

ULx for NI LabVIEW™

Driver for Measurement Computing DAQ Devices



Features

- High-level VIs improve ease of use and speed development
- Polymorphic VIs reduce the number of VIs required
- Intelligent error handling
- Synchronous DAQ operation support
- NI LabVIEW waveform data type compatibility
- Automatically detects supported device functions
- 24-bit MCC device support
- Easy-to-use counter/timer support

Overview

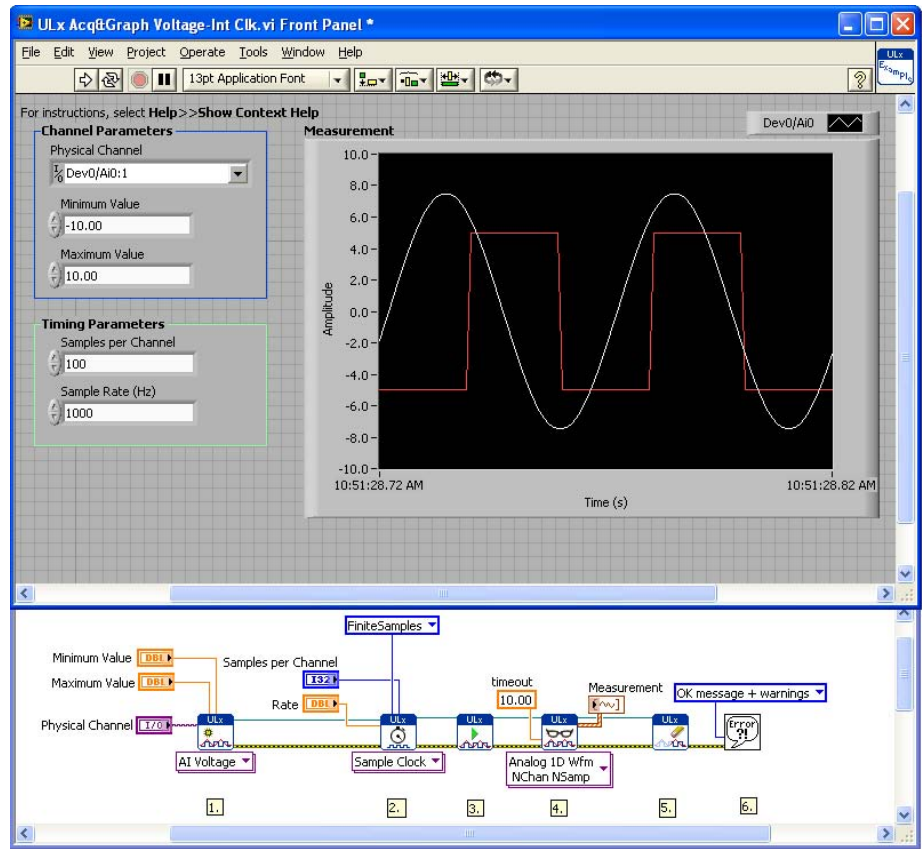
The ULx for NI LabVIEW is a library of virtual instruments (VIs) used with Measurement Computing Corporation (MCC) devices to develop acquisition and control applications in National Instruments LabVIEW. ULx for NI LabVIEW is included free with most MCC devices and is compatible with NI LabVIEW version 8.5 and later. ULx for NI LabVIEW replaces the Universal Library (UL) for NI LabVIEW and offers many improvements both in functionality and ease-of-use.

High-Level VIs

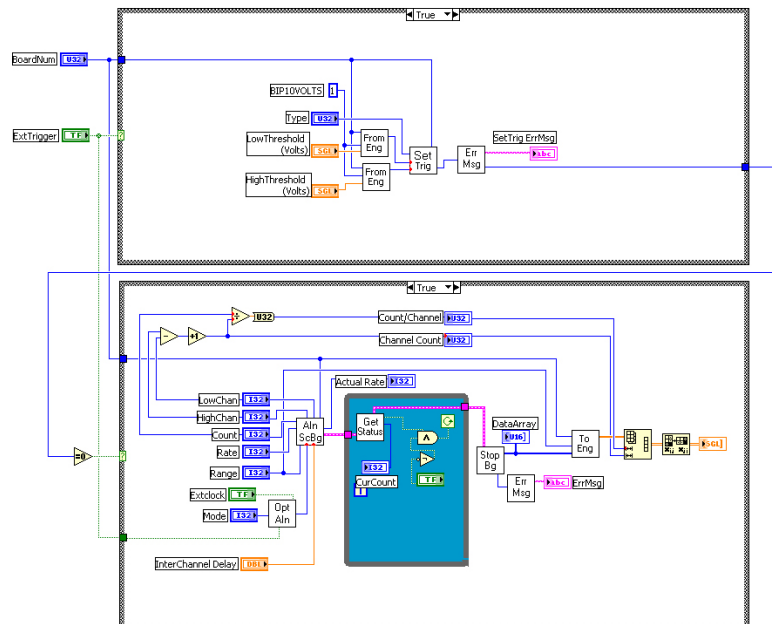
High-level VIs merge operations into single, easier-to-use VIs that improve application development compared to previous drivers. High-level VIs also better manage data collection and flow. VIs are no longer tied to a specific DAQ device and you can use them across a range of devices. Because the VIs internally manage DAQ device variations such as data rate, gain ranges, and data packet sizes, you can easily migrate from one DAQ device to another.

Intelligent Error Handling

ULx for NI LabVIEW provides complete error descriptions and recommendations on how to resolve them, speeding development time.



ULx VI and data display are more consolidated and easier to follow



Older UL-based VI

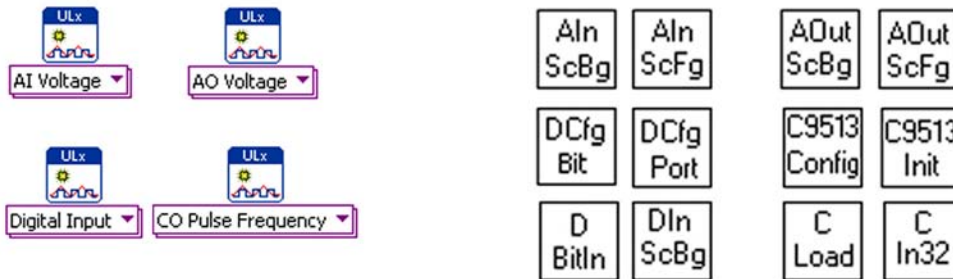
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Polymorphic VIs

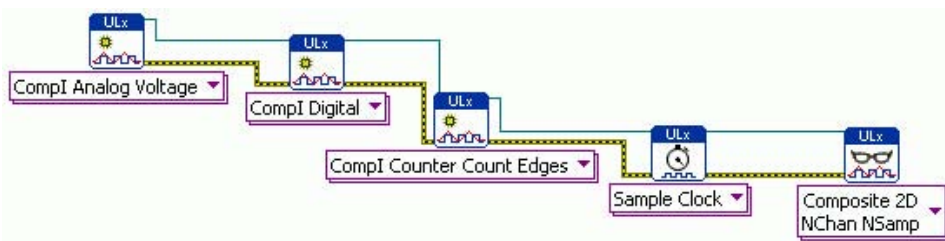
ULx for NI LabVIEW uses polymorphic VIs which combine functions for all types of operations. Different VIs for each data type are no longer required, resulting in a flatter learning curve not only for one device, but for an entire series of devices. Older style, function-specific VIs required a knowledge of the UL programming interface. With ULx polymorphic VIs, you can more easily build an application with references to programming documentation.



ULx VIs consolidate functionality and reduce the number of VIs in an application *Older UL VIs are function specific and require a knowledge of the UL programming interface*

Support for Synchronous DAQ Operations

ULx for NI LabVIEW encapsulates the DaqInScan and DaqOutScan functions and allows synchronous DAQ operations in hardware with synchronous I/O capability including USB-2500 Series and PCI-2500 Series hardware.



The DaqInScan and DaqOutScan functions allow synchronous DAQ operations

Auto Detection of Supported UL Functions

ULx for NI LabVIEW automatically detects supported UL functions for each device, significantly reducing programming errors and reducing the need to refer to UL documentation.

Support for 24-bit Analog Input and Temperature Devices

ULx for NI LabVIEW includes support for MCC 24-bit resolution devices.

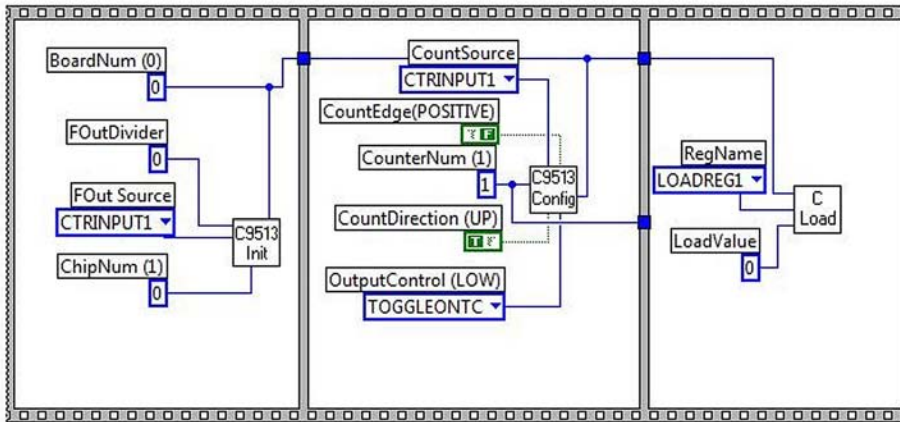
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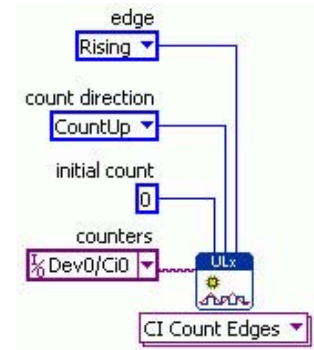


Easy-to-Use Counter/Timer Support

ULx for NI LabVIEW provides a high-level overview of counter operations for simple event counting and timed measurements and eliminates the need for knowledge of counter specifications when programming. This counter/timer support results in having one VI that incorporates all the functionality of multiple VIs needed in previous UL for NI LabVIEW based support.



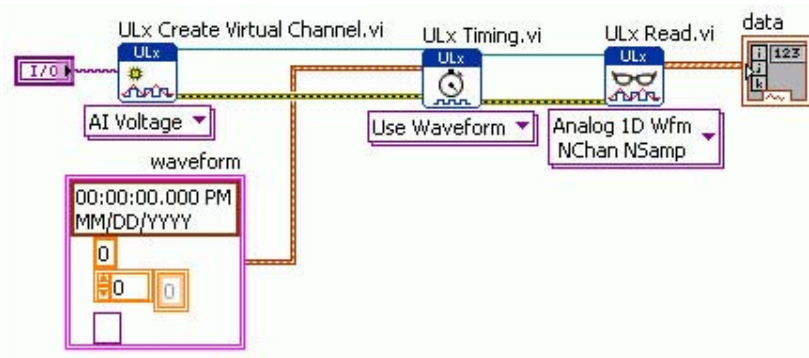
Older UL Counter VI



ULx Counter VI combines functionality into one VI which is easier to use and comprehend

Support for Waveform Data Type

ULx for NI LabVIEW provides time tags for data and allows ULx VIs to interface to more NI LabVIEW VIs.



Waveform data type is supported in ULx for NI LabVIEW

Example Programs

Included with ULx for NI LabVIEW are example programs demonstrating how to perform data acquisition tasks in NI LabVIEW. Example programs can also be modified to suit your specific application needs.

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DAQ Operations

The ULx for NI LabVIEW Library performs the following DAQ operations with the following supported MCC hardware:

Analog I/O, Digital I/O

- USB devices
- PCI boards
- Wireless devices
- Web-based devices

ULx for NI LabVIEW supports counter inputs on all MCC USB, PCI, Wireless, and Web-based hardware that use the following counter types:

Counter/Timers

- 8254 counter
- 9513 counter
- Event counter
- Scan counter (USB-2500 Series and PCI-2500 Series)

Supported Hardware

ULx for NI LabVIEW supports most MCC DAQ devices including:

- USB devices
- PCI boards
- Wireless devices
- Web-based devices

Software

NI LabVIEW 8.5 and later

Operating Systems

Windows 7, Windows Vista, Windows XP (32-bit or 64-bit)

ULx for NI LabVIEW is included on the MCC DAQ Software CD that ships with supported MCC hardware. The software is also available for download from our Software/Drivers Downloads page at <http://www.mccdaq.com/software.aspx>.

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