

Instrument Driver for LabVIEW™

dataTaker®

Intelligent Data Logging Products

- Interface to LabVIEW graphical programming environment
- Follows standard LabVIEW conventions
- Customisable code within the driver
- Extensive examples
- Integrated documentation
- Configure, and/or acquire data via serial, modem or Ethernet
- Allows flexible solutions to be developed
- Stand alone applications*

The driver takes care of communications and data formatting of the *dataTaker*, allowing you to concentrate on your application rather than how to interface to the logger.

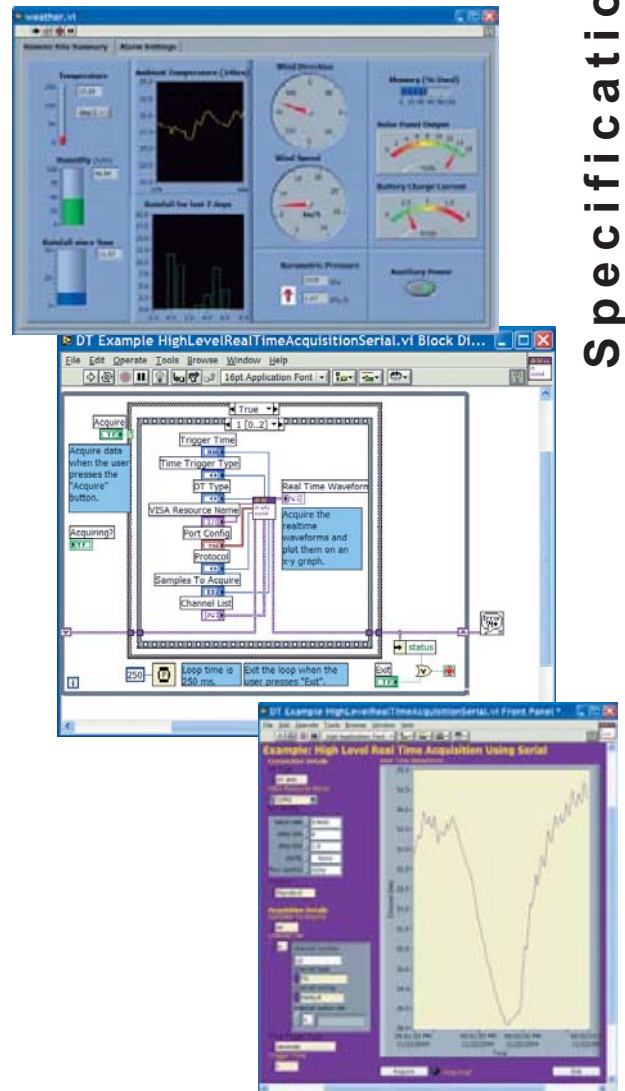
Instrument Driver Software

A comprehensive library of VIs allowing *dataTaker DT50, DT500, DT600* and *DT800* range data loggers to be configured and queried from LabVIEW. Developed in conjunction with one of Australia's leading NI Alliance Integrators, Icon Technologies Pty Ltd, LabVIEW users now have a classic data logger hardware alternative for data acquisition tasks.

With flexible, universal analog, digital and serial inputs, *dataTaker* hardware can be used for real-time data acquisition, in addition to being perfect for applications requiring stand-alone operation in remote or distributed locations with limited power supply.

The *dataTaker* instrument driver for LabVIEW provides a means to incorporate *dataTaker* data loggers in an open, powerful, programmable software environment, including mixing *dataTaker* and other I/O hardware. LabVIEW is National Instruments' industry-leading graphical software development environment for measurement and automation applications.

*Requires LabVIEW Application Builder.



Specifications

Applications include:

- Research and Development
- Remote Monitoring
- Laboratories
- Wind Profiling
- Universities
- Structural Testing
- Process Monitoring
- Meteorology

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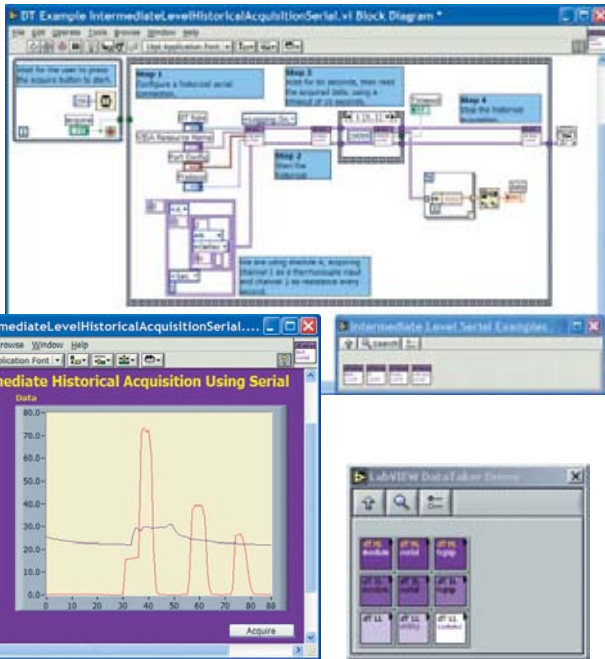
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Requirements

- LabVIEW™ 6.0.2, 6.1, 7.0 or 7.1 base package minimum.
- *dataTaker* DT50/500/600 range or DT800 data logger.
- If communicating to a *dataTaker* data logger via a PC serial port (except PPP), NI-VISA™ is required.

Documentation

A comprehensive help file is available, with chapters on Getting Started, *dataTaker* concepts, and documentation on each of the VIs, linked to each LabVIEW VI used.

Users Background

The *dataTaker* Instrument Driver for LabVIEW is targeted at users that have at least a basic familiarity with the concepts and terminology of both the LabVIEW and *dataTaker* environments.

Experienced *dataTaker* users who are new to LabVIEW would need knowledge of LabVIEW to the level of the National Instruments' course "LabVIEW Basics I", or equivalent.

Experienced LabVIEW users with no previous exposure to *dataTaker* hardware can use the library to connect to a *dataTaker* data logger and acquire real-time data, or return historical data, from a previously configured acquisition schedule. To properly use all high, intermediate and low level library functions requires a working knowledge of the *dataTaker* data logger. Please refer to the appropriate *dataTaker* user's manual for additional details and specific information about each model.

Driver Structure

The *dataTaker* Instrument Driver for LabVIEW follows standard LabVIEW conventions in designing I/O libraries.

The driver palette is organised in three levels - High (or Easy), Intermediate, and Low (or Advanced). Each palette in the driver includes the relevant function VIs, including one or more examples showing how they should be used.

The high level palettes provide "single VI" solutions to the task of retrieving real-time or historical data from a *dataTaker* data logger. The high level VI's handle any required temporary configuration of the data logger automatically, these changes being transparent to the user.

The intermediate level palettes are also used for retrieving real-time or historical data from a *dataTaker* data logger. Like the High level palettes, any temporary configuration of the data logger required is handled automatically by the Intermediate level VI, and is transparent to the user.

A series of Intermediate level VIs is used in a specific sequence to achieve the required outcome. The major benefits of working at the Intermediate level are more direct programmatic control of the timing and execution of each function, along with higher throughput of real-time data.

Both the High level and Intermediate level palettes contain three separate, but functionally identical, sub-palettes for communicating with *dataTaker* data loggers. This can be via direct serial, TCP/IP or dial-up modem link respectively. You should use the palette that corresponds with the type of communications link that you are making to your data logger.

The Low level palettes contain the basic function blocks that allow a user to any of the following:

1. Open and manage a communications link to a *dataTaker* data logger.
2. Read data from any configured *dataTaker* data logger.
3. Compose and download complete Jobs including Schedules, Channel Descriptors, Alarms, Channel Options.
4. Perform specific configuration and management functions as required (eg retrieve the *dataTaker* version, wake up a *dataTaker* from sleep mode, synchronise time between the host PC and *dataTaker*, etc).

dataTaker®

Your local distributor

For full technical specifications download the user's manual from our website.

www.datataker.com

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