# Software for DAQ Cards

Overview

ICP DAS delivers a powerful set of software for the I/O (AD/DA, DI/DO and Timer/Counter series) cards, which helps users to build industrial measurement and control applications easily.

These software are DOS Lib, SDK for Windows, ActiveX Control, LabVIEW driver, Java I/O driver, DasyLab driver and InduSoft Web Studio driver. In most cases, they support Windows 95/98/NT/2000/XP operating systems, while the others support DOS or Linux systems.
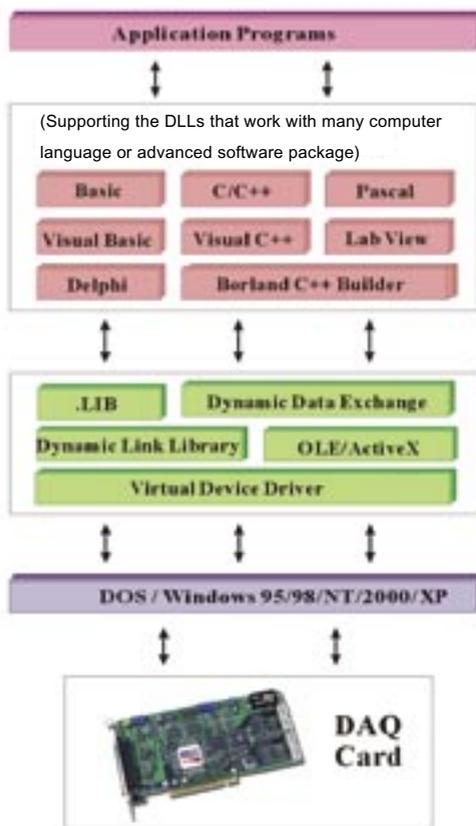
These software packages are designed for users to easily use and learn. Most of the softwares contain a lot of sample programs including source codes that are free to modify and use.

You can distribute the shared libraries (that developed by ICP DAS) with no licensing fees, which gives you a cost-effective method to deploy your own run-time applications.

DOS and Windows

The DOS Lib contains useful function libraries, while the SDK for Windows provides kernel driver, powerful and shared Win32 DLL. These software packages include TC/BC/MSC or VC/VB/Delphi/BCB sample programs with source codes.

ActiveX Control

ActiveX Control (OCX) is a software component for users to develop programs easily and friendly. We provide OCX and sample programs written in VB, Delphi and BCB with source codes.

Linux

ICP DAS provides drivers to support the Linux OS for I/O cards, and provides sample programs written in C/C++ with source codes.

Java

Java I/O Driver gives supports to the low level I/O access in JVM. It provides I/O packages and sample programs with source codes.

LabVIEW

LabVIEW is the best way to acquire, analyze, and present data. ICP DAS gives supports to the LabVIEW and provides lots of sample vi.

DASYLab

DASYLab provides the Easy-to-Use software for data acquisition, analysis and control systems. ICP DAS develops a series of state-of-the-art DASYLab driver for I/O cards.

InduSoft Web Studio

InduSoft Web Studio is a powerful, integrated software that used to develop HMI, SCADA systems, and embedded control applications. We provide the InduSoft bundled driver for I/O cards.

Software Solution

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Software for DAQ Cards
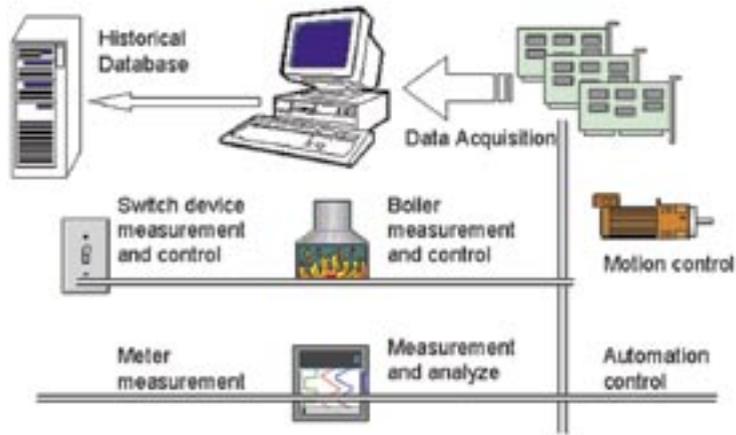
DOS Lib

DOS has many good features (such as high performance, stability, easy to install and deploy...) for the industrial control and measurement applications.

ICP DAS continuously supports DOS system by providing useful function libraries and lots of C sample programs with source codes. Users can modify or use the sample programs freely.

● Useful function libraries for TC, BC and MSC with large and huge mode.
● Lots of sample programs for TC, BC and MSC with source codes.
● Integrated diagnostic program.
● Completely function descriptions.
● Easy use and easy learn.
● No licensing fees for shared libraries.

SDK for Windows

Windows is the most popular OS in the world, and it is easy for users to use and to develop good user interface applications. Thus, ICP DAS gives more supports to the Windows operating systems.

The SDK (Software Development Toolkit) for Windows provides kernel driver, powerful and shared Win32 DLL and contains lots of VC/VB/Delphi/BCB sample programs with source codes. Users can distribute the driver and shared DLL with no licensing fees.

● Kernel mode device driver.
● Powerful and shared Win32 DLL.
● Sample programs for VC, VB, Delphi and BCB with source
  codes.
● Diagnostic program.
● Completely function descriptions.
● Plug and Play support.
● No licensing fees for DLL and driver.
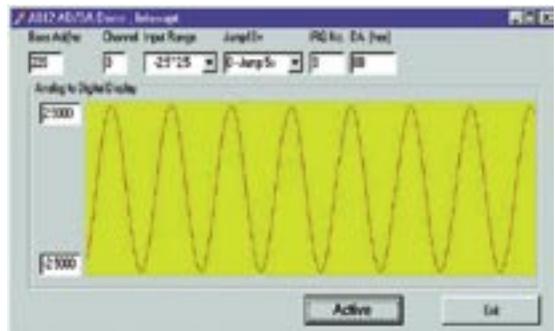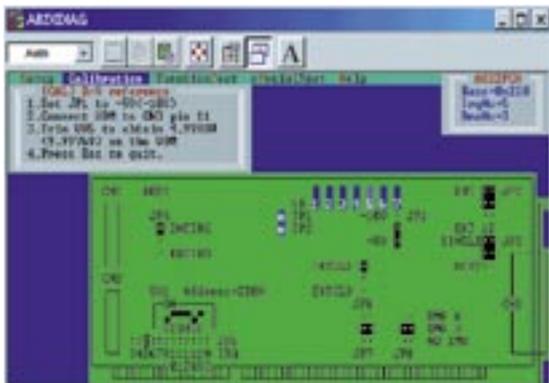
ActiveX Control

Enables you to develop programs in a quick and easy way
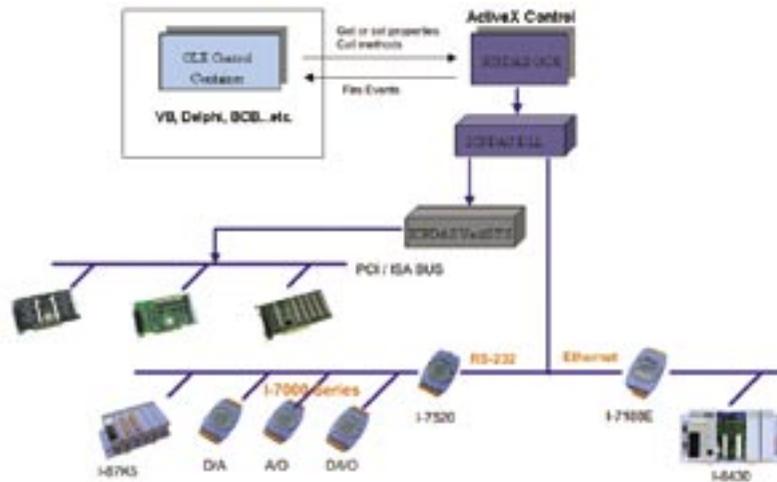
Introduction

ActiveX Control (OCX) is a standard of software component proposed by Microsoft for developing program easily and friendly. You can insert any OCX into your application to use the properties, methods and events of the object to develop your own application without understanding how it works. OCX is supported by many popular application development tools, such as Visual Basic, Visual C++, Delphi, and Boland C++ Builder in operation Windows 95/98, NT 4.0, 2000 and XP. With OCX, users with varied backgrounds and expertise are able to bring their creativity to any kind of application. ICPDAS OCX communicates with PCI, ISA and DCON series cards and modules to perform digital, analog and timer/counter operations. ICPDAS OCX is designed to hide all details of hardware manipulation well, so the data acquisition operations can be achieved by only few lines of codes. The following figure gives the programming system architecture for the ActiveX Control component.

Features

- Standard Win32 DLL.
- 32-bit ActiveX Control (OCX).
- Interoperability with Visual Basic, Visual C++, Delphi and Borland C++ Builder.
- Provides demo programs for Visual Basic, Delphi and Borland C++ Builder.
- Supports the Windows 95/98, NT 4.0, 2000 and XP.
- Supports almost PCI, ISA DAQ cards and DCON series modules of ICPDAS products

Difference between DLL and OCX

With ICPDAS DLL, you can easily access all functionality of PCI, ISA, DCON serial cards and modules. But before you use the DLL functions, you must declare them in your application development tool. Please refer to figure 1-1. If you use the OCX, you don't need to declare the DLL functions. You only need to import the OCX and then you can use the properties, methods and events of the object easily and quickly. Please refer to figure1-2.

Figure 1-1.   DLL declare

Figure 1-2.   OCX Import

Software Solution

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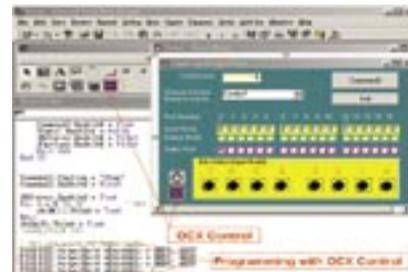
ILinux

Introduction

The Linux comes with a huge level of support from the open source development community. A well deserved reputation for stability and flexibility, no licensing fees or use restrictions to speak of these factors, constitute the Linux as an ideal operating environment. As the Linux operating system continues to gain ground in the industry and enterprise application, ICPDAS provides drivers and libraries to help users to ride the Linux for their industry control projects.

There are two groups of software that support the ICPDAS serial modules and IO add-on cards in the Linux. The serial modules are supported by the libi7k and the USB to Serial projects. The IO cards are supported by the IxPIO, IxPCI, and the IxISA projects.

libi7k (DCON_Linux)

Since the RS-232 is an officially supported serial device by the Linux system, all ICPDAS serial modules which communicate to PC RS-232 (COM) port can work without special driver installed. The Linux application communicates to the module by reading and writing the /dev/ttySn which represents the module connected port. However, the Linux serial device comes with wealthy features from the UNIX legacy, some features may be tricky. The libi7k provides a convenient way to open/close and read/wirte to the serial port in the ICPDAS module acceptable format.

The libi7k comes with serial IO functions, wraps of the MS I-7000/8000/87000 libraries, i7kon, iWarp, and examples. The wraps help users who have to work in the Linux but are only familiar with the MS libraries.

i7kon

The i7kon is an NCURSES text console tool, provides some simple functions to open/close serial port, search and send manual command to module. The i7kon allows user to run on a telnet or ssh connected terminal and send command to the module connected at the serial port of the remote host. The i7kon is also an example for console application, users can feel free to modify it for their use.
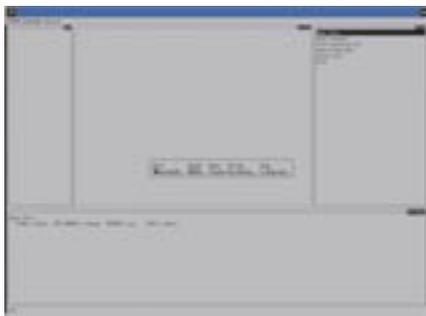
iWarp

The iWarp is a demonstration that redirects serial data to TCP/IP packages and allows users to control their module accross the Internet. The iWarp has two parts, iw and iwc. The iw is the server side that listens on a specified TCP/IP port, redirects the command comes from the port to a specified local serial port, and reads the response from the serial port to the TCP/IP port. The client side, the iwc, is an X GUI application written with the GTK library. The iwc allows user to connect an iw server which has IKIT-06 Professional Kit (I-7060D, I-7012D, I-7021) connected to send predefined AO/DO function pattern or manual command, and read AI/DI. The iWarp uses simple TCP/IP facility to achieve the Internet remote serial control, user can modify it as their application base.

USB to Serial

The USB to Serial is a small set of Linux driver modified from the Linux kernel. The driver supports the ICPDAS USB to RS-232 converters, i.e. I-7560, I-7561, and I-7563, which can be attached to the /dev/ttyUSBn device node (or usb/tts/n for devfs).

IxPIO / IxPCI / IxISA

The ICPDAS IO cards are separated into three groups, the PIO series, the PCI series, and the ISA bus cards, which are supported by the IxPIO, IxPCI, and the IxISA projects, individually.

The IxISA supports all ICPDAS ISA IO cards, and motion cards work on ISA bus. The driver uses a common interface, which contains a dynamic major number, and dynamic device allocation; therefore, it does not limit the number of served cards. It allows application in the user space to access the IO ports or registers of the installed ISA cards. It also supports conditional IRQ signaling and DMA transferability.

The PCI series (the cards with PCI- prefix in model name,) is a small group of the ICPDAS PCI IO cards, which is featured with analog input, digital IO, and counters. These cards are supported by the IxPCI project. As for the IxISA, the driver uses a common interface which includes a dynamic major number and dynamic device allocation. It also can support the register IO and simulate edge IRQ signaling condition.

The PIO/PISO series is a rich collection of the ICPDAS PCI IO cards that includes the motion cards work on PCI bus. They are supported by the IxPIO project. There is one more feature for the IxPIO. The data pattern function, which allows users to commit their predefined data groups to the driver for PIO-DA cards, combined on-board timer and conditional signaling can output arbitrary wave pattern continuously.

The IxPIO and IxISA warp the MS enc600, mstep3, and mservo3 libraries for all supported motion commands.

Java I/O Driver

Easy-to-use software for data acquisition, analysis and control

Introduction

The Java technology features a complete network support and write-once, run everywhere solution, which makes it the ideal solution for industry control project. It reduces the developing and maintaining cost, satisfies the time-to-market requirement. However the Java technology does not implement the low level I/O access in nature. To help user to involve the Java technology and obtain the benefit from it, ICP DAS develops the Java I/O Driver (JIOD) package.

Features

The JIOD is a Java platform technology chosen for JVM extension and makes many industry control applications possible. The JIOD includes packages for the I-7000/8000/87K modules and ICP DAS I/O cards working on PCI bus. It provides developers a simple and easy mechanism to extend the JVM functionality to access the ICP DAS products.

JIOD

The JIOD contains three packages - com.icpdas.ixpio, com.icpdas.ixpci, and com.icpdas.comm. The IxPIO and IxPCI projects support PCI bus add-on cards. The comm packages support the I-7000/8000/87K I/O modules.

The packages are easy to understand from their name standing for. They provide powerful, easy-to-use facilities for developing the data acquisition applications. They could also be used in application, applet and servlet easily. Examples and demonstrations are enclosed for practice. The following figure gives a concept of the relation between user's application, JVM, JIOD, and I/O modules from ICPDAS.
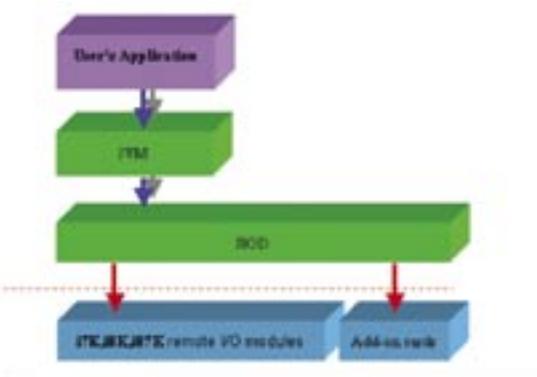
JIOD is now available and distributed for Linux and Windows operation systems. The package can be found and downloaded freely from the download page of the ICP DAS website.

JCon

JCon is a convenient tool to diagnose and configure the installed ICP DAS I/O cards, which is written with JIOD. Since the JCon is a Java application, it works very well both on the Linux and Windows. The JCon searches and initiates all supported I/O cards installed in the system when system start.
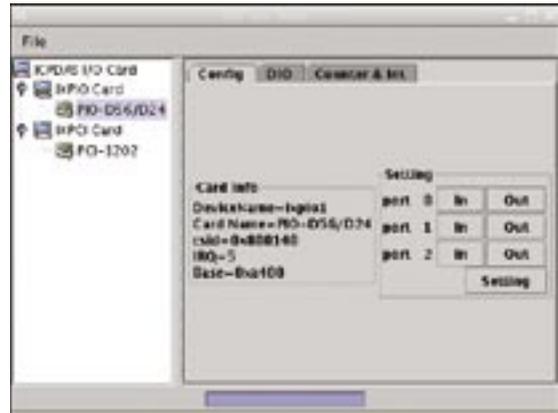
The above screen shows the JCon running on Redhat Linux with two devices - PIO-D56/24 and PCI-1202 installed. The JCon lists devices found on the left side with a tree structure. On the right-hand side, the config tab shows the configuration of the PIO-D56/24 card including the IRQ number, base address and the ports I/O setting.

There are two JCon distributions - standalone and all-in-one available on the ICP DAS download page. The standalone distribution contains only JCon byte code. The all-in-one distribution includes all required components to run JCon, JRE, and JIOD.

More documents for API, quick start, examples, and a variety of demonstrations are available on the JIOD project site.

LabVIEW

Graphical development software
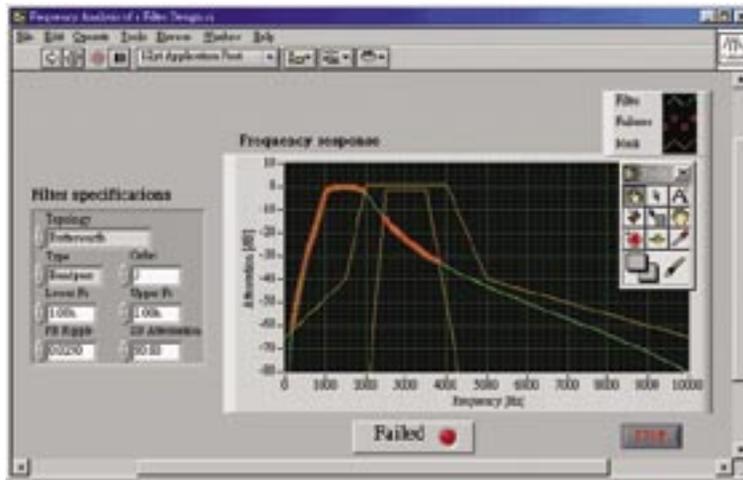
Introduction

LabVIEW is the best way to acquire, analyze, and present data. LabVIEW delivers a graphical development environment that build data acquisition quickly, instrumentation and control systems, boosting productivity and saving development time. With LabVIEW, you can quickly create user interfaces for interactive control of your software system. To specify your system functionality, simply assemble block diagram - a natural design notation for scientists and engineers. LabVIEW contains powerful built-in measurement analysis functions and a graphical compiler for optimum performance.

ICPDAS provides a LabVIEW toolkit for PCI, ISA and DCON series products. User can easily integrate the hardware and software in the LabVIEW graphical development environment for data acquisition, measurement and control .

Draw Your Own Solution

With LabVIEW front panel, you can place the controls and data display for your system by selecting objects such as numeric display, meters, gauges.
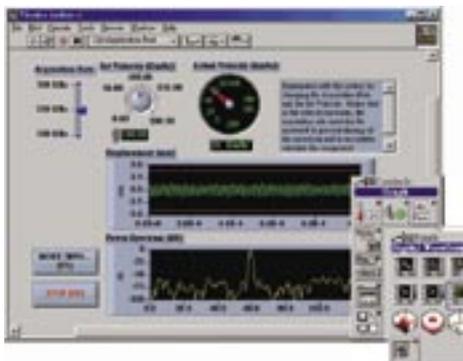
Dataflow Programming

LabVIEW uses a patented dataflow model that frees you from the linear architecture of text-based programming languages. The execution order in LabVIEW is determined by the flow of data between nodes and not by sequential lines of text. To build a block diagram, select objects (icons) and connect them with wires to transfer data among block diagram objects. These objects include simple arithmetic functions, advanced acquisition and analysis routines, network and file I/O operations, and more.

Compiled Execution

LabVIEW is the graphical program system with a compiler that generates optimized code with execution speed comparable to a compiled C program. You even can use the LabVIEW profiler to analyze and optimize time-critical operations without sacrificing execution speed.

● Open Connectivity	● Instrument Control	● Operating Systems
Internet/Networking Databases	GPIB/CAMAC	Windows
NI Data Socket	VXI/PXI	2000/NT/XP/Me/9x
TCP/IP	RS232	Mac OS
UDP	Industrial devices	Sun Solaris
.Net/ActiveX	More than 1500	Linux
DLLs /shared	instrument drivers	Real -Time
libraries		
AppleEvents/named	● Applications	
pipes		
MATLAB	Test and Measurement	
XML	Process Control and Factory Automation	
IrDA	Machine Monitoring and Control	
	Research and Analysis	

DASYLab

Easy-to-use software for data acquisition, analysis and control
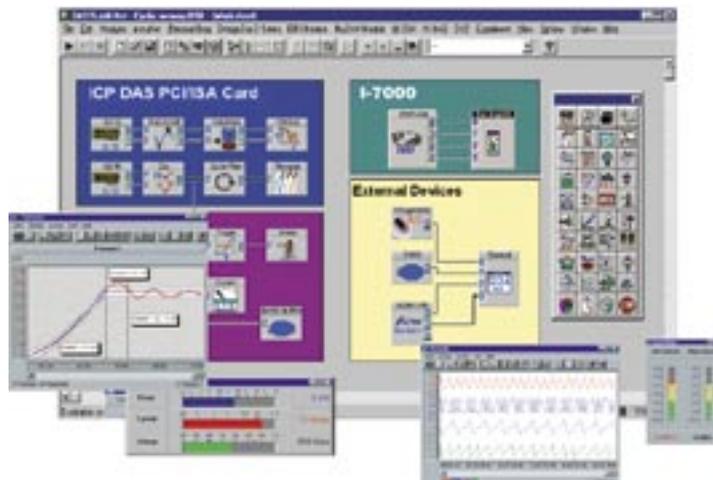
Introduction

DASYLab provides the Easy-to-Use Software in Data Acquisition System with all kinds of interface to connect to hardware, such as RS232, IEEE, USB, Parallel port, ISA bus and PCI bus, etc. It takes just a few minutes to create your individual acquisition and analysis application with DASYLab. The most sophisticated acquisition and control tasks can be solved quickly by DASYLab without any additional programming. Simply insert the appropriate module symbols into the worksheet and connect them by wires-all the work with no more than a few mouse clicks. ICPDAS develops a series of state-of-the-art driver for PCI, ISA and DCON series products. User can easily integrate the hardware and software in the data acquisition, measurement and control system.

Features

- Easy-to-Use visual graphical programming environment
- Fast data acquisition and display
- Supports more and more function modules:
  Inputs/Outputs modules, Control modules, Signal Processing modules, Display modules...etc.

Data Logger:
With just one function module, DASYLab works as a high speed data logger, able to acquire data at speeds up to 1MHz storing them onto hard disk using the built-in disk streaming function

Multi-channel Chart Recorder:
Two function modules create a "paperless" multi-channel chart recorder with many options to adapt the displayed charts to your own needs.

Two-channel Oscilloscope
Monitor a signal with one of the many DASYLab Trigger modules continuously

Trigger Monitoring:
Monitor a signal with one of the many DASYLab Trigger modules continuously. The TTL-level output signals are usual in many control application. It can be used to or control the data flow in the program.

Frequency Analyzer:
Complex signal analysis is quickly configured using some of the Easy-To-Use function modules.

Frequency Maximum:
If the maximum frequency in your frequency spectrum is interested to you, you canjust enlarge the DASYLab "Frequency Analyzer" with an additional Y/t chart module, Statistics module and a Digital Meter module to get more information.

Reference Curve Monitoring:
DASYLab provides the Sequence Generator module, the Check Reference Curve module and the Digital Output module.

Software Solution

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DASYLab

Easy-to-use software for data acquisition, analysis and control

Specifications

Communication: IEEE-Bus, DASYLab Net, CAN, RS232, USB, Parallel port,
ISA bus , PCI bus, DDE, OPC, ODBC.
Input/Output modules.
Data display modules: Y/t and X/Y-Charts, Status Display, Chart Recorder, List Display.
Signal analysis modules for electrical applications.
Provides more than 90 function modules for research and analysis.
Win32 application for Windows 98/NT/2000/XP
Supports almost PCI and ISA DAQ cards of ICPDAS products

IEEE-Bus / RS232

DASYLab uses the GPIB 488 to control up to 15 external devices. Each user is able to quickly design complex measurement tasks using the standard control command syntax. Many devices and instruments can communicate with the PC via the standard RS232 interface. The versatile RS232 modules can communicate with a wide variety of devices, parse their measurement data, and send control commands directly from the worksheet.

DDE

DASYLab DDE input and output modules can now work as a DDE server or as a DDE client using all DDE link modes (hot link, warm link, cold link). The DDE input module is able to mark received data with a time stamp or synchronize it with other data sources. All data values are transmitted in ASCII format.

OPC Client

DASYLab includes a state-of-the-art interface to the OPC (OLE for Process Control) Protocol. DASYLab uses DataSocket Import and Export Modules to communicate with any OPC Server on a network.
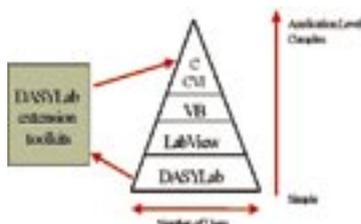
DASYLab-Communication

- **ODBC Read or Write**

  With the ODBC Input and Output modules, DASYLab can exchange data with a ODBC-capable database. Another advantage is to write measured and calculated data directly into any database. Because both modules are controlled by event-driven action and use global strings and variables, DASYLab may automatically store complete experimental runs in the database system.

- **DASYLab Net**

  The powerful extension of DASYLab is able to communicate with and control other remote copies of DASYLab Net.

  - Exchange data at rates up to 100 000 samples per second.
  - Remotely start, stop and load experiments. These include simultaneous starts of several DASYLab Net systems
  - Link to running measurements
  - Use the TCP/IP Protocol
  - Use existing networks (Microsoft Network, Novell, DEC, etc.)
  - Run under Win 95/98 and Windows 2000/NT

Applications

- Multi-channel Chart Recorder
- Trigger Monitoring Application
- Frequency Analyzer
- Environment & Facility Monitoring
- Industrial Control/Automation
- Building Automation
- Remote Data Acquisition

Order Information

- **DASYLab_Lite:**DASYLab Lite Development Version
- **DASYLab_Basic:**DASYLab Basic Development Version
- **DASYLab_Full:**DASYLab Full Development Version

Software Solution

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InduSoft

SCADA Solution-InduSoft Web Studio 6.0

Introduction

InduSoft Web Studio is a powerful, integrated collection of automation tools that includes all the building blocks needed to develop modern Human Machine Interfaces (HMI), Supervisory Control and Data Acquisition (SCADA) systems, and embedded instrumentation and control applications. InduSoft Web Studio's application runs in native Windows NT, 2000, XP, CE and CE .NET environments and conforms to industry standards such as Microsoft .NET, OPC, DDE, ODBC, XML, and ActiveX. We provide the InduSoft bundled driver to integrate InduSoft software and ICP DAS products (I-7000, I-8000 and I-87K) for SCADA system. There are also OPC, DDE and ActiveX development toolkit provided to cooperate with InduSoft. Besides, the VxComm software of ICP DAS can be performed to link to Internet/Intranet modules in an easy way. And DCON Utility of ICP DAS can be used to configure network module for easy use and maintenance.

Specifications
- Windows NT/2000/XP operating system for development
- Windows NT/2000/XP or Windows CE 3.x/CE.NET 4.x operating system for runtime
- OPC Client and OPC Server modules with integrated OPC Browse
- DDE Client and DDE Server modules
- TCP/IP Client and TCP/IP Server modules to exchange tag values and configure redundancy systems
- More than 150 communication drivers for different devices (such as PLC) from several manufacturers; such as Allen-Bradley, Siemens, GE-Fanuc, as well as standard protocols such as MODBUS RTU/ASCII, DeviceNet, Profibus, Interbus, and so forth

InduSoft Web Studio Feature

Graphics
- Create sophisticated interfaces with point and click, drag and drop ease
- Import graphics from more than 15 different formats for enhanced and realistic screens
- Support more than 40 pre-defined dynamic effects; including shadowing, foreground and background color, blinking, fill, rotation, motion, scale, text, and animation
- Provide an object-oriented environment for simple application development and screen and object re-usability
- Use an extensive symbol library to simplify development

Alarms
- Provide a sophisticated alarms management system, which allows you to send alarms to various utilities such as screen, e-mail, Web browser, and archive
- Provide free format alarm messages, uses secondary search keys, and accesses through groups or tags
- Archive alarms to a file, printer, or to an SQL-database
- Filters, sorts, or color sorts alarms for easier visual interpretation

Trending
- Keep track of process behavior on-line or through historical trending
- Distribute information throughout the network for easy monitoring on screens or a Web browser

Recipes and Reports
- Create flexible, user-defined recipe groups
- Provide user-configurable reports, including text and graphics, that can be displayed in an application or on the Web

Input/Output
- Include more than 150 device drivers
- Support OPC (Client & Server)
- Support various PC Control packages

General
- Provide an advanced math library has more than 100 standard functions
- Programming is via flexible and easy-to-use scripting language

Software Solution

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InduSoft

SCADA Solution-InduSoft Web Studio 6.0

- Pr ovide multi-level security for applications, including the Internet and Intranet
- Conform to industry standards such as Microsoft .NET, OPC, DDE, ODBC, XML, SOAP, and ActiveX
- Provide automatic language translation at run-time
- Allow internationalization using Unicode

Features - Product Architecture
- Common development environment for Windows XP/ 2000/NT and CE/CE.NET run-time platforms
  - Remote management and deployment
  - On-line configuration
  - Object-oriented database
  - Object-oriented graphical interface and Object browser
  - Microsoft Windows XP look and feel
- Explorer-style project and document management
- Microsoft Windows .NET compliant
- Based on MFC (Microsoft Foundation Classes) libraries
- Open architecture (API Toolkits) for easy integration

Features - Application
- FULL-FEATURED Web Thin Client solution (visualization and commands, security system, On-line/History alarms, On-line/History trend, ActiveX support, translation, etc.)
- FULL-FEATURED WinCE-based run-time environment (CEView)
- Automatic e-mail support (SMTP)
- Dial-up connection interface
- Scalable security system (unlimited groups and users)
- Fill-effects (gradient color)
- Run-time translation tool
- Communication drivers: Over 150 drivers for Window NT/2000/XP and Windows CE/CE.NET
- OPC Client and Server
- TCP/IP Client and Server
- DDE Client and Server
- ODBC Interface
- ActiveX container (Windows NT/2000/XP and Windows CE/CE.NET)
- Dynamic library of symbols ¡Vcustomizable
- Intuitive script language (does not require programming skills)
- Alarms and trends archiving
- On-line visualization of alarms and trends
- Recipes (XML and simple text)

- Reports (RTF and simple text)
- Scheduler module (events)
- PC-based control software integration through a shared database
- Debug tools: Database Spy and LogWin (local or remote maintenance on the run-time system)

Applications
- Factory & Machine Automation
- Environment & Facility Monitoring
- Industrial Control/Automation
- Building Automation
- Remote Data Acquisition

Order Information

DEVELOPMENT LICENSE WITH ONE RUN-TIME AND ONE WEB SESSION:
- **InduSoft-NT512000D:** Advanced Server (512,000Tags, unlimited drivers)
- **InduSoft-NT64000D:** Control Room (64,000Tags, 8drivers)
- **InduSoft-NT4000D:** Operator Workstation (4,000Tags, 5drivers)
- **InduSoft-NT1500D:** Local Interface for Windows NT/2000/XP (1500Tags, 3drivers)
- **InduSoft-CE1500D:** CEView standard for Windows CE (CE View)(1500Tags, 3drivers) Development Only (without RUN-Time license)
- **InduSoft-NT300D:** NTView PRO for Windows NT/2000/XP (300Tags, 1drivers)
- **InduSoft-CE300D:** CEView Lite Plus for Windows CE (CE View)(300Tags, 1drivers) Development Only (without RUN-Time license)
- **InduSoft-gateway:** InduSoft Gateway only

ADDITIONAL RUN-TIME LICENSES:
- **InduSoft-NT512000R:** Advanced Server Run-time (512,000Tags, unlimited drivers)
- **InduSoft-NT64000R:** Control Room Run-time (64,000Tags, 8drivers)
- **InduSoft-NT4000R :** Operator Workstation Run-time (4,000Tags, 5drivers)
- **InduSoft-NT1500R:** Local Interface for Windows NT/2000/XP Run-time (1500Tags, 3drivers)
- **InduSoft-CE1500R:** CEView standard for Windows CE Run-time (CE View)(1500Tags, 3drivers)
- **InduSoft-NT300R:** NTView PRO for Windows NT/2000/XP Run-time (300Tags, 1drivers)
- **InduSoft-CE300R:** CEView Lite Plus for Windows CE Run-time (300Tags, 1drivers)
- **InduSoft-NT150R:** Lite Interface for Windows NT/2000/XP Run-time (150Tags, 1drivers)
- **InduSoft-CE150R:** CEView Lite for Windows CE Run-time (150Tags, 1drivers)

Software Support
PCI Bus I/O Boards

	DOS	DLL			LabVIEW			OCX			LINUX	JAVA	DasyLab
		Win 95/98	Win NT	Win 2000/XP	Win 95/98	Win NT	Win 2000/XP	Win 95/98	Win NT	Win 2000/XP			
PCI Bus Communication Boards													
PISO-CAN200-T / PISO-CAN200-D	-	Y	Y	Y	-	-	-	Y	Y	Y	-	-	Y
PISO-CAN400-T / PISO-CAN400-D	-	Y	Y	Y	-	-	-	Y	Y	Y	-	-	Y
PISO-CM100-T / PSIO-CM100-D	-	Y	Y	Y	-	-	-	Y	Y	Y	-	-	Y
PISO-CPM100-T / PISO-CPM100-D	-	Y	Y	Y	-	-	-	Y	Y	Y	-	-	-
PISO-DNM100-T / PISO-DNM100-D	-	Y	Y	Y	-	-	-	Y	Y	Y	-	-	-
PCI-488	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
PCI Bus Memory Boards													
PCI-M512 / PCI-M4M	-	Y	Y	Y	-	-	-	-	-	-	-	-	-
PCI Bus Multifunction Boards													
PCI-1800L / PCI-1800H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI-1802L / PCI-1802H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI-1202L / PCI-1202H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI-1002L / PCI-1002H	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI-1602F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI-1602	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIO-821L / PIO-821H	Y	Y	Y	Y	Y	Y	Y	-	-	-	Y	Y	-
PCI Bus A/D,D/A Boards													
PISO-813	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PISO-DA2	Y	Y	Y	Y	-	-	-	-	-	-	Y	-	-
PIO-DA16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIO-DA8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIO-DA4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI Bus Digital I/O Boards													
PIO-D168	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-
PIO-D144	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIO-D96	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIO-D64	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIO-D56	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIO-D48	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIO-D24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI-TMC12A	Y	Y	Y	Y	Y	Y	-	Y	Y	-	Y	Y	-
PCI-P16R16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI-P8R8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI-P16C16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PCI-P16POR16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PISO-P8R8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PISO-P8SSR8AC	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PISO-P8SSR8DC	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PISO-P32A32	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PISO-P32C32	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PISO-A64	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
PISO-C64	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
PISO-P64	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
PISO-725	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PISO-730	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PISO-730A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Note :   " Y " : Ready   " - " : Not ready

Software Solution

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Software Support
PCI Bus I/O Boards

	DOS	DLL			LabVIEW			OCX			LINUX	JAVA	DasyLab
		Win 95/98	Win NT	Win 2000/XP	Win 95/98	Win NT	Win 2000/XP	Win 95/98	Win NT	Win 2000/XP			
Motion Control Boards													
PISO-PS300	Y	Y	Y	Y	Y	Y	-	-	-	-	Y	-	-
PISO-ENC600	Y	Y	Y	Y	Y	Y	Y	-	-	-	Y	-	-
PISO-ENC300	Y	Y	Y	Y	Y	Y	Y	-	-	-	Y	-	Y

ISA Bus I/O Boards

	DOS	DLL			LabVIEW			OCX			LINUX	JAVA	DasyLab
		Win 95/98	Win NT	Win 2000/XP	Win 95/98	Win NT	Win 2000/XP	Win 95/98	Win NT	Win 2000/XP			
ISA Bus Communication Boards													
PC-488	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
ISA Bus Isolated Data Acquisition													
ISO-AD32H / ISO-AD32L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
ISO-DA8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	Y
ISO-DA16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
ISO-LDH / ISO-LDL	Y	Y	Y	Y	-	-	-	Y	Y	Y	Y	-	-
ISO-813	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	Y
ISO-P32C32	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
ISO-P64	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	Y
ISO-C64	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	Y
ISO-730	-	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	Y
P8R8DIO	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
P16R16DIO	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
ISA Bus Data Acquisition Boards													
A-8111	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	Y
A-812PG	Y	Y	Y	Y	-	-	-	Y	Y	Y	Y	-	Y
A-821PGH / A-821PGL	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	Y
A-822PGH / A-822PGL	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	Y
A-823PGH / A-823PGL	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	Y
A-826PG	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	Y
ISA Bus Data Acquisition Boards													
A-626	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
A-628	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
DIO-24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
DIO-48	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
DIO-64/3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
DIO-64/6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
DIO-96	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
DIO-144	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y
TMC-10	Y	Y	Y	-	Y	Y	-	Y	Y	Y	Y	-	-
Motion Control Boards													
Encoder-300	Y	Y	Y	Y	Y	Y	-	-	-	-	Y	-	-
STEP-200	Y	Y	Y	Y	Y	Y	-	-	-	-	Y	-	-
SERVO-300	Y	Y	Y	Y	Y	Y	-	-	-	-	Y	-	-
Watchdog Boards													
WDT-01	Y	Y	Y	Y	-	-	-	-	-	-	Y	-	-
WDT-02	Y	Y	Y	Y	-	-	-	-	-	-	Y	-	-
WDT-03	Y	Y	Y	Y	-	-	-	-	-	-	-	Y	-

Note : " Y " : Ready   " - " : Not ready

Software Solution

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