CompactDAQ Sound and Vibration Measurement Bundle

Modular Data Acquisition Bundles For Sound and Vibration

Use NI DAQ sound and vibration bundle for:

- Quick sound and vibration logging
- System-level validation
- Frequency testing
- Measurement and acoustic characterization

Popular Features

Sensor Compatibility

Smart TEDS sensor compatibility with internal signal conditioning

Rugged

-40° to 70° C Temp range 50g shock

Coupling

Software-selectable AC/DC coupling and IEPE signal conditioning with AC coupling

Pre-Configured Hardware Bundle for Sounds and Vibration

Spend less time configuring your test system and more time testing your products with NI's sound and vibration measurement bundle based on CompactDAQ hardware.

Sound and Vibration Measurement Bundle with Expansion
System P/N: 868017-01

cDAQ-9174   NI-9234   NI-9234

Module Compare	Connectivity	Channels	Sample Rate	Module Features
NI-9234	BNC	4	51.2 kS/s/ch	• Software-selectable AC/DC coupling (AC coupled at 0.5 Hz) • Software-selectable IEPE signal conditioning with AC coupling (2 mA) • 24-bit resolution • Anti-aliasing filters • 102 dB dynamic range • Smart TEDS sensor compatibility

Chassis Features: cDAQ-9174 (4-Slot)

- USB Bus-Powered
- Compact and Rugged

- -20 to 55 ºC Operating temperature
- 30g/0.3g$_{RMS}$ Operational shock and vibration

Other Pre-Configured Hardware Sensor Bundles

Voltage and Digital Measurement Bundle
Bundle P/N: 868015-01

Multi-Sensor Input Measurement Bundle
Bundle P/N: 868016-01

Temperature Measurement Bundle
Bundle P/N: 868014-01

Strain & Load Measurement Bundle
Bundle P/N: 868019-01

Replacement and Upgrade Options for Sound and Vibration Sensors

Need more channels or a different sample rate? NI offers more Sound and Vibration Modules for your sound and vibration test needs.

Sound and Vibration Modules

System Need	Connectivity	Ch	Sample Rate	Isolation	Model/PN
Lowest Module Cost	BNC	3	12.8 kS/s/ch Simultaneous	60 VDC Channel-Earth	NI-9230
Lowest cost/channel	10-32 Coaxial	8	51.2 kS/s/ch Simultaneous	None	NI-9231
Fastest Sample Rate	BNC	3	102.4 S/s/ch Simultaneous	60 VDC Channel-Earth	NI-9232
General Use	BNC	4	51.2 kS/s/ch	None	NI-9234*

*In the Sound and Vibration Measurement Bundle with Expansion

Other Popular Measurement Types

Measurement	Connectivity	Ch	Sample Rate	Isolation	Model/PN
Thermocouple	Spring terminal	16	74 S/s Multiplexed	Channel-Earth	NI-9213
Voltage Input	Spring Terminal	4	250 kS/s Multiplexed	Channel-Earth	NI-9205
Load, Pressure, Strain	RJ-50 (accessories sold separately)	4	50 kS/s/ch Simultaneous	Channel-Earth	NI-9237
Voltage, current, strain, thermocouple, RTD, ¼ ½ full bridge	Spring terminal	4	100 S/sec Simultaneous	Channel-Channel	NI-9219

CompactDAQ Chassis

Need more than four modules or a different connectivity?

Select the chassis that meets your needs. All hardware use the same software driver.

- Ethernet: 1, 4, and 8-Slot chassis
- USB: 1, 4, 8, 14-Slot chassis
- Wi-Fi: 1-Slot chassis

Contact your NI product expert to get help solving your test challenges.

Improve Test Performance with NI Software

Build an Automated Test System with LabVIEW

- **Acquire data** from NI hardware, 3rd party instruments, and many industry-standard protocols

- **Create interactive UIs** for test monitoring and control.

- **Process** with standard math, probability, and statistical functions.

- **Integrate code** written in Python, C/C++, .NET, and MathWorks MATLAB® software.

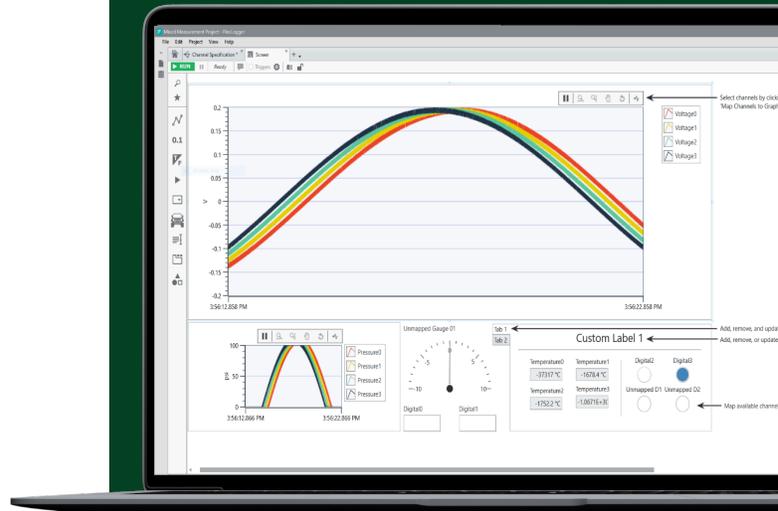- **Save data** to .csv, .tdms, or any custom-defined binary file.

Perform Quick Tests with FlexLogger No-Code Software

- **Configure** quick tests with alarms, test properties, and real-time data displays

- Simplify **sensor measurement** with sensor-specific templates

- **Log test results** to .tdms or .csv files

- **Add calculations** for simple math, filtering, Boolean logic, and more

- **Review data** with an included interactive TDMS file viewer

Develop with Your Preferred Programming Language

- Python

- C, C+, C#

- .NET

- MATLAB® (Contact MathWorks® for the Data Acquisition Toolbox)

MATLAB is a registered trademark of The MathWorks, Inc.

""FlexLogger makes it easier to troubleshoot and verify that the raw data from different sensors are correct before I start my test. This helps shorten test development by saving time typically wasted on redoing configurations."

- Andy Tarman,
Lab Test Engineer
CNH Industrial