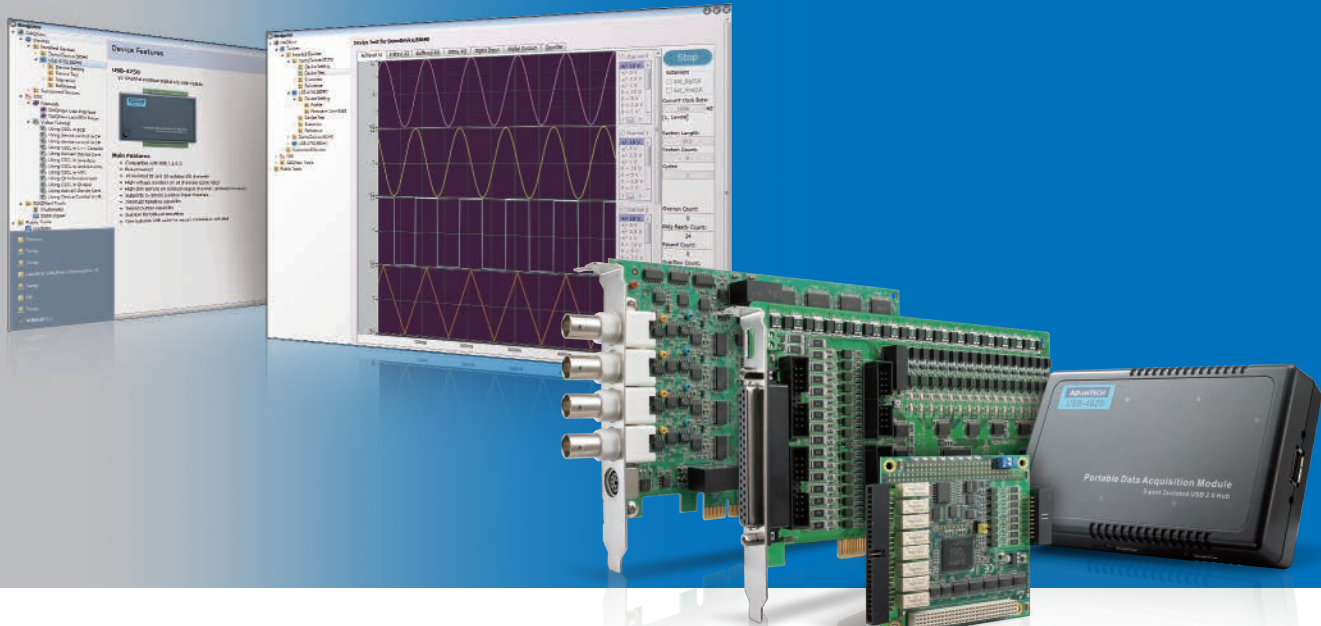


DAQNavi Greatly Reduces Costs and Improves Performance



Features



Guaranteed Reliable Execution for Multi-Thread Programming

Multi-thread programming is now widely-used in DAQ applications. But without careful handling, it can cause unexpected problems like system crashes or data errors. Thread-safe programming technology prevents such problems. DAQNavi has thread-safe mechanisms built into its design, relieving programmers from multi-thread programming problems.



Latest Operating System Support

DAQNavi adheres to the latest Windows (32-bit and 64-bit) and Linux operating system requirements. In addition, DAQNavi software design helps programmers easily migrate their DAQ applications between OS's, without spending lots of time solving OS-compatibility issues.



Supports Multiple Programming Languages

For DAQ application development, DAQNavi supports 10 popular programming languages, including C/C++, Visual Basic, C#, VB.NET, Delphi, Qt, Borland C++ Builder (BCB), Java, MATLAB and LabVIEW. DAQNavi saves programmer development time when it is necessary to change programming languages.

What is DAQNav?

DAQNav, Advantech's next-generation driver package, delivers higher performance, compatibility, and reliability through a brand new driver and SDK; programmers benefit from many new user-friendly templates and shortened development times.

DAQNav Software Architecture

Apps	Native Code				Managed Code	
	Examples	Examples	Examples	Examples	Examples	Tools
Apps	Java UI	C++Console MFC Qt/BCB	LabVIEW	ANSI C	C#Console C# VB.NET MATLAB Delphi	Navigator Plug-in DataLogger Multi-meter
Interpreter	Java Class Library	C++ class library	LabVIEW VIs	ANSI C API	.NET component	
Core	integrated DLL (BioDAQ.DLL for Windows 10, Windows 8, Windows 7, QNX, Linux)					
	DAQ Device Driver (Windows 10, Windows 8, Windows 7, QNX, Linux)					



LabVIEW Programming Support

LabVIEW programmers can easily build DAQ applications with DAQNav Assistant and Polymorphic VI. DAQNav Assistant, based on LabVIEW Express VI technology, provides an intuitive wizard window that helps complete configuration programming quickly. DAQNav Polymorphic VI delivers more programming flexibility to experienced LabVIEW programmers.



Component-based Programming

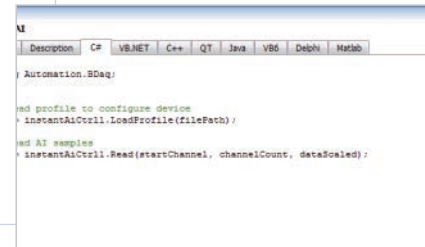
Rapidly changing application requirements challenge DAQ developers, who are pressed to shorten development times. DAQNav delivers reuseable, component-based libraries, which can save up to 70% on programming code. Programmers can ignore many detailed low-level hardware settings, and concentrate on major parameter configurations. For Visual Studio, BCB and Delphi users, DAQNav offers step-by-step wizards that complete configurations without coding.



Easy-to-Use Utility

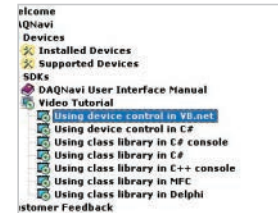
DAQNav provides an integrated utility, Advantech Navigator, where programmers can perform hardware configurations and functionality testing without programming. Hardware manual, software library documentation, and sample source codes are also provided. Everything necessary for DAQ programming is provided in this utility.

Easy-to-Use Advantech Navigator Utility



SDKs Software Development Manual

DAQNavi offers detailed documents that explain methods, properties, and events for each of the libraries, as well as programming flows and examples.



Video Tutorial

For each programming language, a dedicated tutorial video is provided that shows how to create a DAQ project.



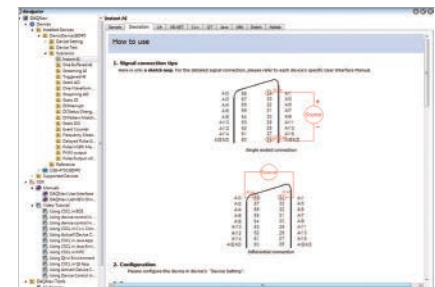
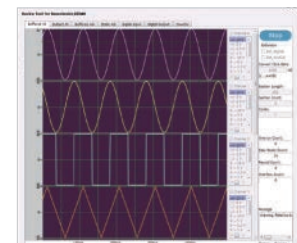
Devices

All installed Advantech DAQ devices are displayed here, including simulated "DemoDevices". So even if there is no DAQ hardware connected to the computer, relative operations can still be performed. For each device, there are four selectable items:

1. **Device Setting:** Hardware parameter configurations
2. **Device Test:** DAQ function test without any coding
3. **Scenario**

To help programmers get started quickly with DAQNavi component-based libraries, Advantech has designed many DAQ application references, called Scenarios. For different programming languages, examples with source codes are provided. More than 300 examples dramatically reduce programming effort.

4. **Reference:** Selected-device hardware manual



DAQNavi DataLogger

Features

- Data logging, display and recording without programming
- Instant AI, buffered AI and static DI data logging
- Hardware channel parameter configuration wizard
- Supports simulated device operation
- Save configurations into a project file for future use
- Real-time display with zoom and pan
- Supports data recording, store file to disk
- View historical data via recorded data playback
- Supports both analog and digital graph display



Introduction

Advantech DAQNavi DataLogger is ready-to-use application software that engineers can leverage to perform data logging, recording, and display. Without spending time programming, engineers benefit from the flexibility of acquiring and storing data from various Advantech data acquisition devices.

DAQNavi SignalMeter

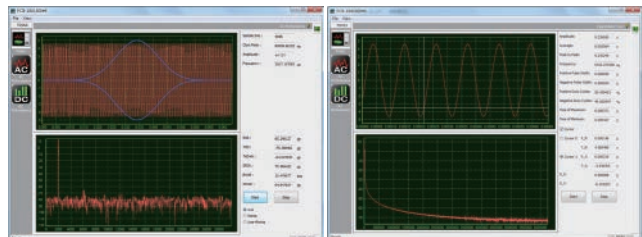
Features

Real-time display frequency domain based on zoom and pan operation in time domain.

- Auto measurement for amplitude, average, peak to peak, and frequency.
- Cursor measurement for signal analysis.
- Provides Window function for AC signal.

Provides DC and AC performance measurement.

Easy to use without programming.



Introduction

SignalMeter is a software utility that provides three functions for Advantech DAQ devices. It includes Scope, AC Performance, and DC Performance functions for different angles on data acquisition.

Scope provides simple oscilloscope features:

- **Amplitude:** Returns the difference between the High and Low of the signal.
- **Average:** This is the mean vertical level of the entire captured waveform.
- **Peak to Peak:** Returns the difference between the extreme Maximum and Minimum values.
- **Frequency:** The period is the average time for a cycle to complete using the entire waveform in the capture window, so frequency is the inverse of the period.

The Scope function not only shows time-domain and frequency-domain at the same time but also provides synchronous zoom on time-domain and frequency-domain.

AC Performance can automatically calculate SNR, THD, SIMAD—important information for user data acquisition. For a DC signal, DC Performance will display RMS noise and chart a histogram graph. The interface is simple and easy to operate.