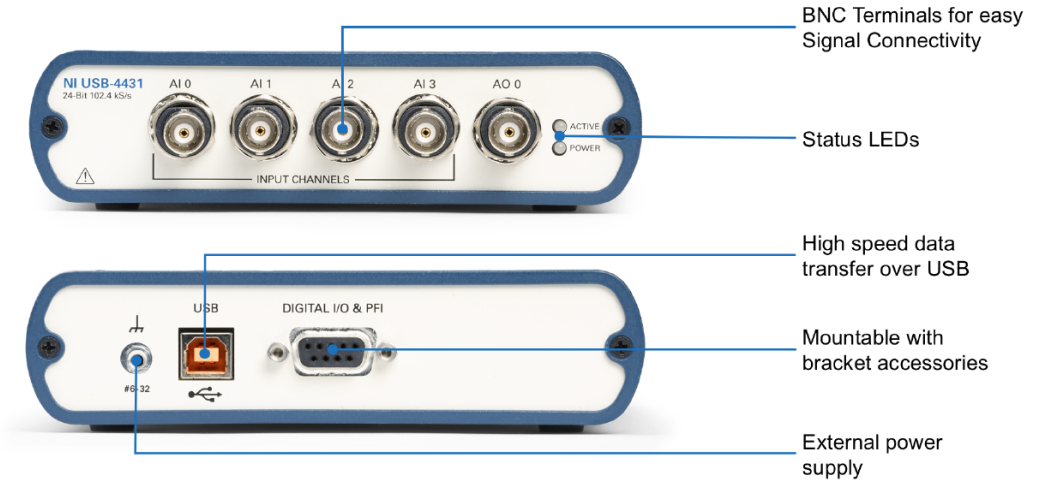
Table 1. Sound and Vibration Devices provide a range of abilities for measuring and generating dynamic signals.

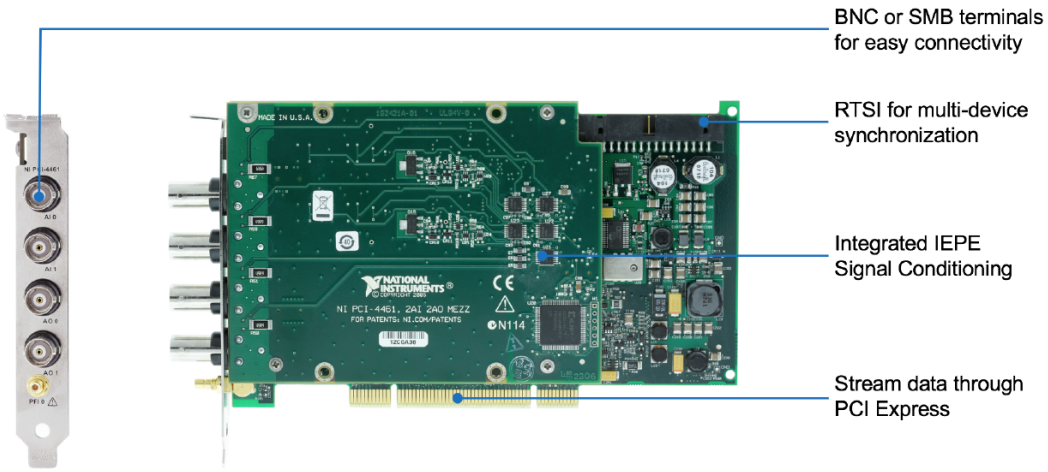
	Bus	Input Channels	Max Sample Rate	Input Coupling	Output Channels	High Pass Cutoff Freq.	I/O Connector Type
PCI-4461	PCI	2	204.8 kS/s	AC/DC	2	3.4 Hz	BNC, SMB
PCI-4462	PCI	4	204.8 kS/s	AC/DC	0	3.4 Hz	BNC, SMB
PCI-4472	PCI	8	102.4 kS/s	AC/DC	0	3.4 Hz	SMB
PCI-4472B	PCI	8	102.4 kS/s	AC/DC	0	0.5 Hz	SMB
PCI-4474	PCI	4	102.4 kS/s	AC/DC	0	3.4 Hz	SMB
USB-4431	USB 2.0	4	102.4 kS/s	AC/DC	1	0.8 Hz	BNC
USB-4432	USB 2.0	5	102.4 kS/s	AC/DC	0	0.1 Hz	BNC

Detailed Views of Sound and Vibration Devices

USB Sound and Vibration Device



PCI Sound and Vibration Device



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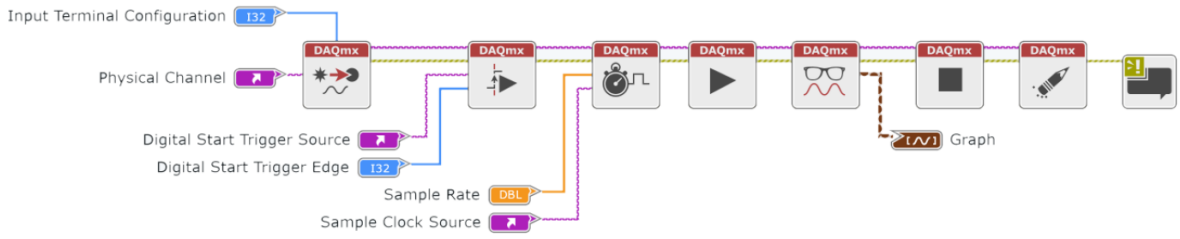
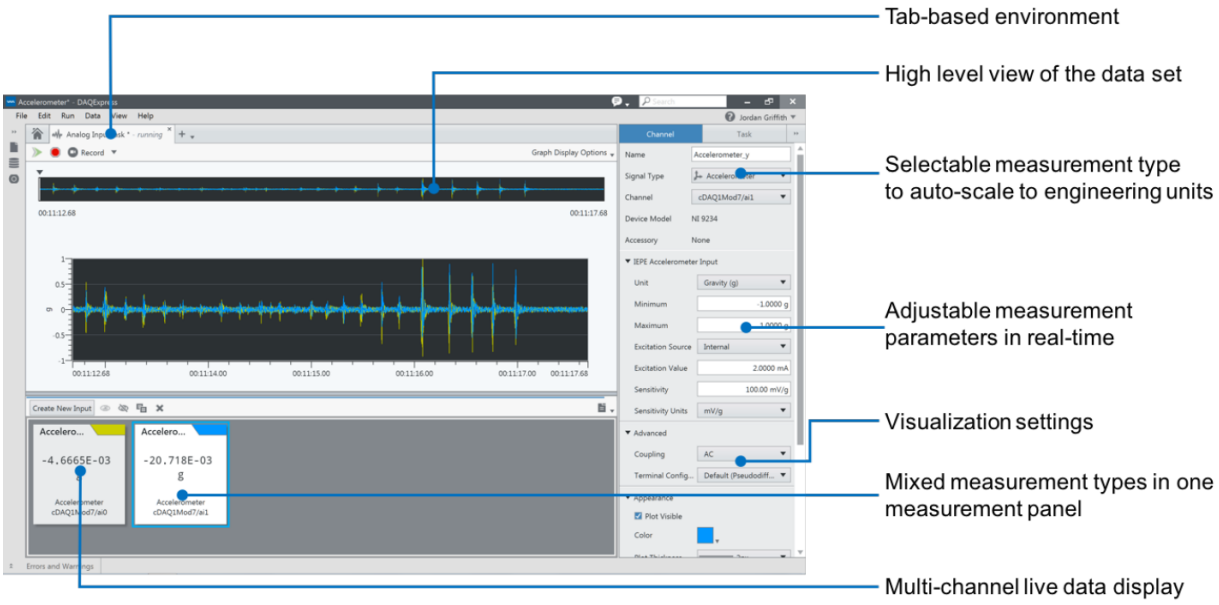
NI-DAQmx Application Programming Interface (API)

The NI-DAQmx driver includes a best-in-class API that works directly with a variety of development options including LabVIEW, DAQExpress, C, C#, Python, and others. The native integration provides exceptional performance and a seamless experience without the need for manual wrapping of functions. To ensure long-term interoperability of DAQ devices, the NI-DAQmx driver API is the same API used for all NI DAQ products – meaning re-development efforts can be minimized regardless of hardware changes or upgrades. Additionally, the driver provides access to help files, documentation, and dozens of ready-to-run shipping examples you can use as a starting point for your application.



DAQExpress Companion Software

DAQExpress is interactive companion software included with the purchase of a supported hardware product. It provides quick, clear access to all the measurements supported by a DAQ device as soon as it is plugged it, and allows you to get instant access to the measurement data and apply analysis functions without writing any code. All USB and PCI(e) multifunction I/O devices are supported by, and ship with, DAQExpress and the NI-DAQmx driver.



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Hardware Services

All NI hardware includes a one-year warranty for basic repair coverage, and calibration in adherence to NI specifications prior to shipment. PXI systems also include basic assembly and a functional test. NI offers additional entitlements to improve uptime and lower maintenance costs with service programs for hardware. Learn more at ni.com/services/hardware.

	Standard	Premium	Description
Program Duration	1, 3, or 5 years	1, 3, or 5 years	Length of service program
Extended Repair Coverage	•	•	NI restores your device's functionality and includes firmware updates and factory calibration.
System Configuration, Assembly, and Test[1]	•	•	NI technicians assemble, install software in, and test your system per your custom configuration prior to shipment.
Advanced Replacement[2]		•	NI stocks replacement hardware that can be shipped immediately if a repair is needed.
System Return Material Authorization (RMA)[1]		•	NI accepts the delivery of fully assembled systems when performing repair services.
Calibration Plan (Optional)	Standard	Expedited[3]	NI performs the requested level of calibration at the specified calibration interval for the duration of the service program.

[1]This option is only available for PXI, CompactRIO, and CompactDAQ systems.
[2]This option is not available for all products in all countries. Contact your local NI sales engineer to confirm availability.
[3]Expedited calibration only includes traceable levels.

PremiumPlus Service Program

NI can customize the offerings listed above, or offer additional entitlements such as on-site calibration, custom sparing, and life-cycle services through a PremiumPlus Service Program. Contact your NI sales representative to learn more.

Technical Support

Every NI system includes a 30-day trial for phone and e-mail support from NI engineers, which can be extended through a Software Service Program (SSP) membership. NI has more than 400 support engineers available around the globe to provide local support in more than 30 languages. Additionally, take advantage of NI's award winning online resources and communities.

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