


# Software Selection Guide

## DAQ & Modular Instruments

Type	Model	Description	Bus	Page	Driver	
					 Windows®	
					Task-oriented Page 1-10	Legacy Page 1-13
High-Performance DAQ	DAQ/DAQe/PXI-2005	4-CH 16-Bit 500 kS/s Simultaneous-Sampling Multi-Function DAQ	PCI, PCIe, PXI	2-7	DAQPilot	D2K-DASK
	DAQ/DAQe/PXI-2006	4-CH 16-Bit 250 kS/s Simultaneous-Sampling Multi-Function DAQ	PCI, PCIe, PXI	2-7	DAQPilot	D2K-DASK
	DAQ/DAQe/PXI-2010	4-CH 14-Bit 2 MS/s Simultaneous-Sampling Multi-Function DAQ	PCI, PCIe, PXI	2-7	DAQPilot	D2K-DASK
	DAQ/DAQe/PXI-2016	4-CH 16-Bit 800 kS/s Simultaneous-Sampling Multi-Function DAQ	PCI, PCIe, PXI	2-7	DAQPilot	D2K-DASK
	DAQ/DAQe/PXI-2204	64-CH 12-Bit 3 MS/s Multi-Function DAQ	PCI, PCIe, PXI	2-11	DAQPilot	D2K-DASK
	DAQ/DAQe/PXI-2205	64-CH 16-Bit 500 kS/s Multi-Function DAQ	PCI, PCIe, PXI	2-11	DAQPilot	D2K-DASK
	DAQ/DAQe/PXI-2206	64-CH 16-Bit 250 kS/s Multi-Function DAQ	PCI, PCIe, PXI	2-11	DAQPilot	D2K-DASK
	DAQ/DAQe/PXI-2208	96-CH 12-Bit 3 MS/s Ultra High-Density Analog Input Multi-Function DAQ	PCI, PCIe, PXI	2-9	DAQPilot	D2K-DASK
	DAQ/DAQe-2213	16-CH 16-Bit 250 kS/s Low-Cost Multi-Function DAQ w/o Analog Output	PCI, PCIe	2-15	DAQPilot	D2K-DASK
	DAQ/DAQe-2214	16-CH 16-Bit 250 kS/s Low-Cost Multi-Function DAQ	PCI, PCIe	2-15	DAQPilot	D2K-DASK
	DAQ/DAQe/PXI-2501	4-CH 12-Bit 1 MS/s Analog Output Multi-Function DAQ	PCI, PCIe, PXI	2-13	DAQPilot	D2K-DASK
	DAQ/DAQe/PXI-2502	8-CH 12-Bit 1 MS/s Analog Output Multi-Function DAQ	PCI, PCIe, PXI	2-13	DAQPilot	D2K-DASK
	PCI-9221	Low-Cost 16-Bit Multi-Function DAQ Card with 2-CH Encoder Input	PCI	2-5	DAQPilot	PCIS-DASK
	PCI-9222	16-CH 16-Bit 250 KS/s Multi-Function DAQ Card with Encoder Input	PCI	2-5	DAQPilot	PCIS-DASK
PCI-9223	32-CH 16-Bit 500 KS/s Multi-Function DAQ Card with Encoder Input	PCI	2-5	DAQPilot	PCIS-DASK	
General-Purpose DAQ	PCI-9111DG	16-CH 12-Bit 100 kS/s Low Cost Multi-Function DAQ Card	PCI	2-18	DAQPilot	PCIS-DASK
	PCI-9111HR	16-CH 16-Bit 100 kS/s Low Cost Multi-Function DAQ Card	PCI	2-18	DAQPilot	PCIS-DASK
	PCI/LPCI/cPCI-9112	16-CH 12-Bit 110 kS/s Multi-Function DAQ Modules	PCI, cPCI, LPXI	2-19	DAQPilot	PCIS-DASK
	PCI-9113A	32-CH 12-Bit 100 kS/s Isolated Analog Input Card	PCI	2-22	DAQPilot	PCIS-DASK
	PCI-9114A-DG	32-CH 16-Bit 250 kS/s Normal-Gain Multi-Function DAQ Card	PCI	2-17	DAQPilot	PCIS-DASK
	PCI-9114A-HG	32-CH 16-Bit 250 kS/s High-Gain Multi-Function DAQ Card	PCI	2-17	DAQPilot	PCIS-DASK
	PCI-9114DG	32-CH 16-Bit 100 kS/s Normal-Gain Multi-Function DAQ Card	PCI	2-17	DAQPilot	PCIS-DASK
	PCI-9114HG	32-CH 16-bit 100 kS/s High-Gain Multi-Function DAQ Card	PCI	2-17	DAQPilot	PCIS-DASK
	cPCI-9116	64-CH 16-Bit 250 kS/s Multi-Function DAQ Module	cPCI	2-23	DAQPilot	PCIS-DASK
	PCI-9118DG/L	16-CH 12-Bit 333 kS/s Normal-Gain Analog Input Card	PCI	2-21	DAQPilot	PCIS-DASK
PCI-9118HG/L	16-CH 12-Bit 333 kS/s High-Gain Analog Input Card	PCI	2-21	DAQPilot	PCIS-DASK	
Analog Output	PCI-6202	4-CH 16-Bit 1 MS/s Analog Output & 32-CH Isolation DIO Card	PCI	2-25	DAQPilot	PCIS-DASK
	PCI/cPCI-6208-A	8-CH 16-Bit Voltage and Analog Output Cards	PCI, cPCI	2-27	DAQPilot	PCIS-DASK
	PCI/PCIe/cPCI-6208V-GL	8-CH 16-Bit Voltage Output Cards	PCI, PCIe, cPCI	2-27	DAQPilot	PCIS-DASK
	PCI/PCIe/cPCI-6216V-GL	16-CH 16-Bit Voltage Output Modules	PCI, PCIe, cPCI	2-27	DAQPilot	PCIS-DASK
	PCI-6308A	8-CH 12-Bit Isolated Voltage & Current Output Card	PCI	2-24	DAQPilot	PCIS-DASK
PCI-6308V	8-CH 12-Bit Isolated Voltage Output Card	PCI	2-24	DAQPilot	PCIS-DASK	
High-Resolution Modules	PCI-9524	24-Bit Precision Load Cell Input Card	PCI	4-9	DAQPilot	PCIS-DASK
	PCI-9527	24-Bit High-Resolution Dynamic Signal Acquisition and Generator	PCI	4-10		



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Digital I/O	PCI/cPCI/PCIe-7200	12 MB/s High-Speed 32-CH DI & 32-CH DO	PCI, cPCI, PCIe	2-35	DAQPilot	PCIS-DASK
	PCI-7224	24-CH Opto-22 Compatible Digital I/O	PCI	2-47	DAQPilot	PCIS-DASK
	PCI/LPCI/LPCle/cPCI-7230	32-CH Isolated Digital I/O	PCI, LPCI, LPCle, cPCI	2-45	DAQPilot	PCIS-DASK
	PCI-7233	32-CH Isolated Digital Input	PCI	2-45	DAQPilot	PCIS-DASK
	PCI-7234	32-CH Isolated Digital Output	PCI	2-45	DAQPilot	PCIS-DASK
	PCI/cPCI-7248	48-CH DIO & Timer/Counter Modules	PCI, cPCI	2-47	DAQPilot	PCIS-DASK
	cPCI-7249R	48-CH DIO & Timer/Counter Module With Real I/O	cPCI	2-48	DAQPilot	PCIS-DASK
	PCI/LPCI/LPCle-7250	8-CH Relay Outputs & 8-CH Isolated DI	PCI, LPCI, LPCle	2-37	DAQPilot	PCIS-DASK
	cPCI-7252	8-CH Relay Outputs & 16-CH Isolated DI	cPCI	2-37	DAQPilot	PCIS-DASK
	PCI-7256	16-CH Latching Relay Outputs & 16-CH Isolated DI	PCI	2-39	DAQPilot	PCIS-DASK
	PCI-7258	32-CH PhotoMos Relay Outputs & 2-CH Isolated DI	PCI	2-40	DAQPilot	PCIS-DASK
	PCI-7260	8-CH High-Power Relay Outputs & 8-CH Isolated DI	PCI	2-36	DAQPilot	PCIS-DASK
	PCI-7296	96-CH Opto-22 Compatible Digital I/O	PCI	2-47	DAQPilot	PCIS-DASK
	PCI/PCIe/cPCI-7300	80 MB/s High-Speed 32-CH Digital I/O	PCI, PCIe, cPCI	2-33	DAQPilot	PCIS-DASK
	PCI-7348	High Driving Capability 48-CH Digital I/O	PCI	2-51	DAQPilot	PCIS-DASK
	PCIe-7350	50 MHz 32-CH High-Speed Digital I/O	PCIe	2-31	DAQPilot	PCIS-DASK
	PCI-7396	High Driving Capability 96-CH Digital I/O	PCI	2-51	DAQPilot	PCIS-DASK
	PCI/cPCI-7432	64-CH Isolated Digital I/O	PCI, cPCI	2-43	DAQPilot	PCIS-DASK
	PCI/cPCI-7433	64-CH Isolated DI	PCI, cPCI	2-43	DAQPilot	PCIS-DASK
	PCI/cPCI-7434	64-CH Isolated DO	PCI, cPCI	2-43	DAQPilot	PCIS-DASK
	PCI-7442	High-density 128-CH Isolated Digital I/O	PCI	2-41	DAQPilot	PCIS-DASK
	PCI-7443	High-density 128-CH Isolated DI	PCI	2-41	DAQPilot	PCIS-DASK
	PCI-7444	High-density 128-CH Isolated DO	PCI	2-41	DAQPilot	PCIS-DASK
cPCI-7452	128-CH Isolated Outputs & 128-CH Isolated DI	cPCI	2-49	DAQPilot	PCIS-DASK	
Digitizers	PCI-9810	4-CH 10-Bit 20 MS/s Simultaneous-Sampling Analog Input	PCI	4-7	DAQPilot	PCIS-DASK
	PCI-9812	4-CH 12-Bit 20 MS/s Simultaneous-Sampling Analog Input	PCI	4-7	DAQPilot	PCIS-DASK
	PCI/PXI-9816	4-CH 16-bit 10 MS/s Simultaneous-Sampling Analog Input	PCI, PXI	4-3	DAQPilot	WD-DASK
	PCI/PXI-9820	2-CH 14-Bit 65 MS/s Digitizer with 512 MB Memory	PCI, PXI	4-5	DAQPilot	WD-DASK
	PCI/PXI-9826	4-CH 16-bit 25 MS/s Simultaneous-Sampling Analog Input	PCI, PXI	4-3	DAQPilot	WD-DASK
	PCI/PXI-9846	4-CH 16-bit 40 MS/s Simultaneous-Sampling Analog Input	PCI, PXI	4-3	DAQPilot	WD-DASK
Timer Counter	PCI/cPCI-8554	12-CH 16-Bit Timer/Counter & Digital I/O Modules	PCI, cPCI	2-52	DAQPilot	PCIS-DASK



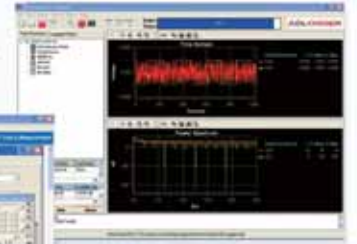
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				 <b>Windows®</b>	
				Vista (64-bit)	2000/XP/ Vista (32-bit)
<b>Motion</b>					
	PCI-8253/8256	DPS-based 3/6-axis Analog Motion Control Cards	7-7		√
	PCI-8154/8158	Advanced 4/8 axis Stepper & Servo Motion Control Cards with Modular Design	7-9		√
	PCI-8164/PXI-8164	Advanced 4-axis Stepper & Servo Motion Control Cards with High-Speed Triggering	7-13		√
	PCI-8102	Advanced 2-axis Stepper & Servo Motion Control Card	7-14		√
	PCI-8132	Entry-level 2-axis Stepper & Servo Motion Control Card with 32-CH GPIO	7-15		√
	PCI-8134	Entry-level 4-axis Stepper & Servo Motion Control Card	7-16		√
	PCI-8144	4-axis Stepper Motion Control Card	7-17		√
	cPCI-8168	Advanced 6U CompactPCI 8-axis Motion Control Card with One HSL Network	7-18		√
	PCI-8124-C	Advanced 4-CH Encoder Card with High-Speed Triggering Function	7-19		√
	PCI-8136	6-CH Quadrature Encoder and Multi-Function I/O Card	7-20		√
	PCI-8392(H)	DSP-based 16-axis SSCNET III Motion Control Cards	7-21		√
	PCI-8372+/8366+	DSP-based 12/6-axis SSCNET II Motion Control Cards	7-23		√
	cPCI-8312H	Advanced 6U CompactPCI SSCNET II 12-axis Motion Control Card with HSL Network	7-24		√
	PCI-7856	Master-Slave Distributed Motion & I/O Master Controller	7-26		√
<b>Distributed I/O</b>					
	PCI-7853/7854	High Speed Link Master Controllers	8-3		√
	NDP-243/243U	Panel Mounting Power Supply	9-3		√
	ND-6510/6520/6530/6531	Converter Modules	9-3		√
	ND-6013/6017/6018/6021/6024	Analog Modules	9-4		√
	ND-6050/6052/6053/6054/6056	Digital Modules	9-5		√
	ND-6058/6060/6063/6067/6080	Digital Modules	9-6		√
	ND-8511(D)	Serial to Ethernet Data Converter	9-7		√
<b>Communications</b>					
	PCI-7841/cPCI-7841	PCI/3U CompactPCI Dual-port Isolated CAN Interface Cards	10-2		√
	C422/C485/C518/C514/C588/C584	PCI-based Serial Communications Cards	10-3		√
	cPCI-3534/3538	3U CompactPCI 4/8-port Asynchronous Serial Communications Modules	10-4		√
	cPCI-3544	3U CompactPCI 4-port RS-422/485 Isolated Serial Communications Modules	10-5		√
	cPCI-8994	6U CompactPCI 4-port IEEE-1394a & 4-port RS-232 Card	10-6		√
<b>Vision</b>					
	FIW64/62	2/4-CH PCI Express IEEE 1394b Frame Grabber	11-3		√
	CPL64	2-CH PCI Express PoCL Frame Grabber	11-4	√	√
	CML64	Single Channel PCI Express Camera Link Frame Grabber	11-5	√	√
	GIE62+	2-CH Gigabit Ethernet Frame Grabber Supporting Power over Ethernet	11-6		√
	HDV62	Full HD 1080p Video Capture Card	11-7		√
	PCIe-RTV24/PCI-RTV24	4-CH PCI/PCI Express Real-time Video Capture Cards for Standard Cameras	11-8	√	√
	cRTV-24/44	3U/6U CompactPCI 4-CH Real-time Video Capture Boards	11-9		√
	PCI-MPEG24	4-CH MPEG4 Hardware Real-time Video Compression Card	11-10		√
	GEME-X52000/X43000/W52000	4-CH Real-time Video Capture Compact Vision Platforms	11-11		√
<b>PAC</b>					
	DPAC-3000	Distributed Programmable Automation Controller with HSL and Motionnet Bus	12-10		√
	DPAC-1000	Distributed Programmable Automation Controller with Four COM Ports	12-9		√

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Driver	Third Party Software Support			Utilities
 Linux	 LabVIEW™	 MATLAB®	RTX	
				MotionCreatorPro2
√			√	MotionCreatorPro2
√			√	MotionCreatorPro
√				MotionCreatorPro
√	√			MotionCreatorPro
√	√			MotionCreatorPro
				MotionCreatorPro2
				MotionCreatorPro
			√	TriggerMaster
√				MotionCreatorPro2
			√	MotionCreatorPro2
√			√	MotionCreatorPro2 (for all HSL I/O modules)
				NuDAM Administration
				NuDAM Administration
				NuDAM Administration
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√				
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√				
√				CamCreator
√				CamCreator
				ViewCreatorPro
√	√	√		ViweCreatorPro
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√				ViweCreator
	√			ViewCreatorPro
			√	

# Software Overview

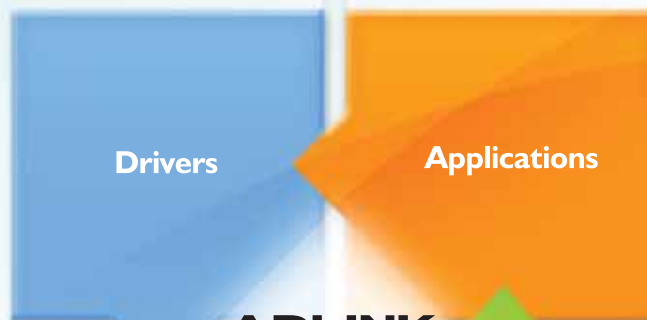


## ADLINK DAQ Driver/API

- Task-oriented driver  
DAQPilot for Windows
- DASK (legacy) drivers  
PCIS-/D2K-/WD-DASK for Windows  
PCIS-/D2K-/WD-DASK(/X) for Linux

## Ready-to-Run Test & Measurement Applications

- AD-Logger  
Configuration-based Data Logger
- DAQMaster  
Configuration-based System Manager
- DAQStreaming



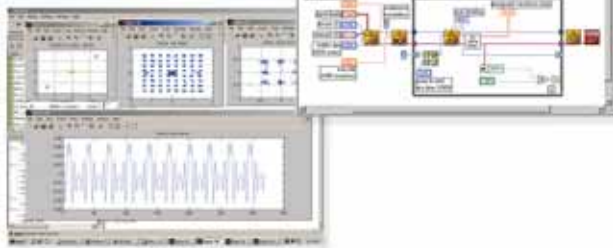
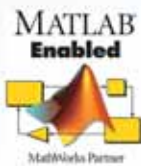
**ADLINK**  
TECHNOLOGY INC.

## Use ADLINK Data Acquisition Cards in Third-Party Software

- LabVIEW™
- MATLAB®

## Easily write your program using ADLINK SDK & Componentware

- DAQPilot for LabVIEW  
Express VI  
Polymorphic VI
- DAQPilot SDK  
ActiveX Controls  
.NET Assembly
- DAQBench

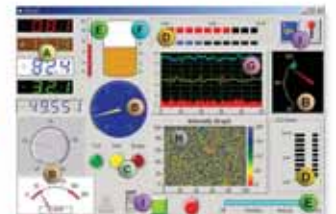


LabVIEW Express VI and Polymorphic VIs

API

ActiveX Controls

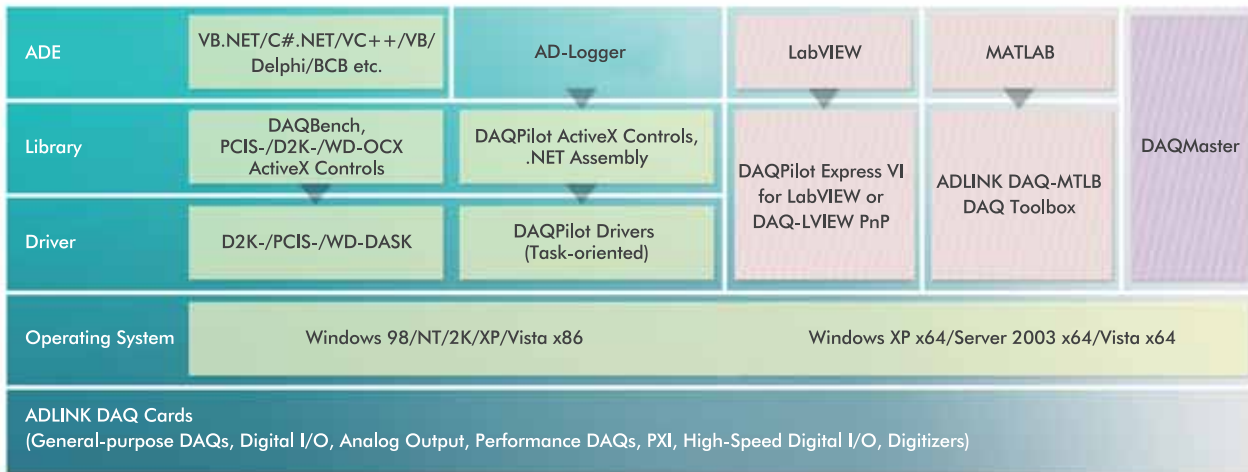
.NET Assembly



## Introduction

ADLINK Technology Inc., a leading provider of high-performance, high-quality data acquisition cards and platforms, delivers robust software support for its comprehensive line of DAQ cards with varying form factors including PCI Express®, PCI, CompactPCI®, and PXI™. ADLINK offers support not only for mainstream Windows® and Linux® operating systems, but also for third-party applications including LabVIEW® and MATLAB®. In addition, ADLINK provides .NET Assembly and ActiveX® Controls for measurement, and breakthrough proprietary software applications.

## ADLINK Software Supporting Microsoft® Windows® Frameworks



## ADLINK Solutions for Users' Software Support Requirements

	Support Requirements	ADLINK Solution(s)	Page
Windows® Driver/SDK	One task-oriented Windows® driver for all ADLINK devices	DAQPilot	1-10
	Reduce development time and shorten the learning curve	DAQPilot	1-10
	Windows Vista™ support	All software/drivers for Windows are verified	-
	Programmers who need low level controls with ADLINK DASK solution.	PCIS-DASK, D2K-DASK, and WD-DASK	1-13
	Windows® 64-bit edition support	DAQPilot PCIS-DASK, D2K-DASK, and WD-DASK	1-10 1-13
Linux® Driver/SDK	Driver and ELF shared library for Linux	PCIS-DASK/X, D2K-DASK/X and WD-DASK/X	1-13
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	Configure ADLINK DAQ devices	DAQMaster device manager	1-15
	Check for the latest versions of ADLINK software	DAQMaster software manager	1-15
	Manage DAQPilot DAQ Tasks	DAQMaster task manager	1-15
.NET & ActiveX® support	.NET assembly for ADLINK DAQ cards	DAQPilot	1-10
	ActiveX® controls for ADLINK DAQ cards	DAQPilot	1-10
	ActiveX® controls for data display, numeric analysis, and application integration	DAQBench	1-21
LabVIEW™ & MATLAB® Support	Express VI and Polymorphic VIs for LabVIEW	DAQPilot	1-11
	Use ADLINK DAQ products in MATLAB® (up to version 2008b) DAQ-MTLB DAQ Toolbox	DAQ-MTLB DAQ Toolbox	1-20
Others	Ready-to-run application, acquire everything with ADLINK DAQs.	AD-Logger	1-17
	Find sample programs	DAQMaster software manager	1-18
	Retrieve on-line pin assignment and illustration	DAQMaster device manager	1-18

# 6 Steps to Get ADLINK DAQ Cards Ready



\* We strongly recommend all users to install the latest ADLINK Driver – DAQPilot. For those who have been using legacy ADLINK DASK Drivers or are not able to connect to the internet, you may install the legacy drivers from the ADLINK All-in-one CD.

# DAQPilot

ADLINK Task-oriented DAQ Driver and SDK for Windows



## Features

- DAQ driver with graphical interface assistance for programmers
- Program via three approaches: DAQPilot API, DAQPilot ActiveX controls, and .NET assembly
- Supports Express VI for LabVIEW
- Supports Polymorphic VIs for LabVIEW
- Supports 32-/64-bit editions of Windows Vista/Server 2003/XP and legacy Windows 98/NT/2000
- Supports a complete line of ADLINK DAQ cards and compatible with all ADLINK DAQ hardware functions
- Supports various application development environments including Microsoft Visual C# .NET, Microsoft Visual Basic .NET, Microsoft Visual Basic, Microsoft Visual C++, Borland Delphi, and Borland C++ Builder
- Task-oriented approach creates your DAQ application in 3 minutes
- One interface to hundreds of ADLINK data acquisition Cards

## Develop a DAQ Application in 3 Minutes!



## DAQ in an Instant!

Days of confusing parameters, rigid programming procedures, and tons of functions to program data acquisition cards are over! Welcome DAQPilot — a revolutionary task-oriented DAQ driver that empowers you to create your DAQ tasks in minutes. Designed to streamline simple to complex DAQ applications, DAQPilot lets you focus on specific tasks via a user-friendly, step-by-step wizard. Driven by an intuitive graphical user interface, DAQPilot offers superior convenience, compatibility, and ease-of-use. Equipped with helpful built-in components such as an instant test panel and automatic reference code generation, DAQPilot lets you land in a variety of DAQ programming environment with your best foot forward.

## Introduction

DAQPilot comes as ADLINK's commitment to provide full support to its comprehensive line of data acquisition products. DAQPilot is a driver and SDK with a graphics-driven interface for various ADE, such as Microsoft Visual C# .NET, Microsoft Visual Basic .NET, Microsoft Visual Basic, Microsoft Visual C++, Borland Delphi, and Borland C++ Builder programmers. The interface assists you in completing the most simple to the most complex parts of DAQ programming. You can use DAQPilot API, activeX controls or .NET Assembly to develop your own DAQ applications in your choice programming environment. DAQPilot ActiveX controls and .NET assembly are designed to replace the original properties setting page to make configuration more effectively. For LabVIEW users, DAQPilot provides Express VI and Polymorphic VI libraries to guides you in developing LabVIEW applications without the need for the complex configuration of ADLINK DAQ cards. DAQPilot is designed for the novice to the most experienced programmer. Beside, because DAQPilot can finish a DAQ task in minutes, it is suitable for programmers aiming to immediately program their premium ADLINK DAQ modules and integrate the tasks to their own DAQ applications. DAQPilot supports a complete line of PCI/PCI Express®, CompactPCI, and PXI data acquisition modules and is ready to support future DAQ offerings. Actually, DAQPilot's strength lies on the fact that programming methods stay the same no matter what DAQ card/module you use. Therefore, you could easily program ADLINK DAQ devices using DAQPilot API, ActiveX controls or .NET assembly. Then just combine the task codes generated by DAQPilot with the corresponding hardware driver with other vendor's program to build an integrated DAQ application.

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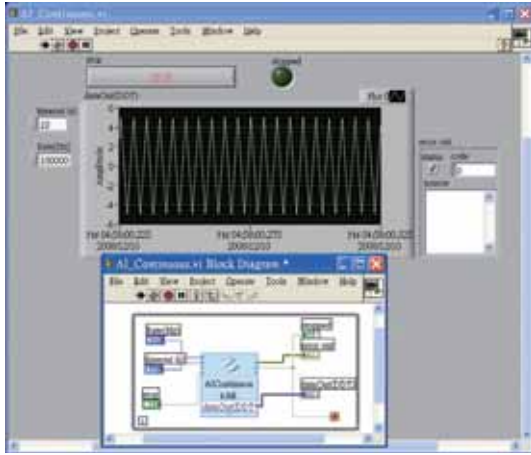
cPCI &amp; Industrial Computers

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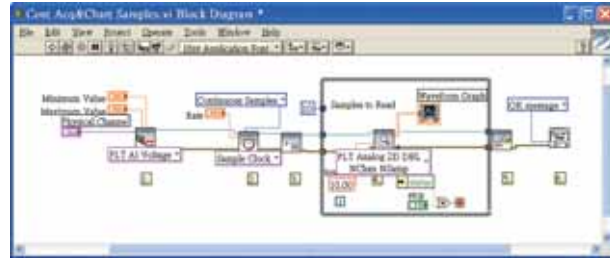
Accessories

# DAQPilot for LabVIEW™

## DAQPilot Express VI and Polymorphic VIs for LabVIEW™



DAQPilot Express VI Sample for Continuous AI



Polymorphic VI Sample for Continuous AI



DAQPilot Polymorphic VI Window

## Overview

ADLINK's DAQPilot provides task-oriented SDK for API, ActiveX controls, and .NET .NET assembly. For LabVIEW users, ADLINK introduced DAQPilot Express VI and Polymorphic VI libraries in DAQPilot beginning in version 2. Programmers can interactively configure ADLINK DAQ products through DAQPilot Express VI and Polymorphic VI libraries. DAQPilot Express VI and Polymorphic VI libraries allow you to transfer your LabVIEW software knowledge and expertise to whom may be extremely knowledgeable of that specific applications, but not so familiar with LabVIEW.

Previously, LabVIEW™ introduced an Easy I/O and Intermediate I/O layer to traditional library to simplify common DAQ tasks. ADLINK thus provided DAQ-LVIEW PnP VI Library as a plug and play library based on its architecture. Now, with the new Express VI concept, ADLINK provides DAQPilot Express VI to assist and simplify application development when using ADLINK DAQ products.

## Compatibility with LabVIEW™

The DAQPilot Express VI has been tested for compatibility under different versions of LabVIEW™:

LabVIEW™ 8.0	LabVIEW™ 8.2
LabVIEW™ 8.5	LabVIEW™ 8.6
LabVIEW™ 2009	

## What is Express VI?

Express VI is designed by interactive configuration dialog boxes. Benefits include reduced wiring, and a dramatically reduced learning curve. Express VI is composed of an Express Source VI and an Express Configuration Dialog Box VI. In fact, Express VI encapsulate the functionality of related standard VIs, providing developers with easy access to powerful measurement technologies through point-and-click interfaces, whereby such interactive VIs simply require little or no programming to configure. Express VI provides an easy-to-use interface for developers who possess in-depth understanding of the application or concepts, but lack in programming experience. With Standard VIs, VIs are modularized via wiring. With Express VI, complicated wiring is already integrated as a single interface. The DAQPilot Express VI is completely compatible with various LabVIEW™ functions and with ADLINK DAQ Products.

## What is a Polymorphic VI?

A Polymorphic VI is a collection of VIs with the same connector pane patterns. Each VI in the collection is an instance of the Polymorphic VI which provides the polymorphism ability of a node to adjust automatically to data of different representation, type, or structure. For most polymorphic VIs, the data types you wire to the inputs of the Polymorphic VI determine the instance to use. DAQPilot Polymorphic VIs thus provide a better way to perform the same operation on different data types.

## Features

- **DAQPilot Express VI** enables replacement of large portions of a complex DAQ application with a simple configuration dialog.
- **DAQPilot Polymorphic VIs** support more flexible function VIs which provide polymorphism ability for integrating different data types as an instance.
- **DAQPilot Express VI** is easier to add new features and parameters to DAQ APIs than ADLINK's DAQ-LVIEW PnP, which was developed based on traditional DASK APIs.
- **DAQPilot Express VI** provides task-oriented approach to development with configuration dialog.
- **DAQPilot Express VI** is easier to add new devices. DAQPilot uses a componential plug-in design that facilitates adding new devices. DAQ applications can use DAQPilot as a kernel to handle all detailed hardware configuration for further application development. For example, ADLINK DAQMaster, AD-Logger, Express VI are all powered by DAQPilot.

DAQPilot provides Express VI for LabVIEW™ help developers easily integrate ADLINK DAQ products into their LabVIEW™ program. Simply leave the complexities to DAQPilot so that more focus can be placed on advancing knowledge of an application.

\* National Instruments and LabVIEW are trademarks of National Instrument, Inc.

## Benefits of DAQPilot

- **Rapid DAQ development and integration**
- No hours spent on understanding functions, parameters, and confusing driver API calls
- Eliminates the time-consuming trial-and-error approach in DAQ development
- Creates tasks which can be used across multiple DAQ devices
- Supports mainstream programming environments

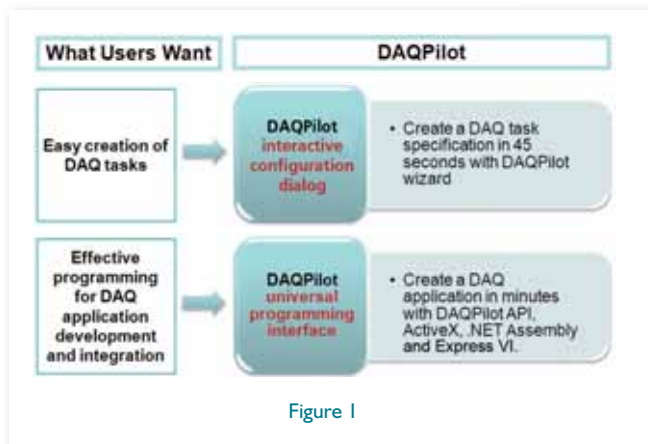


Figure 1

### Intuitive Wizard

- Smart and easy to navigate user interface
- Step-by-step DAQ parameter setting
- Automatic DAQ device detection
- Dynamically corrects wrong/unsupported settings
- Provides an instant test panel function for task validation Robust Task Manager

### Robust Task Manager (provided in DAQMaster)

- Manages predefined and newly-created DAQ tasks
- Generates the reference code for C/C++ programming languages
- Integrated test panel function immediately validates selected task(s)

### .NET Support with Managed Component

- DAQPilot .NET assembly provides many benefits to users, including:
  - .NET self-register mechanism, AUTO exception handling, AUTO garbage memory processing, AUTO type safety, etc.
  - Provides complete C# .NET and Visual Basic .NET examples

### Bridge to DAQMaster

- DAQMaster provides the connectivity between DAQMaster and DAQPilot, user can use DAQMaster to configure ADLINK DAQ products and define the DAQ Task.
- Easily to allocate memory and find the sample programs

### High-performance Runtime Engine

- Efficiently parses tasks and performs corresponding hardware operations
- Guarantees flawless execution of all DAQ task types across all ADLINK DAQ modules

### New-generation ActiveX Controls

- Supports component-based DAQ applications
- Replace traditional properties setting page, embedded DAQPilot Wizard offers faster integration with your programming environment
- Equipped with four basic functions (read, write, start, and stop) to execute any type of DAQ task
- Strongly recommended for Visual Basic programmers

### Task Gallery

DAQPilot supports five task categories which comprise 19 task items.

Analog Input		Single channel or multi-channel voltage polling
		Single-shot analog waveform acquisition
		Continuous analog waveform acquisition
Analog Output		Single channel or multi-channel voltage output
		Single channel or multi-channel current output
		Single-shot analog waveform generation
		Continuous analog waveform generation
		Sine/square/triangle/sawtooth function generation
Digital Input		Digital line input
		Digital port input
		Single-shot digital pattern acquisition
		Continuous digital pattern acquisition
Digital Output		Digital line output
		Digital port output
		Single-shot digital pattern generation
		Continuous digital pattern generation
Timer/Counter		Simple event counter
		Timer interrupt operation
		Complete 8254 mode operations
		Interrupt

### Supported Hardware

#### ADLINK PCI/PCIe/cPCI Series DAQ Cards

6202, 6208, 6216, 6308, 7200, 7224, 7230, 7233, 7234, 7248, 7250, 7252, 7256, 7258, 7260, 7296, 7300, 7348, 7350, 7360, 7396, 7432, 7433, 7434, 7442, 7443, 7444, 7452, 8554, 9111, 9112, 9113, 9114, 9118, 9221, 9222, 9223, 9524

#### ADLINK DAQ/DAQe/PXI-2000 Series DAQ Cards

2005, 2006, 2010, 2016, 2204, 2205, 2206, 2208, 2213, 2214, 2501, 2502

#### ADLINK PCI/PXI Digitizers

9810, 9812, 9816, 9820, 9826, 9846

### Free Download!!

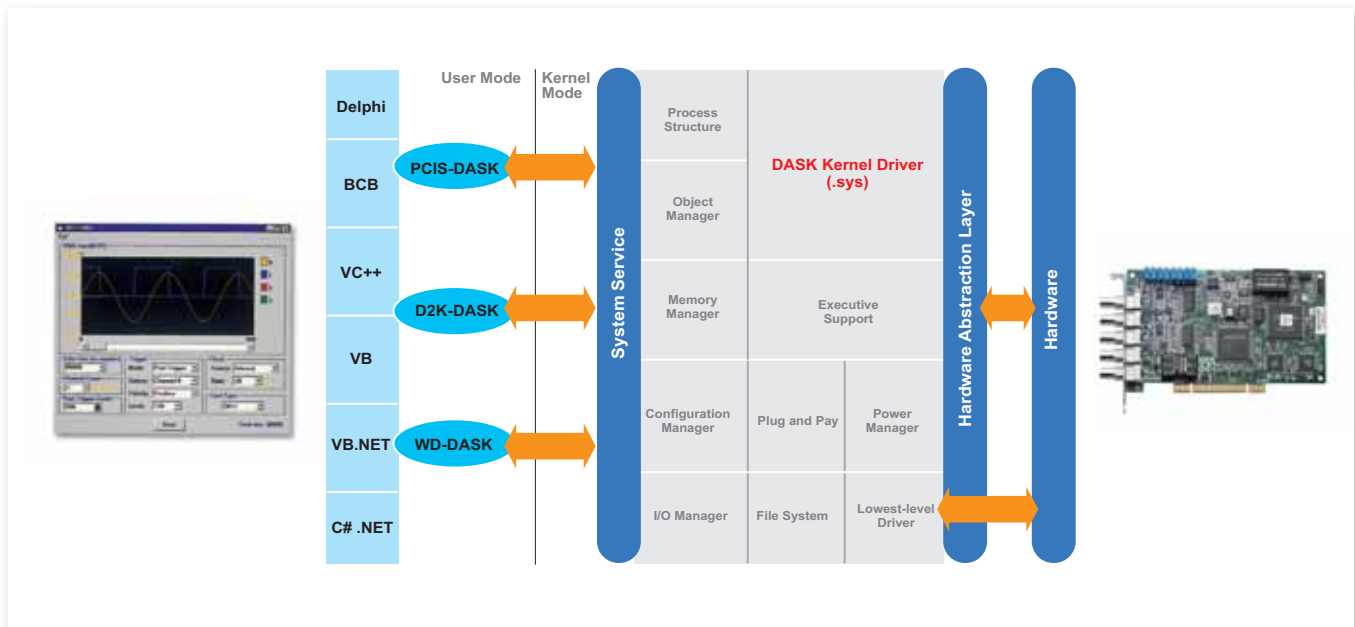
Please visit <http://www.adlinktech.com/MAPS/DAQPilot.html> for more information

**DAQPilot**  
Task-oriented DAQ Driver and SDK

**DAQMaster**  
Configuration-based System Manager to Manage DAQPilot Task

# PCIS-DASK, D2K-DASK, WD-DASK for Windows

## ADLINK DAQ Card Drivers for 32-/64-Bit Windows



### Features for 32-bit Windows

- 32-bit Windows kernel drivers/libraries for data acquisition cards
- Supports Windows 98/NT/2000/XP/Server 2003/Vista x32
- Provides full functionalities of ADLINK data acquisition cards
- Provides kernel-level event and memory mapping for complex applications
- User-defined callbacks for asynchronous data acquisition
- A new CodeCreator utility to automatically generate C code
- Complete tutorial and sample programs
- Provides header files and linkage files for
  - Microsoft Visual Basic/Visual C++
  - Borland C++ Builder/Delphi
  - Microsoft Visual Basic .NET
  - Microsoft C# .NET
- Provides example programs of Microsoft Visual Basic, Visual C/C++, Visual Basic .NET, and Visual C+ .NET

### Features for 64-bit Windows

- 64-bit Windows kernel drivers for data acquisition cards
- Supports Windows Vista x64/XP x64/Server 2003 x64
- Supports both AMD64 and Intel x86-64 architecture
- Digitally signed for 64-bit edition of Windows Vista™
- Ensures that 32-bit applications run on 64-bit editions of Windows XP, Windows Server 2003 and Windows Vista™ without modification using WOW64 subsystem

### Introduction

ADLINK DASK drivers are the device drivers for custom data acquisition applications for Windows. The DASK driver libraries provide API sets for ADLINK PCI Express®, PCI, CompactPCI, and PXI data acquisition cards to access full hardware functionalities, such as buffered/double-buffered data acquisition, pattern generation, digital input/output and etc. For novice users, the built-in CodeCreator utility helps you create your first program in just a few minutes. For experienced users, the DASK libraries expose some low-level functions for accessing kernel-level objects and allow you to program a complex data acquisition operation with optimal efficiency. ADLINK DASK drivers deliver great performance, reliability, and portability to your data acquisition systems.

### Seamlessly Migrate to Windows Vista

Windows Vista is the latest operating system from Microsoft and comes as their biggest Windows operating system launch after Windows XP. Windows Vista provides an opportunity for engineers and scientists to solve critical technical problems through greater and faster data processing not possible on earlier Windows releases. The 64-bit version of Windows Vista further supports memory intensive applications such as vision acquisition and large scale data processing that are not feasible on 32-bit operating systems.

For Windows Vista, ADLINK provides both 32-bit and 64-bit versions of kernel drivers for its full-range of DAQ cards. As previously stated, PCIS-DASK, D2K-DASK, and WD-DASK also supports Windows XP and Windows Server 2003 for 64-bit Extended Systems, including AMD64 and Intel x86-64 system architectures. PCIS-DASK is Windows Kernel Driver APIs for ADLINK PCI/PCIe/cPCI Series DAQ Cards. D2K-DASK is Windows Kernel Driver APIs for ADLINK DAQ/DAQe/PXI-2000 Series. WD-DASK is Windows Kernel Driver APIs for ADLINK High-speed digitizer.

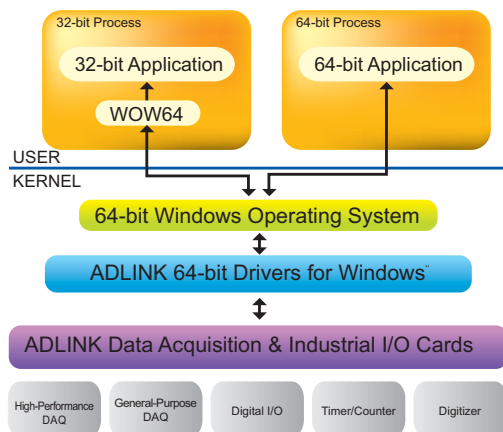
Microsoft requires a digital signature on all drivers starting from Windows Vista x64 Edition. By requiring signed drivers, Microsoft aims to reduce failures and improve stability by setting the spotlight on vendor responsibility with regard to driver bugs and glitches. For this reason, all ADLINK 64-bit DASK drivers are digitally-signed for Windows Vista x64 Edition that can be installed under the user-privilege model.

In Windows Vista, .NET Framework 3.0 (formerly known as WinFX) interface delivers a straightforward way to program applications on Vista territory. Moreover, all existing 32-bit sample programs can function normally on the 64-bit version of Windows Vista without modifications through Microsoft WOW64 (Windows-on-Windows 64-bit) subsystem, as shown in Figure 1 below. Launched in both 32-bit or 64-bit edition, Windows Vista enables the user to choose the edition depending on their computer hardware. On a 64-bit windows system, the WOW64 translation layer can allocate as much 4 GB of RAM to 32-bit Windows applications. That gives the application the full 4 GB memory space, a significant increase for heavy computing applications.

ADLINK offers relevant kernel driver releases and software updates to ensure complete compatibility with this new and exciting operating system and provide smooth and trouble-free development of applications for data acquisition, measurement, and automation.

For more information about Windows Vista support, please visit <http://www.adlinktech.com/MAPS/VistaSupport.html>

Figure 1



## .NET Support

Considered one of the most significant changes to the Windows® platform, the .NET Framework brings into the operating system unified features and responsibilities that are previously provided individually by programming languages and tools from various sources.

For .NET programmers that require direct calling of ADLINK DASK DLL libraries (Native Regular DLL Form) such as PCIS-DASK, D2KDASK, and WD-DASK, ADLINK provides the example programs for of Visual C# .NET and Visual Basic .NET that speed up the development of your applications in Microsoft Visual Studio .NET 2003/2005.

## Standardized Application Programming Interface (API)

ADLINK DASK maintains a set of consist programming interfaces across different Window platforms, and therefore provides portability between different platforms and programming languages.

In addition to basic I/O support, the DASK API also provides sophisticated build-in capability to handle memory and data buffer management. A double-buffered mode processes can be repeated endlessly to provide a stream of data to your applications.

## Software Migration

ADLINK DASK is designed to maximize programming flexibility and data throughput. There is only one set of Application Programming Interface (API), so each card be programmed with the same API for the same series of products. This greatly shortens developer's learning curve if more than one type of ADLINK data acquisition cards and digitizers is used.

## Data Acquisition Functions

ADLINK DASK provides full functionalities of ADLINK PCI/PCIe/cPCI Series DAQ cards, DAQ/DAQe/PXI-2000 Series DAQ cards, and digitizers

- Single-point analog input
- Buffered data acquisition
- Double-buffered data acquisition
- Single-point analog output
- Digital I/O control
- Buffered digital I/O
- Double-buffered digital I/O
- Counter/timer I/O

## Supported Modules

### PCIS-DASK

6202, 6208, 6216, 6308, 7200, 7224, 7230, 7233, 7234, 7248, 7250, 7252, 7256, 7258, 7260, 7296, 7300, 7348, 7350, 7396, 7432, 7433, 7434, 7442, 7443, 7444, 7452, 8554, 9111, 9112, 9113, 9114, 9118, 9524, 9221, 9810, 9812, 9222, 9223

### D2K-DASK

2005, 2006, 2010, 2016, 2204, 2205, 2206, 2208, 2213, 2214, 2501, 2502

### WD-DASK

9816, 9820, 9826, 9846

## Free Download!!

Please visit <http://www.adlinktech.com/MAPS/VistaSupport.html> for more information

### PCIS-DASK

ADLINK PCI/PCIe/cPCI Series DAQ Card Drivers for Windows

### D2K-DASK

ADLINK DAQ/DAQe/PXI-2000 Series DAQ Card Drivers for Windows

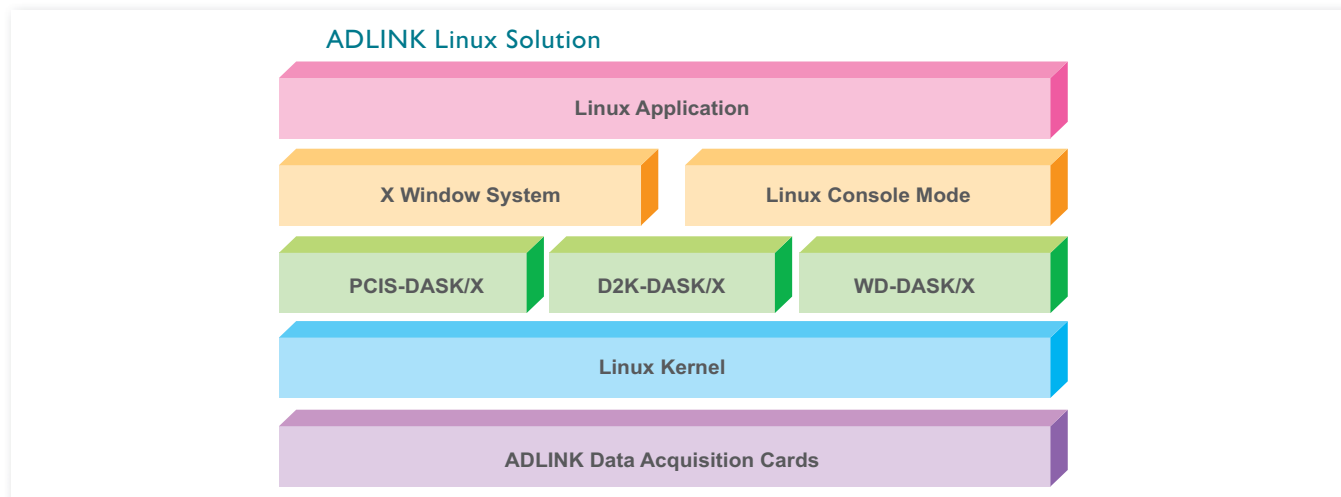
### WD-DASK

ADLINK PCI/PXI-9820 and PCI/PXI-9816/26/46 Digitizer Drivers for Windows  
Digitizer Driver for Windows

\*All company names appearing herein are trademarks or trade names of their respective owners.

# PCIS-DASK/X, D2K-DASK/X, WD-DASK/X for Linux

## ADLINK DAQ Card Drivers for Linux



### Features

- PCIS-DASK/X - drivers and SDK for APCI/PCIe/cPCI Series DAQ Cards
- D2K-DASK/X - drivers and SDK for ADLINK DAQe/DAQ/PXI-2000 series data acquisition cards
- WD-DASK/X - drivers and SDK for the ADLINK High-speed digitizer
- Linux ELF (Executable and Linking Format) shared library
- Functionalities of DASK/X
  - Arbitrary waveform generation
  - Auto calibration (D2K-DASK/X only)
  - Buffered data acquisition
  - Buffered digital I/O
  - Counter/Timer I/O
  - Double-buffered data acquisition
  - Digital I/O control
  - Double-buffered digital I/O
  - Single-point analog input
  - Single-point analog output

### Why Linux?

Linux is a freely-distributed UNIX-like operating system originally created by Linus Torvalds at the University of Helsinki in Finland in 1991. For years, thousand of users and developers have made Linux a complete and powerful operating system with a full arrangement of applications and drivers.

Here are some reasons why Linux has become very popular: it inherits the efficiency and reliability from UNIX system, and it offers multi-tasking and multi-user environment. Compared to other operating systems, Linux consumes less system resources and requires less hardware capabilities. And most importantly, it is free! Linux is recognized as an adequate platform for test and measurement applications, delivering desirable performance, great customization capabilities, and a reasonable cost.

### Introduction

ADLINK's DASK/X drivers are device drivers for custom data acquisition applications that run under Linux. DASK/X drivers provide common Application Programming Interfaces (APIs) for ADLINK's extensive family of PCI Express®, PCI, CompactPCI and PXI plug-in data acquisition cards, and utilize the full capabilities of these cards under the Linux environment. With DASK/X drivers, you can easily access all of the functionalities of ADLINK data acquisition cards to obtain optimal performance.

### ADLINK Linux Support Policy

Linux is a highly customized operating system. Driver support can vary when applied to different Linux kernels or different hardware platforms. Currently ADLINK supports and maintains drivers for the following Linux distributions on 32-bit, single x86 processor platforms.

- Ubuntu 9.0.4
- Fedora 11
- OpenSUSE 11.1
- Red Hat 9

For other distributions, kernels, or SMP configuration, please contact your local dealer for more information.

### Supported Modules

#### PCIS-DASK/X

6202, 6208, 6216, 6308, 7200, 7224, 7230, 7233, 7234, 7248, 7250, 7256, 7258, 7260, 7296, 7300, 7348, 7350, 7396, 7432, 7433, 7434, 7442, 7443, 7444, 7452, 8554, 9111, 9112, 9113, 9114, 9118, 9221, 9810, 9812, 9222, 9223

#### D2K-DASK/X

2005, 2006, 2010, 2016, 2204, 2205, 2206, 2208, 2213, 2214, 2501, 2502

#### WD-DASK/X

9820, 9816, 9826, 9846

### Free Download!!

Please visit [http://www.adlinktech.com/MAPS/linux\\_daq.html](http://www.adlinktech.com/MAPS/linux_daq.html) for more information

#### PCIS-DASK/X

ADLINK PCI/PCIe/cPCI Series DAQ Card Drivers for Linux

#### D2K-DASK/X

ADLINK DAQ/DAQe/PXI-2000 Series DAQ Card Drivers for Linux

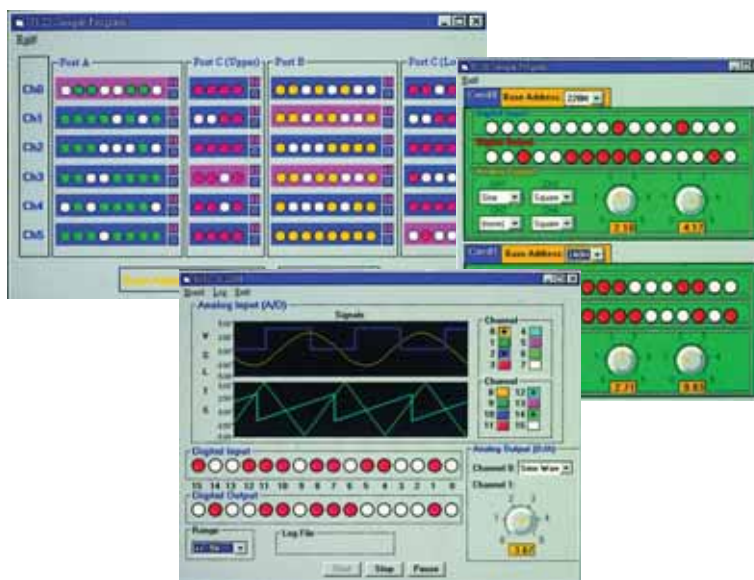
#### WD-DASK/X

ADLINK PCI/PXI-9820 and PCI/PXI-9816/26/46 Digitizer Driver for Linux

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# ACLS-DLL1, ACLS-DLL2

## ADLINK ISA-bus DAQ Cards Drivers for Windows



### Features

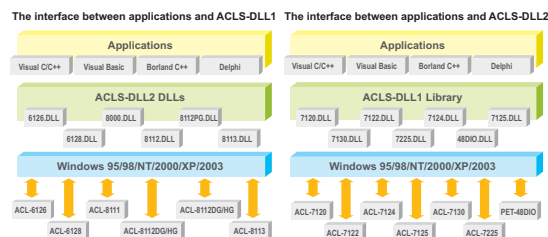
- Standard Windows driver libraries in DLL format
- Supports Windows 95/98/NT/2000/XP/Server 2003
- Makes full use of the capabilities of ADLINK ISA-bus data acquisition cards
- Native 32-bit Windows device drivers
- Provides linking files for both Visual C/C++ and Borland C++
- Provides header files for both Visual Basic and Borland Delphi
- Provides a complete set of Visual C/C++ and Visual Basic example programs

### What are ACLS-DLL1 and ACLS-DLL2 ?

ACLS-DLL1 and ACLS-DLL2 are Windows driver libraries for ADLINK NuDAQ ISA-bus data acquisition cards. ACLS-DLL1 supports digital I/O cards and ACLS-DLL2 supports multi-function cards. These driver libraries can be used with any Windows programming languages, including Microsoft Visual C/C++, Visual Basic, Borland C++, Delphi, etc.

ACLS-DLL1 and ACLS-DLL2 implement all the necessary functions to support complete hardware capabilities. Users can use ACLS-DLL1/DLL2 to easily deal with complex operation issues such as memory management, interrupt handling, and DMA transfer. Using ACLS-DLL1/DLL2 also lets users take advantage of the powerful features of Microsoft Windows environments, including multi-tasking, extended memory, and a graphical user interface, to develop data acquisition applications. ACLS driver libraries provide an easy and efficient way to access NuDAQ ISA-bus data acquisition cards in Windows.

### Architecture of Driver Interface



### Supported Modules

#### ACLS-DLL1

ACL-7120A, ACL-7122A, ACL-7124, ACL-7125, ACL-7130, ACL-7225, PET-48DIO, ACL-8454

#### ACLS-DLL2

ACL-8316/L, ACL-8312/L, ACL-8112HG, ACL-8112DG, ACL-8112PG, ACL-8216, ACL-8113A, ACL-8111, ACL-6126, ACL-6128A

### Free Download!!

Please visit <http://www.adlinktech.com> and search for

#### ACLS-DLL1

Windows driver library for ADLINK ISA-bus digital I/O cards

#### ACLS-DLL2

Windows driver library for ADLINK ISA-bus multi-function data acquisition cards

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PXI

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GPIB &amp; Bus Expansion

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Accessories

# AD-Logger

ADLINK Configuration-based Data Logger



## Features

- Log data based on DAQPilot task configurations
- Supports both real-time and historical viewer
- Supports intuitive user interface as a ready-to-run application
- Supports exporting data functions for offline analysis in third party applications, including Microsoft Excel, NI® DIADem, and MathWorks MATLAB®
- Supports all ADLINK DAQ hardware functions
- Provides basic embedded analysis functions, such as FFT
- Provides monitoring features via a user-friendly toolbox
- Provides a buffer monitoring mechanism to automatically evaluate and display the data processing system status

## Introduction

There are two general categories of software that can be used for PC-based data logging applications:

- Turnkey software, also known as configuration-based software that interface with your measurement hardware to acquire and log data
- Application development environments that depend on corresponding signal condition solutions.

ADLINK's AD-Logger is a turnkey software logger which provides a productive, flexible solution for data acquisition applications. In addition to performing basic tasks such as acquiring data and logging it to disk, data logging software tools should provide a means to handle the configuration of measurement hardware, scaling of data from channels of the system. ADLINK's AD-Logger is a configuration-based software tool that you can use to define and execute data logging tasks. AD-Logger provides basic data logging and acquisition tools for all ADLINK DAQ devices, in addition to providing data collection and monitoring functions, such graphing collected signal data, zoom observation, file saving, and dynamic transfer to third-party software (i.e. Microsoft Excel, NI® DIADem, and MathWorks MATLAB®) for post analysis. A system with compatible ADLINK DAQ devices and AD-Logger installed allows immediate data collecting and monitoring after the sampling conditions are easily configured via ADLINK's DAQPilot interactive wizard without the need for any programming.

## Benefits of AD-Logger

- No programming necessary; leave the complexity to DAQPilot
- High-speed sampling and graphing
- Long-term logging with alarm and event functions
- Modularized design, supports new hardware with new DAQPilot drivers
- Supports virtual device operation
- Seamlessly interfaces with third-party analysis software

## Obtain Waveforms in Only Four Steps

- Step 1: Configure the DAQ step-by-step with the DAQPilot configuration wizard
- Step 2: Configure the recording options and graph settings
- Step 3: Begin recording and observe real-time data display
- Step 4: Cease recording, retrieve history data from saved files, and export data for post processing

## Supported Modules

### ADLINK PCI/PCIe/cPCI Series DAQ Cards

7200, 7224, 7230, 7233, 7234, 7248, 7250, 7252, 7256, 7258, 7260, 7296, 7300, 7348, 7350, 7360, 7396, 7432, 7433, 7434, 7442, 7443, 7444, 7452, 8554, 9111, 9112, 9113, 9114, 9118, 9221, 9222, 9223

### ADLINK DAQ/DAQe/PXI-2000 Series DAQ Cards

2005, 2006, 2010, 2016, 2204, 2205, 2206, 2208, 2213, 2214, 2501, 2502

### ADLINK PCI/PXI Digitizers

9810, 9812, 9816, 9820, 9826, 9846

## Ordering Information

Please visit <http://www.adlinktech.com/MAPI/AD-Logger.html> for more information

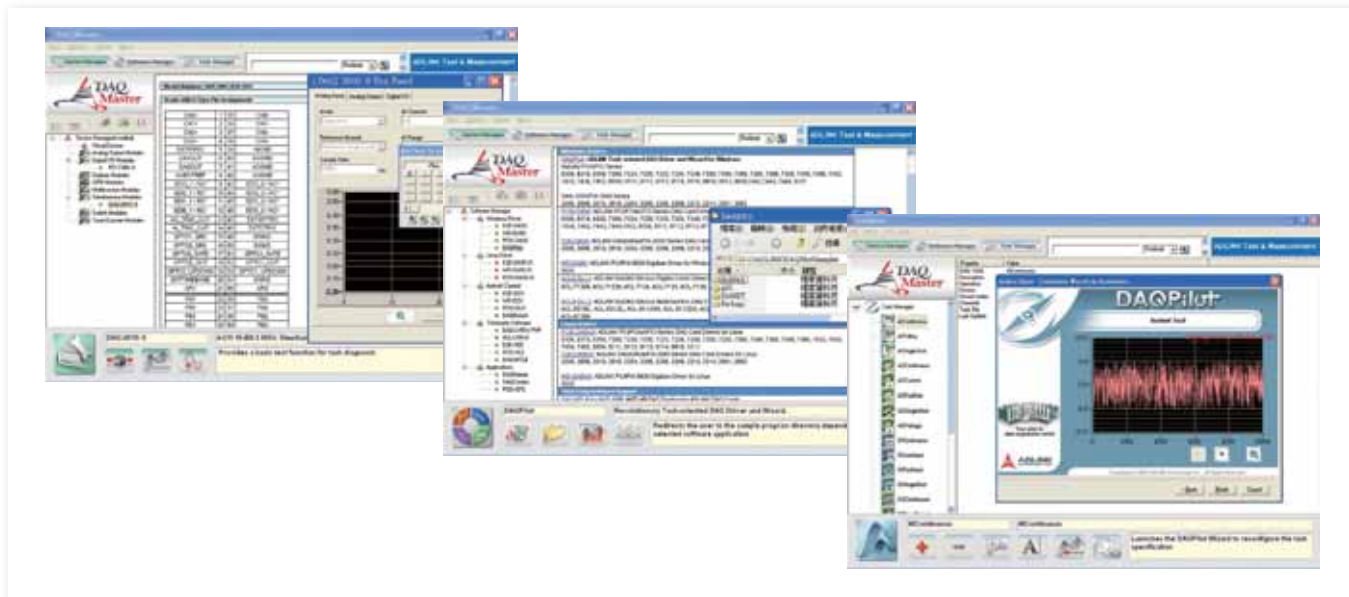
### AD-Logger

Configuration-based Data Logger

National Instruments and LabVIEW are trademarks of National Instrument Inc. MATLAB® is a trademark of The MathWorks, Inc.

# DAQMaster

## Configuration-Based System Manager for ADLINK DAQ Cards



### Features

- Manage ADLINK DAQ devices
- Manage ADLINK software
- Manage ADLINK DAQ tasks
- Supports 32-bit Windows Vista/98/NT/2000/XP/Server 2003
- Supports 64-bit Windows Vista/XP/Server 2003

### Introduction

ADLINK DAQMaster includes a series of features to provide access to ADLINK test and measurement products. The DAQMaster Device Manager feature can be used to manage installed devices. Installation documentation for related software packages and pin-out illustrations depends on the selected ADLINK device. The DAQMaster Software Manager feature manages installed ADLINK software. DAQMaster also provides the connectivity between DAQMaster and DAQPilot so that ADLINK DAQ cards can be configured in DAQMaster. DAQ tasks would then be managed via the Task Manager.

DAQMaster provides item-specific tools which can be used to configure, diagnose, or test a system. ADLINK DAQMaster provides a Windows-based configuration utility to simplify the configuration of plug-in I/O cards. Navigating through the DAQMaster page will display the contents of the product and sub-functions changes based on the selected main function. The test utility verifies the hardware operation, including analog input/output, digital input/output, and counter/timer function.

### Benefit of DAQMaster

- Configure your ADLINK Test and Measurement hardware and software in an integrated user interface
- Automatically detect and view devices connected to your system
- One click to update your ADLINK Test and Measurement software and find the samples programs
- Use ready-to-run application to execute diagnostics and basic function tests
- Manage DAQPilot tasks creation with simple editing tools such as add/create, delete, modify, copy, rename, etc.

### Hardware Support

- Analog Output Modules**  
6202, 6208, 6216, 6308
- Digital I/O Modules**  
7200, 7230, 7224, 7233, 7234, 7248,  
7249, 7250, 7252, 7256, 7258, 7260,  
7300, 7350, 7432, 7433, 7434, 7442,  
7443, 7444, 7452, 7296, 7348, 7396
- Digitizer Modules**  
9812, 9820, 9816, 9826, 9846
- Multifunction DAQ Modules**  
2204, 2205, 2206, 2208, 2213, 2214,  
2501, 2502, 6202, 9118, 9116, 9114,  
9113, 9112, 9111, 9221, 9524, 9222,  
9223
- Simultaneous DAQ Modules**  
2005, 2006, 2010, 2016,
- Timer/Counter Modules**  
8554
- GPIO Interface Modules**  
3488
- Switch Modules**  
7901, 7921, 7931
- Extension**  
8570

### Software Support

- Windows WDM Drivers**  
DAQPilot  
PCIS-DASK  
D2K-DASK  
WD-DASK
- ActiveX Controls Set**  
DAQBench  
PCIS-OCX  
D2K-OCX  
WD-OCX
- Third-Party Software Support**  
DAQ-LVIEW PnP for LabVIEW  
DAQ-MTLB for MATLAB  
D2K-VEE  
PCIS-VEE
- Proprietary Applications**  
DAQMaster  
AD-Logger

### Free Download!!

Please visit <http://www.adlinktech.com/MAPS/DAQMaster.html> for more information

#### DAQMaster

Configuration-Based System Manager for ADLINK DAQ Cards

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PXI

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Modular Instruments

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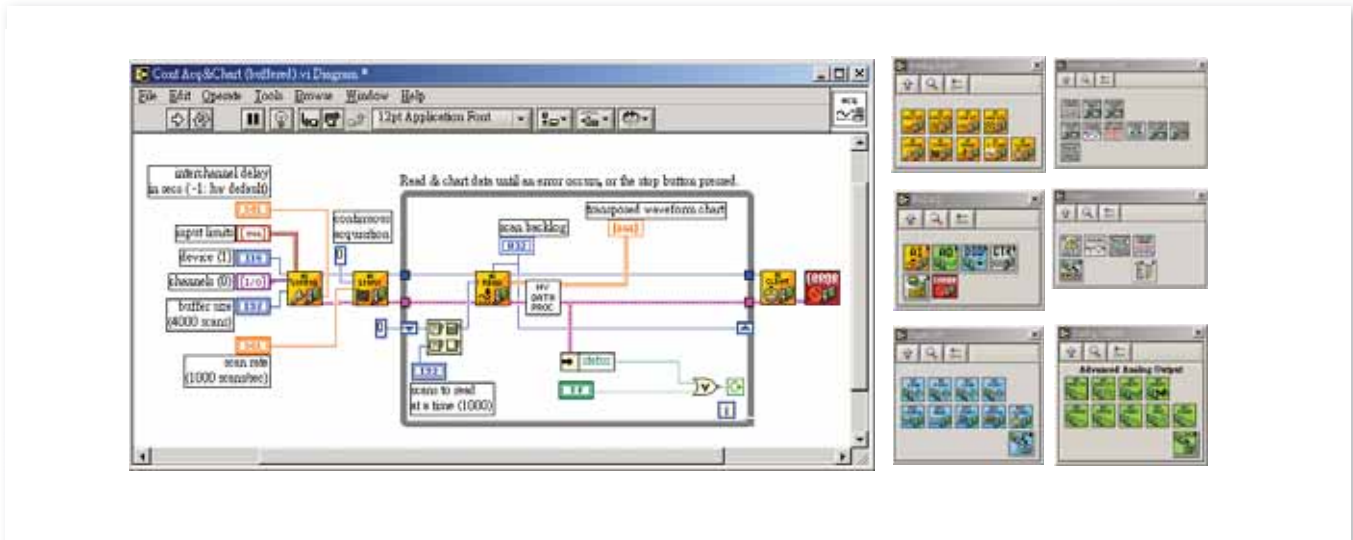
cPCI &amp; Industrial Computers

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Accessories

# DAQ-LVIEW PnP for LabVIEW™

LabVIEW Drivers for ADLINK DAQ Cards



## Features

- LabVIEW™ compatible VIs for data acquisition
- Supports a full range of ADLINK data acquisition cards
- Drop-in replacement for NI-DAQ VIs
- Supports complete hardware capabilities of ADLINK data acquisition cards
- Supports 32-/64-bit editions of Windows Vista/Server 2003/XP and legacy Windows 98/NT/2000
- Several LabVIEW™ example programs provided

## What is LabVIEW™?

National Instruments™ LabVIEW™ is an industry-leading software tool for developing measurement, test, and control applications. For years, thousands of engineers and scientists have been using LabVIEW™'s powerful graphical programming environment and its built-in data acquisition, analysis, and presentation functions to shorten the design period and increase productivity.

As an open developing environment, LabVIEW™ allows users to integrate any third-party hardware into measurement and control applications. With standard VI (Virtual Instrument) interfaces, hardware such as data acquisition cards, image capture cards and motion control cards from various vendors can be easily used in LabVIEW™. Users can take advantage of both the powerful LabVIEW™ environment and great flexibility in hardware selection.

## Introduction

DAQ-LVIEW PnP is a set of LabVIEW™ DAQ VIs that supports a full range of ADLINK data acquisition cards. Based on the concept of virtual instruments, users can easily program an operation of analog input, analog output, digital I/O, or timer/counter using DAQ-LVIEW PnP VIs. Each VI has the identical interface with NI DAQ VI in basic, intermediate, and advanced I/O modes. Users familiar with LabVIEW™ and National Instrument™'s DAQ devices can easily program ADLINK devices as these VIs follow the exact same programming method. All existing LabVIEW™ programs can be easily modified within few minutes by removing the original VIs and plugging in DAQ-LVIEW PnP VIs. With DAQ-LVIEW PnP driver, users can take advantage of LabVIEW™'s powerful graphical programming capability as well as the excellent price/performance ratio brought by ADLINK data acquisition cards.

## Compatibility with LabVIEW™

The DAQ-LVIEW PnP was designed within the LabVIEW™ 7.0 environment, and has been tested for compatibility under different versions. You can use DAQ-LVIEW PnP in the following versions of LabVIEW™:

- LabVIEW™ 6.5
- LabVIEW™ 7.0
- LabVIEW™ 7.1
- LabVIEW™ 8.0
- LabVIEW™ 8.2
- LabVIEW™ 8.5
- LabVIEW™ 8.6

## Supported Modules

### ADLINK PCI/PCIe/cPCI Series DAQ Cards

6202, 6208, 6216, 6308, 7200, 7224, 7230, 7233, 7234, 7248, 7250, 7256, 7258, 7260, 7296, 7300, 7348, 7396, 7432, 7433, 7434, 7442, 7443, 7444, 7452, 8554, 9111, 9112, 9113, 9114, 9118, 9221, 9524

### ADLINK DAQ/DAQe/PXI-2000 Series DAQ Cards

2005, 2006, 2010, 2016, 2204, 2205, 2206, 2208, 2213, 2214, 2501, 2502

### ADLINK PCI/PXI Digitizers

9810, 9812, 9820

## Free Download!!

Please visit <http://www.adlinktech.com/MAPS/labview-pnp.html> for more information

### DAQ-LVIEW PnP

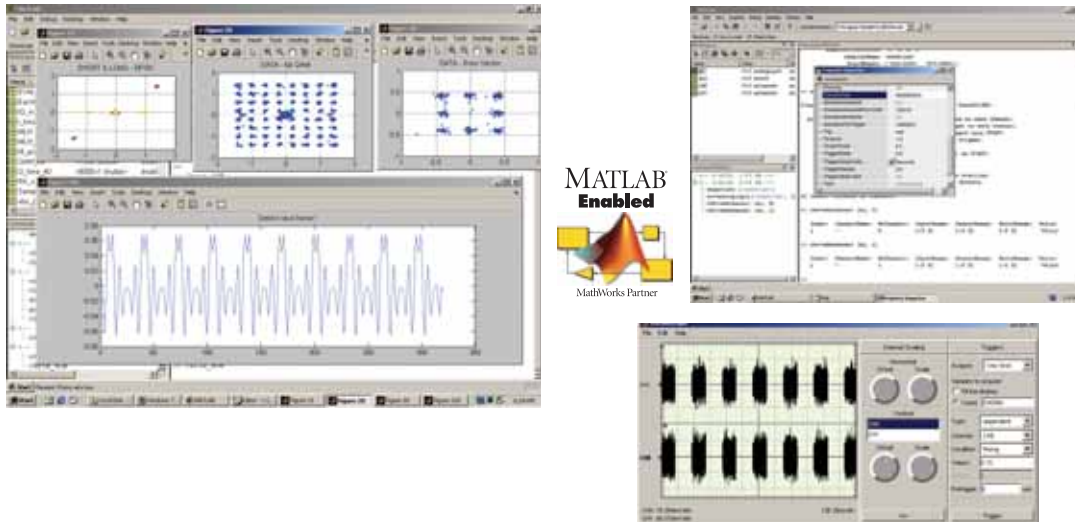
LabVIEW Drivers for ADLINK DAQ Cards

Note : DAQPilot for LabVIEW, supporting Express VIs and the Polymorphic VI, is now offered as a replacement for DAQ-LVIEW PnP.

\* National Instruments and LabVIEW are trademarks of National Instrument, Inc.

# DAQ-MTLB for MATLAB®

## MATLAB DAQ Toolbox for ADLINK DAQ Cards



### Features

- MATLAB® Data Acquisition Toolbox 2.2 (or above) compliant
- Supports MATLAB® versions up to 2009b
- Access live, measured data directly in MATLAB®
- Provides 100 kS/s to 130 MS/s, 12-bit to 16-bit data acquisition capability
- Supports a full range of ADLINK data acquisition cards
- Provides complete hardware trigger capability
- Supports analog input, analog output, and digital I/O

## What are MATLAB & DAQ Toolbox?

MATLAB® is a high-level technical computing language and interactive environment for algorithm development, data visualization, data analysis, and numeric computation. MATLAB® can be used in a wide range of applications, including signal and image processing, communications, control design, test and measurement, financial modeling and analysis, and computational biology.

Data Acquisition Toolbox is one of MATLAB® most extensive Toolbox interfaces, providing a universal command set for performing analog input, analog output, and digital I/O from a variety of data acquisition devices. The DAQ Toolbox allows user-configurable external hardware devices to acquire live waveforms and output the data within a single, integrated MATLAB® environment.

### Introduction

The ADLINK DAQ-MTLB for MATLAB® is designed to integrate ADLINK hardware with MATLAB® Data Acquisition Toolbox. This driver enables you to directly control a wide range of ADLINK data acquisition cards from MATLAB® environment. If you're a MATLAB® user, you may now extend your data acquisition capability via a hundred of ADLINK cards in a variety of form factors including PCI Express®, PCI, CompactPCI, and PXI. ADLINK also offers the first and only MATLAB® adapter for high-speed digitizer featuring up to 130 MHz sampling rate and 14-bit resolution that are ideal for applications like ultrasonic-related applications and IF signal testing for wireless communications.

Multi-function in design, ADLINK DAQ-MTLB for MATLAB® Toolbox comes with comprehensive hardware trigger capability to perform an exact data acquisition process and provides a consistent interface for ADLINK's data acquisition cards.

These allow you to acquire, analyze, and visualize data in MATLAB® environment. As a partner of the MathWorks Connections Program, ADLINK is committed to ensuring the compatibility of its products with current and future versions of all MathWorks environment.

### Benefits for Using DAQ-MTLB for MATLAB®

DAQ-MTLB for MATLAB® provides users with a seamless interface to ADLINK data acquisition cards and allows users to access realtime data for analysis and visualization in MATLAB®. For experienced MATLAB® DAQ Toolbox users, all techniques on hand can be leveraged to program ADLINK cards. For users not familiar with DAQ Toolbox, samples and a user's guide are included with the DAQ-MTLB for MATLAB® to clearly describe DAQ Toolbox commands.

With DAQ-MTLB for MATLAB®, MATLAB® users can now have more powerful hardware support for developing measurement and analysis systems.

### Supported Modules

#### ADLINK PCI/PCIe/cPCI Series DAQ Cards

6202, 6208, 6216, 6308, 7200, 7224, 7230, 7233, 7234, 7248, 7250, 7252, 7256, 7258, 7260, 7296, 7348, 7396, 7432, 7433, 7434, 7442, 7443, 7444, 7452, 9111, 9112, 9113, 9114, 9118, 9221, 9222, 9223, 9524, 7300, 7350

#### ADLINK DAQ/DAQe/PXI-2000 Series DAQ Cards

2005, 2006, 2010, 2016, 2204, 2205, 2206, 2208, 2213, 2214, 2501, 2502

#### ADLINK PCI/PXI Digitizers

9810, 9812, 9820, 9816, 9826, 9846

### Free Download!!

Please visit <http://www.adlinktech.com/MAPS/DAQ-MTLB.html> for more information

**DAQ-MTLB for MATLAB®**  
MATLAB DAQ Toolbox for ADLINK DAQ Cards

MATLAB® is a trademark of The MathWorks, Inc.

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Accessories

### DAQBench® Features

- 32-bit ActiveX controls support Windows 98/NT/2000/XP
- Easily programming in VB, VC++, Delphi, and C++ Builder
- User-friendly property pages interface for interactive configuration

### DAQBench® Benefits

- Superior flexibility** - Flawlessly combines ActiveX technology with programming languages
- Top efficiency** - Features the best run-time performance with machine-code
- Compatibility and extensibility** - Easy integration with ActiveX Controls

## What is DAQBench®?

DAQBench® is an ActiveX controls package designed for measurement and SCADA/HMI applications. DAQBench® leverages Microsoft ActiveX technology, the standard for code interchangeability and integration under Windows platform. DAQBench® provides plenty of ActiveX controls for data display, numeric analysis, and application integration. You can develop a powerful application with fantastic user interface by just piecing DAQBench® controls together in most popular programming environments. With DAQBench®, programming has never been so easy!

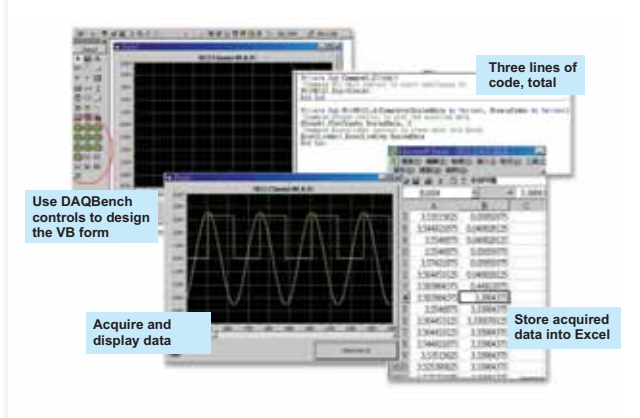
### DAQBench® for Measurement - Develop your Measurement Applications in Few Minutes

- Plenty of user interface controls including graph, chart, meter, knob, button, switch, slide, and 7-segment display
- Powerful analysis controls including statistics, vector, complex, matrix and FFT
- Integration controls on data with Excel, databases, etc.

DAQBench® assists you in every step of developing a measurement application. Data is acquired using DAQ ActiveX controls®. The DAnalysis control in DAQBench® allows you to analyze acquired data. The data can be displayed in any way preferred by selecting the corresponding user interface control. Data can also be integrated into Excel or a database with the DAQBench® data integration controls. Figure 1 is an example of using VB with DAQBench® to develop a data acquisition application.

ADLINK provides free DAQ ActiveX controls to support a entire line of data acquisition cards. Please refer to PCIS-OCX, D2K-OCX, or WD-OCX for detailed information

Figure 1



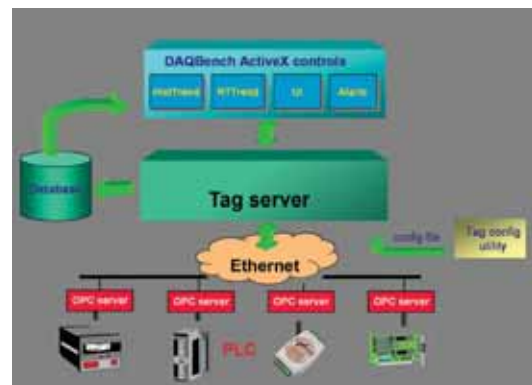
### DAQBench® for SCADA/HMI - Unlimited SCADA/HMI Applications with Network Accessibility

- A smart tag server for automatically data gathering, data logging, and alarm generating
- Support any kind of hardware device via OPC standards
- Distinctive controls for SCADA/HMI application including real-time trend, historical trend, alarm display, report generating, and industrial symbols
- Supports Mitsubishi PLCs, Omron PLCs, AB PLCs, Modbus/TCP, and M-System in the DAQBench® 2.4 package
- No limitation on tag numbers

DAQBench® provides a complete and robust structure for developing a SCADA/HMI application without limiting hardware alternatives and application flexibility. Utilizing OPC technology, DAQBench® accesses any hardware such as DAQ modules, PLCs, and DMMs which have a corresponding OPC server. The built-in Tag Server communicates with the OPC servers to gather and log data, update the user-interface, and generate alarms. DAQBench® also provides abundant graphical controls so you may develop a userfriendly SCADA/HMI application as shown in Figure 2.

- Real-time trend** - Automatically gather data from Tag Server and display the real-time data trend
- Historical trend** - Retrieve and display data from the Microsoft JET database
- Alarm display** - Display alarm(s) issued from the Tag Server according to specified conditions
- Ack button** - Acknowledge alarm(s) manually
- Data report** - Retrieve and display past data from the database
- Alarm report** - Retrieve and display past alarm(s) from the database
- Alarm reactor** - React when alarm(s) occur; behaviors including a pop-up window, sending an e-mail, playing an audio file, and issuing a short message.
- Tag control** - Directly read/write the corresponding I/O point
- Equipment controls** - Industrial symbols for HMI interface
- User-interface controls** - Switch, knob, slide, 7-segment display.

Figure 2



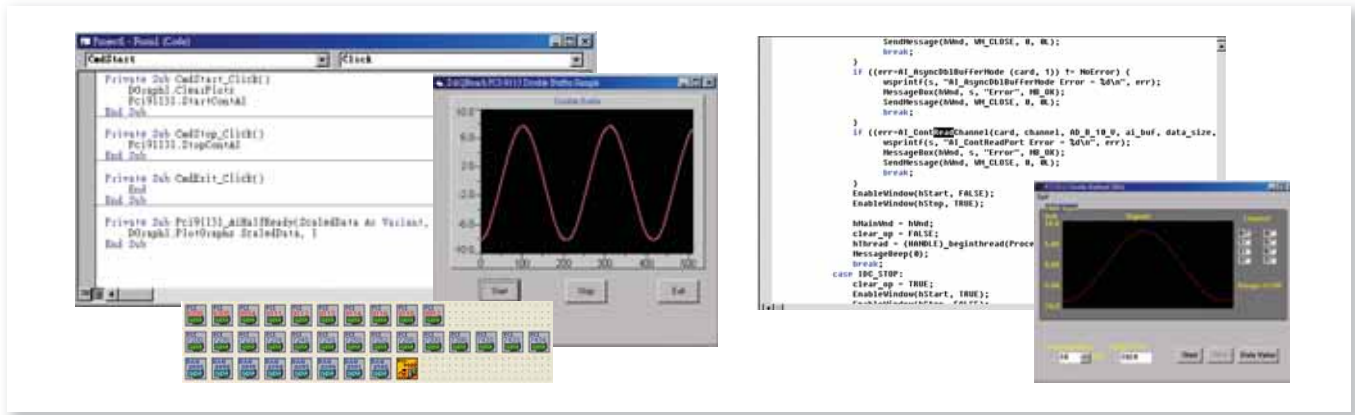
### Ordering Information

**DAQBench**  
ActiveX Controls for Measurement and SCADA/HMI

- Note:
1. DAQBench Development version is bundled free of charge when ordering any ADLINK DAQ board. Customers can get the installation package from the shipped Test and Measurement All-In-One CD.
  2. DAQBench Runtime version is free for download.

# PCIS-OCX, D2K-OCX, WD-OCX

ActiveX Controls for ADLINK DAQ Cards



## Features

- 32-bit ActiveX Controls for data acquisition
- Easy-to-use property page for parameter configuration
- Event-driven programming methodology
- Works with any ActiveX container, including Visual Basic, Borland Delphi, Visual C++, Borland C++ Builder, etc.
- Supports the full hardware capabilities of ADLINK data acquisition cards
- Example programs for Visual Basic, Visual C++, and Borland C++ Builder

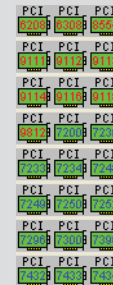
## Supported Modules

- PCIS-OCX**  
6208, 6216, 6308, 7200, 7224, 7230, 7233, 7234, 7248, 7249, 7250, 7252, 7296, 7300, 7348, 7396, 7432, 7433, 7434, 8554, 9111, 9112, 9113, 9114, 9116, 9118, 9810, 9812
- D2K-OCX**  
2005, 2006, 2010, 2204, 2205, 2206, 2501, 2502
- WD-OCX**  
9820

## Free Download!!

Please visit <http://www.adlinktech.com> and search for

**PCIS-OCX**  
DAQ ActiveX Controls for ADLINK PCI/PCIe/cPCI Series DAQ Cards



**D2K-OCX**  
DAQ ActiveX Controls for ADLINK DAQ/DAQe/PXI-2000 Series DAQ Cards



**WD-OCX**  
DAQ ActiveX Controls for ADLINK PCI/PXI-9820 High-speed Digitizer



## What are ActiveX Controls?

ActiveX is a standard of software component defined by Microsoft. Developers can insert any ActiveX control into an application to use the functionality it provides without knowing how it works. Many popular programming environments, such as VB, VC++, C++ Builder, and Delphi support ActiveX controls.

## Introduction

PCIS-OCX, D2K-OCX, and WD-OCX are part of ADLINK's commitment to provide a user-friendly interface to program our data acquisition devices. OCXs are the drivers encapsulated in the ActiveX control format and provide the same functions as the traditional driver APIs. These OCX drivers are well designed to hide all the details of hardware access and operation sequences, and therefore only a few lines of code are needed to program a data acquisition procedure. All sophisticated hardware configurations can be done with mouse clicks in the graphical user interface. ADLINK PCIS-OCX, D2K-OCX and WD-OCX provide an exceptionally easy way to access DAQ cards in the most popular programming environments.

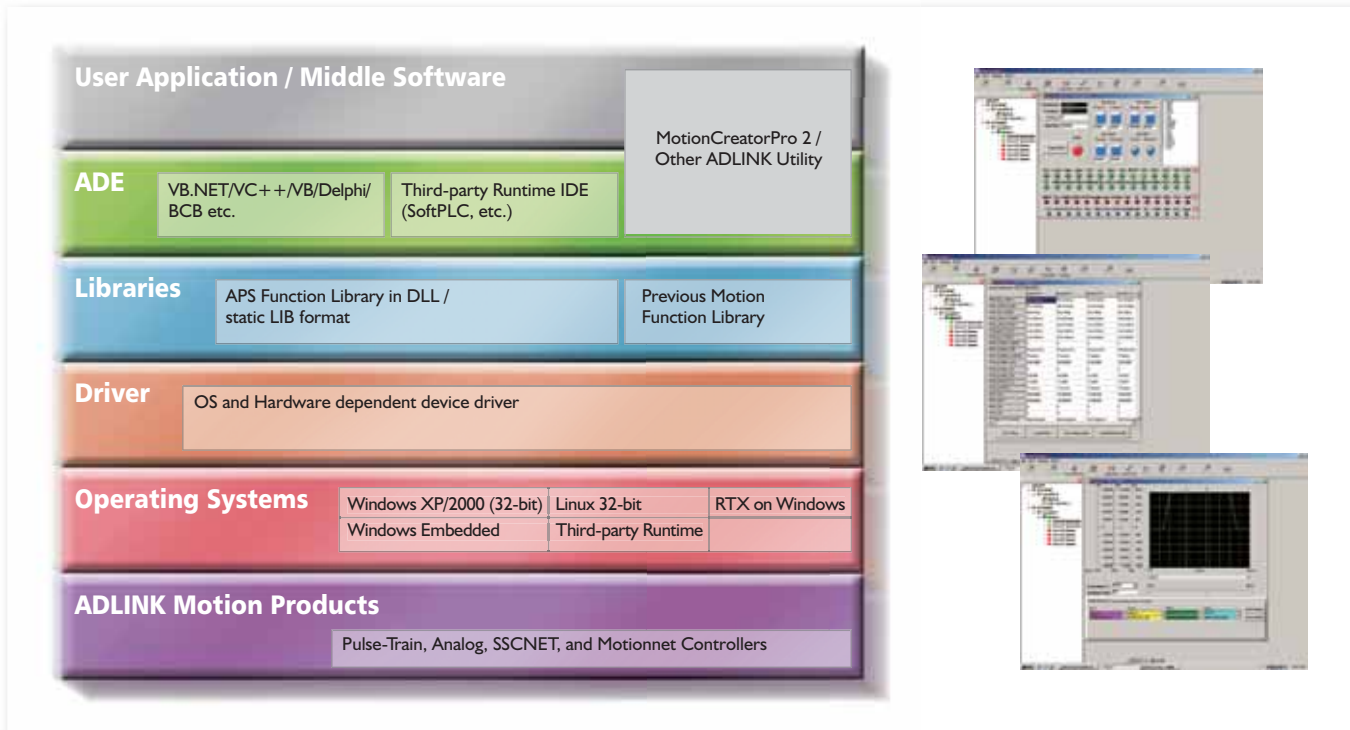
## Benefits of OCX Drivers

Using OCX drivers has some obvious benefits. First, the OCX drivers hide all implementation details and only reveal some easy and intuitive interfaces for operating. For this reason, using OCX drivers can greatly reduce development time and code size. Naturally, such programs using OCX drivers are also much easier to maintain. ADLINK OCX drivers are developed by experienced engineers familiar with hardware and driver details to guarantee the best run-time performance and reliability. Because ActiveX is an open standard, developers can piece together any existing ActiveX controls to build applications. For example, use a control in D2K-OCX to acquire a waveform, and then plot the waveform on the screen with another graphical control in ADLINK DAQBench. The OCX drivers and ActiveX technology deliver the maximum flexibility to your applications in the simplest way.

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- Remote I/O
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# MotionCreatorPro 2™

Universal User Interface Utility for ADLINK Motion Controllers



## Features

- Manage ADLINK's complete product line of motion controllers, including pulse-train, analog, SSCNET, and Motionnet types.
- Easily configure all servo and motion axis parameters instantly via table settings
  - Supports motion axes operation and status monitoring
  - Real-time data sampling for current position and speed, dedicated motion I/O information
  - Supports HSL I/O status by indicated on-screen LED
  - Easy-to-debug system
  - Support Windows® Vista (32-bit version)/XP/2000

## Introduction

ADLINK MotionCreatorPro 2 is ready-to-run motion control utility that graphically display the speed profile to familiarize users with motion control manipulation. This universal user interface for all ADLINK analog and SSCNET serial motion controllers provides single-axis, multiple-axis, and interpolation operation and simulation. MotionCreatorPro 2 also enables real-time motion data sampling via sampling windows and high-speed I/O can be checked via the HSL filed bus. The logic of the motion and general-purpose I/O can be configured to store the data to hard disk and allow users to review and adjust speed profile settings via a graphical display.

## Benefits of MotionCreatorPro 2

- **Easy-to-use motion manipulation**  
Axis manipulation supports linear/circular interpolation.
- **Easily monitor dedicated motion I/Os status and interrupt events**  
All dedicated motion and general-purpose I/O will be monitored and displayed on-screen.
- **Instant speed profile graphing**  
The speed profile can be viewed and simulated via a graphical interface. The speed profile can also be adjusted at the same time through the interface.
- **Easily debug designs**  
Simple and comprehensive hardware and software debugging.
- **Easily repeat servo and axis parameters settings with tables**  
The servo and axis parameters can be configured and reused by using a table setting method. All parameter settings from indicated servos/axes can be shared with each other.

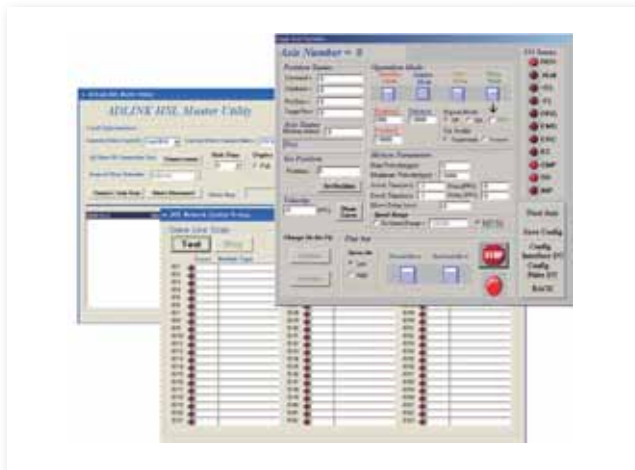
## Supported Modules

[PCI-8253/8256](#)  
[PCI-8154/8158](#)  
[PCI-8144](#)  
[PCI-8392/8392H](#)  
[PCI-7856](#)  
[MNET-4XMO/MNET-4XMO-C](#)  
[MNET-J3/S23/MIA](#)  
[PCI-7853/7854](#)  
[HSL I/O modules](#)

See Chapter 7 for more information on ADLINK motion modules

# HSL LinkMaster Utility

Windows-based Utility for ADLINK HSL Distributed Modules



## What is HSL LinkMaster?

ADLINK's HSL LinkMaster utility is an integrated Windows utility for testing HSL systems. This utility is designed easily help you setup the baud rate of your system, scan all the connected modules for testing, check and ensure the network communication quality, perform calibration via software, and move servo motors with the built-in MotionCreator-Pro applet. With HSL LinkMaster, you can test the operation of your HSL system before programming the application. The HSL LinkMaster utility offers a graphical interface, easy-to-use features, and an efficient way to control HSL slave modules.

### Features

- One easy-to-use user interface to scan and test all HSL modules
- Graphical view the status of the entire HSL network
- Communication status is displayed on each module page
- Calibration via graphical interface
- Built-in MotionCreatorPro applet to use with and test HSL motion controllers

### Supported Modules

- HSL Master Boards**  
PCI-7853 / PCI-7854
  - HSL I/O Modules**  
All U, M, and DB series modules
  - HSL Motion Modules**  
HSL-4XMO-CD-N / HSL-4XMO-CG-N
- See Chapter 8 for more information on the ADLINK HSL series.

# NuDAM Administration

Windows-based Utility for ADLINK NuDAM Remote Data Acquisition Modules



## What is NuDAM Administration?

NuDAM Administration is a graphical user interface for sending ASCII commands to and acquiring data from remote modules. With the built-in toolkit, you can use this utility to setup COM ports and baud rate, configure the default mode setting for each NuDAM module and assign addresses, send ASCII commands to each module without programming, and acquire the data from each module before programming the application. NuDAM Administration provides an easy and efficient way to access all NuDAM 6000 series modules.

### Features

- Graphical user interface to easily send commands and acquire data
- Easily scan all connected NuDAM modules
- Simple default mode setting configuration
- Simple calibration for analog modules

### Supported Modules

- All ND-6000 series modules**
- See Chapter 9 for more information on the ADLINK NuDAM series.

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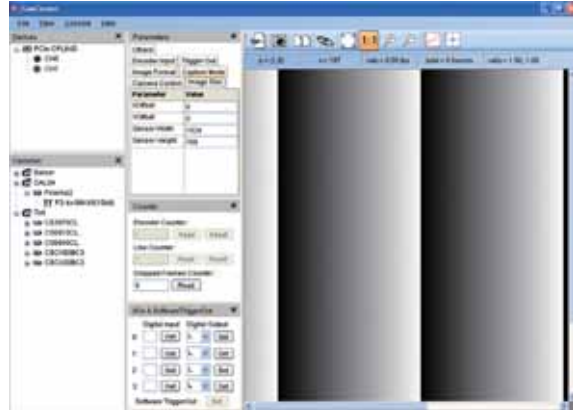
Accessories

# ViewCreatorPro™ / CamCreator™

Image Development Utilities for ADLINK Frame Grabbers



ViewCreatorPro™



CamCreator™

## Features

### ViewCreator

- Supports 32/64-bit Windows® XP/Vista operating systems
- Access and configuration of ADLINK RTV series vision cards
- Adjust video picture
- Save image files
- Direct access of general purpose I/Os
- Full, CIF, or QCIF image sizes; 2 x 2 or 4 x 4 display
- Software triggering

### CamCreator

- Supports 32/64-bit Windows® XP/Vista operating systems
- Access and configuration of ADLINK CML/CPL series cards
- Automatic detection of acquisition hardware
- Creation and modification of camera files
- Instantaneous modification of camera parameters
- Serial communication
- Open and save still image files
- Direct access of general purpose I/Os
- View captured images

## Introduction

ViewCreatorPro and CamCreator provide a simple yet powerful means to setup, configure, test, and debug vision systems. These utilities assist developers in evaluating initial test functions with ADLINK frame grabbers. Both ViewCreatorPro and CamCreator support 32/64-bit Windows XP/Vista operating systems. In addition, CamCreator provides pixel values, focus values, and zoom in/out functionality to expedite vision system installation.

## Supported Modules

### ViewCreatorPro

HDV62, PCIe-RTV24, PCI-RTV24, cRTV-24/44, GEME-X43000/X52000/W52000

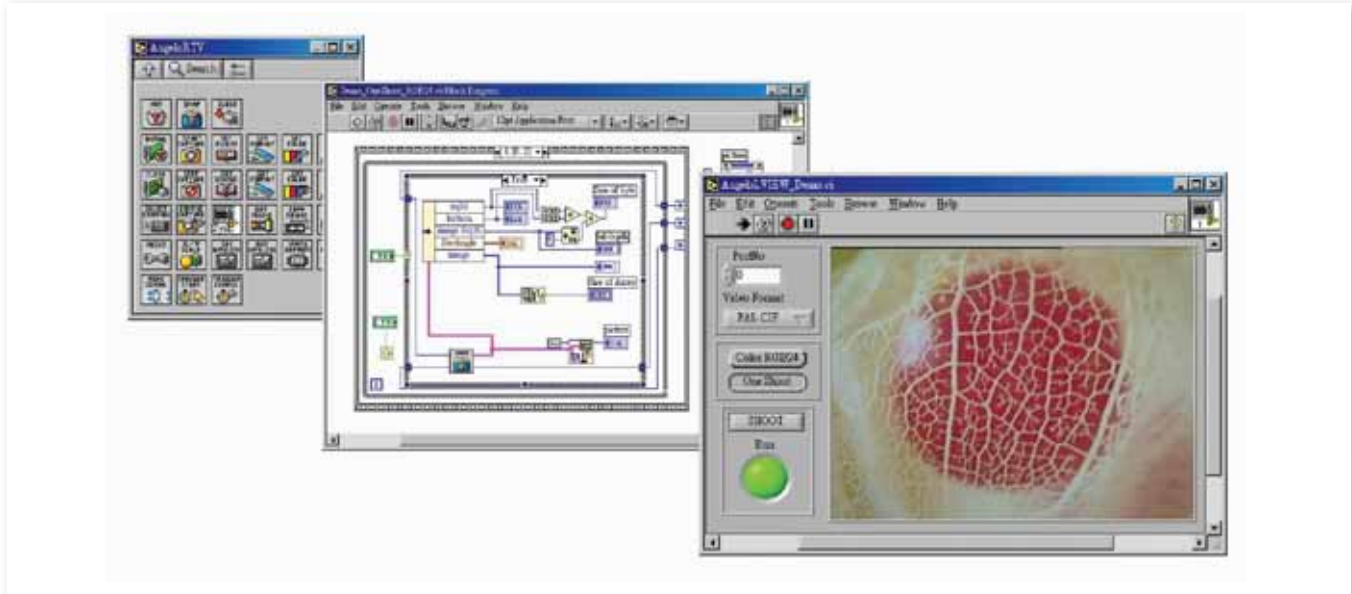
### CamCreator

CML64, CPL64

See Chapter 11 for more information on ADLINK vision solutions.

# Angelo-LVIEW

## LabVIEW Driver Support for ADLINK Frame Grabbers



### Features

- Visual programming interface
- Supports 32-bit Windows® XP/Vista operating systems
- Access and configure RTV series cards

### What is LabVIEW™?

National Instruments™ LabVIEW™ is an industry-leading software tool for developing measurement, test and control applications. For years, thousands of engineers and scientists have been using LabVIEW™'s powerful graphical programming environment and its built-in data acquisition, analysis, and presentation functions to shorten design periods and increase productivity. As an open development environment, LabVIEW™ allows you to integrate any third-party hardware into measurement and control applications. With standard virtual instrument (VI) interfaces, hardware such as data acquisition cards, image capture cards, and motion control cards from various vendors can be easily used in LabVIEW™. Take advantage of both the powerful LabVIEW™ environment and great flexibility in hardware selection.

### Introduction

ADLINK's Angelo-LVIEW interface software packages contain libraries with many virtual instruments (VIs) acting as the interface between ADLINK DLLs and LabVIEW™. Developers familiar with LabVIEW™ can easily take advantage of LabVIEW™'s intuitive graphical programming capability as well as the performance of ADLINK's frame grabbers.

### Supported Modules

PCIe-RTV24, PCI-RTV24, cRTV-24/44, PCI-MPG24, GEME-X43000/X52000/W52000

See Chapter 11 for more information on ADLINK vision solutions.

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