PACwiz

ADLINK PAC Solution with IEC 61131-3 Support

PACwiz Platform

PACwiz IDE

LD

SFC

FBD

IL

ST

CFC

Distributed I/O modules
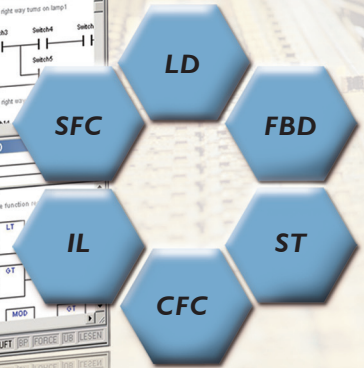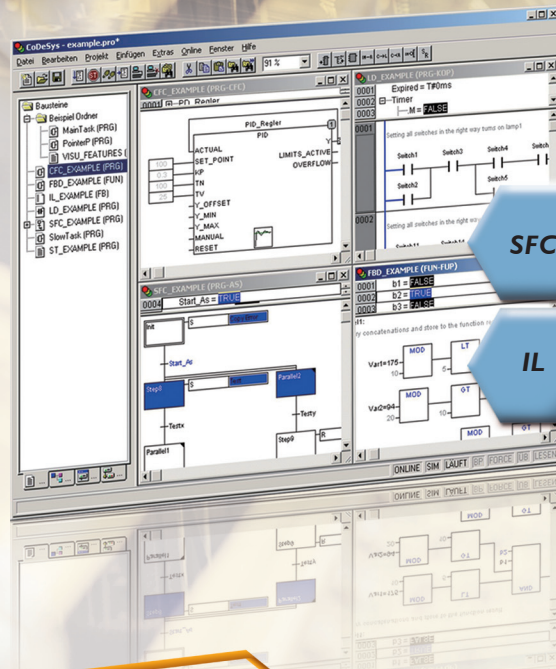
VGA for displaying

Motionnet bus

Features

- Compatible with IEC 61131-3 syntax, including five commonly-used PLC syntaxes; PLC users can switch to a PC-based solution without further training
- Built-in visualization editor allows use of standard VGA monitor instead of expensive specialized HMI devices
- Built-in ADLINK motion function blocks
- Real-time capability allows set up of tasks to within a 1 ms cycle time; no additional RTOS is required
- Support of distributed I/O and motion modules allows for flexible wiring, easy expansion, and reducing wiring costs
- Native CPU code and independent core from Windows faster performance than the competition; code will continue to execute even when Windows has crashed ("blue screen of death")
- Rugged fanless and cable-less design; without moving parts and internal cables dramatically decrease product reliability and durability.

Introduction

What's PACwiz?

PACwiz, ADLINK's solution for IEC 61131-3 application with motion control, enables you to access ADLINK products via PLC-like languages. The concept of PAC wiz is composed of two parts: PACwiz Platform and PACwiz IDE. You can develop IEC 61131-3 applications in PACwiz IDE just like you are developing applications with traditional PLCs. These applications are then downloaded to your PACwiz Platform.

PACwiz Platform

PACwiz Platform is a PC-based well-integrated automation solution. Up to 2016 DI/Os and 64 servo axes, or 558 AI/O points and 64 servo axes can be controlled by a single platform. PACwiz Platform includes both the features of a PC, such as high-performance computing power, mass storage devices, and built-in network connectivity, and the features of a PLC, such as compact and robust design, real-time scan behavior and intuitive graphical programming. PACwiz Platform can connect to common LCD touch panels monitors for its display and operation interface, and thus no specialized industrial HMI is required. You can choose from developing your own control programs in an IDE supporting the Windows XP series of operating systems or editing the HMI screen in the PLC project before downloading to PACwiz Platform.

PACwiz PLC is composed of the CoDeSys SP RTE by 3S and a driver interface by ADLINK. This is the realtime and IEC 61131-3 engine of PACwiz Platform, and enables you to run IEC 61131-3 tasks with a cycle time less than 1 ms in the Windows XP series of operating systems. PACwiz PLC directly drives the corresponding hardware without using any Windows resources. Thus I/O lines and servo axes keep running normally even when Windows has crashed (i.e. the infamous "Blue Screen of Death"). PACwiz PLC also provides the ability to automatically start up and run. In other words, it can be configured to automatically start up, load a default program, and run the loaded program after PACwiz Platform boots up.

Support of IEC 61131-3 provides five PLC syntaxes

PACwiz IDE is the CoDeSys IDE from 3S and a corresponding TSP from PACwiz Platform. CoDeSys IDE includes programming editors, a complier and several diagnostic and commissioning functions. The programming editor provides a friendly program-ming interface and features for each language used. Variables Auto Declare, Auto Format, Syntax Coloring and Input Assistance reduce possibility of typos and speed up application development. The excellent built-in compiler of CoDeSys IDE generates fast native code to run and support all IEC 61131-3 data types and non-standard types such as pointers to user-defined types, which offers large flexibility during programming. When it comes to debugging, CoDeSys IDE supports common features such as Forcing Variables, Breakpoints and Single Step. An Online Change feature also enables PACwiz PLC keeping running when downloading modified programs to avoid possible loss if the machine stops.

Ordering Information

	Platforms	
PACwiz-DPAC	DPAC-30Y0-11	Intel® Atom™ N270 CPU with Built-In Remote Master, Windows XP Embedded (English), CoDeSys SP RTE
PACwiz-MXC	APC-P0003-1030	MXC-2002D/HDD 160G (Intel® Atom™ Fanless Configurable Controller with PCI/PCIe Slots) with Windows XP Embedded (English), CoDeSys SP RTE
	APC-P0003-1040	MXC-2002/M2G/HDD 160G (Intel® Atom™ Fanless Configurable Controller with PCI/PCIe Slots) with Windows XP Embedded (English), CoDeSys SP RTE
	Note: Please select the optional PCI/PCIe cards and contact your sales representative for custom PACwiz-MXC configurations.	
	Centralized Modules	
	PCI-7856	Master-Slave Distributed Motion & I/O Master Controller
	PCI-7230	16-CH Isolated DI & 16-CH Isolated DO Card
	PCI-9112	16-CH AI, 2-CH AO, 16-CH DI & 16-CH DO Card
	PCI-RTV24	4-CH Real-time Video Capture Board for Standard Cameras
	Distributed Motion Control Modules	
	MNET-4XMO	Motionnet Distributed 4-axis Motion Control Module
	MNET-J3	Motionnet Distributed Single-Axis Motion Control Module for Mitsubishi J3-A
	MNET-S23	Motionnet Distributed Single-Axis Motion Control Module for Yaskawa Sigma II, III and V
	MNET-MIA	Motionnet Distributed Single-Axis Motion Control Module for Panasonic MINAS A4
	Distributed I/O Control Modules	
	HSL-DI16DO16-US/-UJ/-UD	16-CH Discrete Input 16-CH Discrete Output Modules
	HSL-DI32-US/-UJ/-UD	32-CH Discrete Input Modules with U Profile
	HSL-DO32-US/-UJ/-UD	32-CH Discrete Output Modules with U Profile
	HSL-DI16DO16-DB-NN/-NP/-PN/-PP	16-CH Discrete Input 16-CH Discrete Output Daughter Board Modules
	HSL-DI16DO16-M-NN/-NP/-PN/-PP	16-CH Discrete Input 16-CH Discrete Output Modules
	HSL-DI32-DB-N/P	32-CH Discrete Input Daughter Board Modules
	HSL-DI32-M-N/P	32-CH Discrete Input Modules
	HSL-DO32-DB-N/P	32-CH Discrete Output Daughter Board Modules
	HSL-DO32-M-N/P	32-CH Discrete Output Modules
	HSL-AI16AO2-M-VV/-AV	16-CH Analog Input 2 Analog Output Modules

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