CompactDAQ

A modular data acquisition system for analog, digital, and sensor-based measurements

Use CompactDAQ for:

- Benchtop test and measurement
- Tests that need synchronization
- System-level validation tests that combine sensors and electrical signals
- Field tests that need rugged instrumentation

Popular Features

Rugged

-40°..70° C Temp range
50g shock

Synchronized

<1 µs Between chassis
(optional feature)

Measurements

Over 70 modules
available

What Is CompactDAQ?

CompactDAQ is a rugged, modular, data acquisition system that combines signal-based measurement circuitry, data acquisition technology, and test-centric software with standard Ethernet and USB connectivity. CompactDAQ has several features to simplify your instrumentation whether you use it for quick ad-hoc tests, or more sophisticated, automated test stands.

Precise Measurements

Choose from more than 70 modules with built-in sensor or signal-specific conditioning. Mix and match to build a customized system that meets your measurement needs.

System Scalability

Expand your system with Ethernet-compatible CompactDAQ chassis to take µs-synchronized measurements across multiple chassis.

Compact, Rugged Design

Pack it up and take it with you between labs, to field tests, or to a customer site to validate in-situ data with your test equipment.

Develop or Don't

Program a custom data acquisition test application with .NET, C#, Python, *MATLAB® or LabVIEW, or use FlexLogger™ no-code application software to configure your system to log and view real-time data with alarms.

Chassis

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

Features
- -40-70C Operating temperature
- 50g/5gRMS Operational shock and vibration
- DC Powered -9 VDC – 30VDC (AC supply included)
- 1-Slot USB chassis are bus powered

Modules

Measurement Options
- Voltage input/output
- Digital input/output
- Thermocouples and RTDs
- Accelerometers and microphones
- Strain gages
- Load cells, pressure transducers, torque cells
- Over 70 modules available!

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.
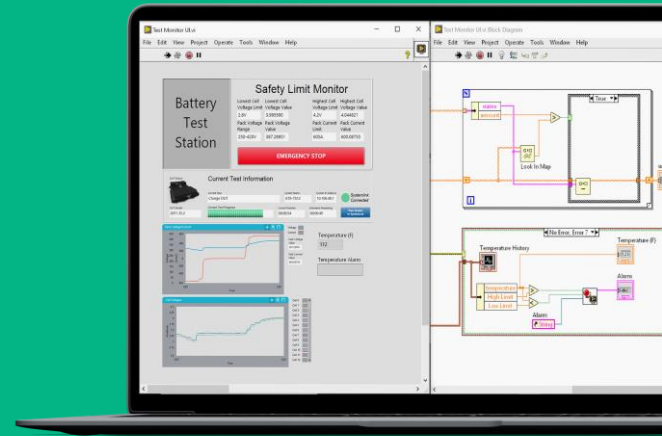
LabVIEW is the key for accelerating test. After selecting NI, with LabVIEW as the foundation for test, L3 has increased its engineering performance with improvements in development time, downtime, and code reuse.**

**Excerpt from NI and L3 Case Study
L3 merged with Harris in 2019 and is now L3Harris
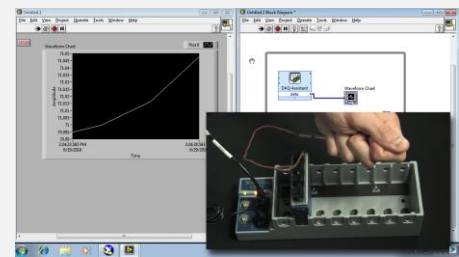
Check out the NI CompactDAQ USB Chassis Out of Box Video on YouTube.

Contact your NI product expert to configure system today.

US Corporate Headquarters
11500 N Mopac Expwy,
Austin, TX 78759-3504
T: 512 683 0100 F: 512 683 9300
info@ni.com