

Introduction

The WinCon-8000 is a leading edge embedded platform with Intel Strong ARM CPU running the Windows CE .NET operating system. When compared to the standard Windows OS, Windows CE .NET has some advantages, including hard real-time capability, small core size, fast boot speed, interrupt handling at a deeper level, achievable deterministic control and low cost. Windows CE .NET provides WinCon-8000 with the ability to run advanced application programs written in Visual Basic .NET, Visual C# .NET, Embedded Visual C++ and PC-based control software such as SCADA software, Soft PLC ...etc.

The WinCon-8000 includes a VGA port, allowing the user to choose a regular LCD monitor without the need for an expensive HMI or Industrial PC. WinCon-8000 is a cost-effective choice as a replacement for a regular PC or PLC based control system.

The operating system is resident in the flash memory of the WinCon-8000 CPU module. User programs and data can be saved in external storage areas, such as Compact Flash Cards and USB mass storage or uploaded to RAM at run time through the LAN or USB. The iPush server provides real-time transmit function and lets WinCon-8000 has the ability of sending out data itself and can send acquisitive data such as monitoring data/alarm/device status to remote devices successively through TCP/IP constructions (Wireless LAN / VPN / Internet / GPRS). An SDK, used to control the I-8000 and I-7000 series I/O modules is provided for easy development of user applications using Visual Basic .NET, Visual C# or Embedded Visual C++. The included WinCon Utility is a convenient tool that enables system configuration, monitoring and software updates.

WinCon-8000

Programmable Automation Controller

PAC

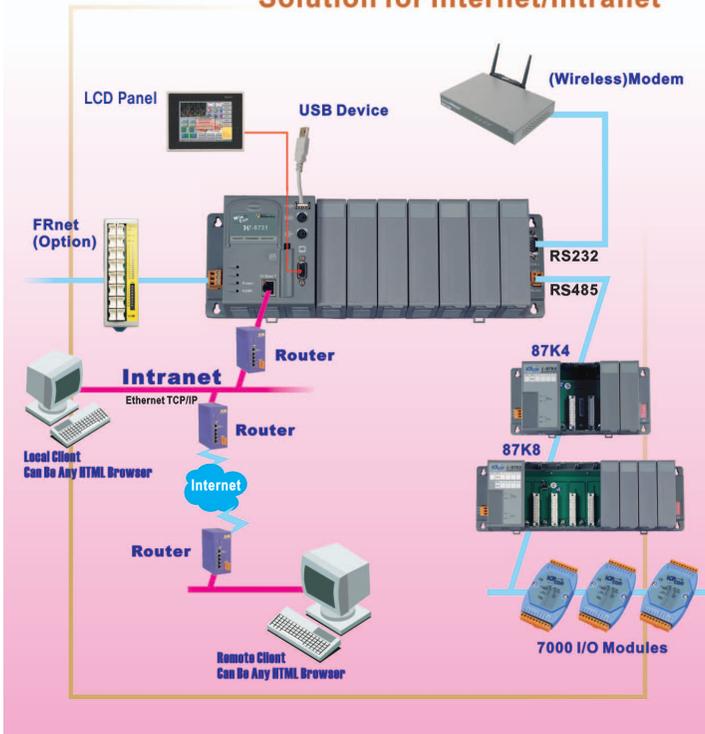


Key Specifications & Features

- Intel Strong ARM CPU
- Windows CE .NET built-in
- Supports VGA , Ethernet, USB, Keyboard, Mouse, Compact Flash
- OPC server support
- Industrial Modbus/TCP, RTU Protocol Compliant
- Convenient utility for system configuration, monitoring and software upgrade
- Wide range of I/O modules: DI, DO, AI, AO, Counter/Frequency, Motion control... etc.
- Real-time transmission as multicast sever via iPush Embedded
- Various access target such as Excel, mobile phone, PDA, terminals



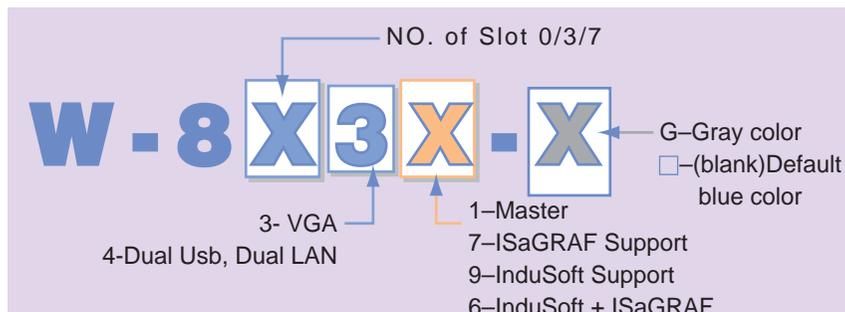
Solution for Internet/Intranet



WinCon-8000 PAC Main Control Unit (MCU)

Main Control Unit (MCU)

The MCU is the powerhouse of the 8000. Except W-8031, each MCU comprises a Central Processor Module(CPM), a power supply, a three (3) or seven (7) slot backplane for either 3 or 7 Parallel or Serial I/O modules. ICP DAS invents the customized version of non-slot structure for networked integration and narrow industrial environment. The CPM is a powerful integrated processing engine comprising a CPU, RAM, ROM and Ethernet.



WinCon-8000 Main Control Unit Selection Guide

Model	Description	CPU Speed	Embedded OS	Slot	Flash	SDRAM	Peripherals
W-8031-G	PAC	206MHz	Windows CE.NET	0	32 Mbyte	64 Mbyte	10BaseT Ethernet Portx1 VGA Portx1 CF Slotx1 USBx1 PS/2 Keyboardx1 PS/2 Mousex1 RS-232x1 RS-485x1 FRnetx1 (Option)
W-8331-G				3			
W-8731-G				7			
W-8037-G	ISaGRAF PAC	206MHz	Windows CE.NET	0	32 Mbyte	64 Mbyte	
W-8337-G				3			
W-8737-G				7			
W-8039-G	InduSoft PAC	206MHz	Windows CE.NET	0	32 Mbyte	64 Mbyte	
W-8339-G				3			
W-8739-G				7			
W-8036-G	InduSoft + ISaGRAF PAC	206MHz	Windows CE.NET	0	32 Mbyte	64 Mbyte	
W-8336-G				3			
W-8736-G				7			



Windows CE.net

Ordering Information:

W-8031-G: Compact PAC



Windows CE.net

Ordering Information:

W-8331-G: Compact PAC



Windows CE.net

Ordering Information:

W-8731-G: Compact PAC

Option

- DM-64T:6.4" LCD Module
- DM-121D-AL:12.1" LCD monitor

Specifications & Features

- Intel Strong ARM CPU, 206MHz
- SDRAM: 64M bytes
- Flash Memory: 32M bytes
- EEPROM: 16K bytes
- 64-bit hardware unique serial number
- Built-in Watchdog Timer
- Real-Time Clock
- Real-Time transmission function
- 10 Base-T: NE2000 compatible
- 1 VGA port:
 - 320x240x16 to 1024x768x16
 - Default is 640x480x16
- 2 PS/2 ports: Keyboard and Mouse
- 1 Compact Flash slot: CF memory card
- 1 USB 1.1 Host:USB drive or USB mouse
- Reset button
- Power LEDs
- 16-channel digital I/O (only for W-8031)
- COM0: Internal use
- COM2: RS-232
- COM3: RS-485
- COM1: Serial Control for 87K Series FRnet (Option)
- I/O Expansion Slot:
 - without I/O expansion for W-8031
 - 3-slot for W-8331
 - 7-slot for W-8731
- Power Supply: 25W
- Unregulated +10Vdc to +30Vdc
- Environment:
 - Operating Temp.: -25°C to +75°C
 - Storage Temp.: -30°C to +85°C
- Humidity: 5~95%
- Dimensions:
 - 354 x 110 x 90(75.5)mm - W-8731
 - 229 x 110 x 90(75.5)mm - W-8331
 - 114 x 110 x 90(75.5)mm - W-8031

WinCon-8000 ISaGRAF/InduSoft PAC



W-8037-G



W-8337-G



W-8737-G



Ordering Information: ISaGRAF PAC

W-8037-G: Without I/O Expansion

W-8337-G: 3 slot I/O Expansion

W-8737-G: 7 slot I/O Expansion



W-8039-G



W-8339-G



W-8739-G



Ordering Information: InduSoft PAC

W-8039-G: Without I/O Expansion

W-8339-G: 3 slot I/O Expansion

W-8739-G: 7 slot I/O Expansion

W-8039-G-1500: Without I/O Expansion

W-8339-G-1500: 3 slot I/O Expansion

W-8739-G-1500: 7 slot I/O Expansion

Ordering Information:

InduSoft with ISaGRAF PAC

W-8036-G: Without I/O Expansion

W-8336-G: 3 slot I/O Expansion

W-8736-G: 7 slot I/O Expansion

ISaGRAF SoftLogic PAC

Specifications & Features

- The same hardware specifications of WinCon-8000 series
- The W-8000 target driver and ISaGRAF target license are included.

Option

- DM-64T:6.4" LCD Module
- DM-121D-AL:12.1" LCD monitor

InduSoft PAC

Specifications & Features

- The same hardware specifications of WinCon-8000 series
- The W-8X39 has 300 tags runtime licence with one driver and one web thin client.
- The W-8X39-G-1500 has 1500 tags run-time with 3 drivers and one web thin client.

Option

- InduSoft-NT1500D: Local Interface development version for Win2000/XP/CE target (1500 Tags, 3 drivers)
- InduSoft-CE1500D: CE View standard development version for WinCE target only(1500 Tags, 3 drivers)
- InduSoft-NT 300D: Launch development version for Win2000/XP/CE target (300 Tags,1 driver)
- InduSoft-CE 300D: Launch development version for WinCE target only(CE View)
- LCD monitor
DM-64T:6.4" LCD Module
DM-121D-AL: 12.1" LCD monitor

What is InduSoft ?

InduSoft Web Studio is a powerful, integrated collection of automation tools that includes all the building blocks required to develop modern Human Machine Interfaces (HMI), and Supervisory Control and Data Acquisition System (SCADA) applications that run natively on Windows XP, 2000, NT and CE .NET or in an Internet and Intranet environment. A simple drag and drop, point and click development environment mimics the most complex behavior of your live processes. InduSoft Web Studio is the most ideal E-Automation solution available in the industry.

InduSoft HMI/ SCADA software and automation technology can be used for:

- Monitoring: alarm monitoring, event monitoring, real time monitoring
- Control: Quality Control, Motion control, Statistical Process Control, Automation Control
- Measurement Software
- Automation: Building Automation, Process Automation, Plant Automation, Manufacturing Automation, Factory Automation Systems
- SCADA applications: SCADA Communication, SCADA Real Time System



The WinCon-8000 and InduSoft Integration Application

The WinCon-8000 InduSoft PAC provides a bundled driver to integrate the application performance and the easy to use of software and hardware. It can operate as an intelligent distributed data acquisition front end connected to a Host machine running a standard SCADA package. The user can develop SCADA applications on a PC then download and apply them to the WinCon-8000 InduSoft PAC. In addition, InduSoft Web Studio allows you to save your application screens in HTML format and export them from Wincon-8000 HTTP server for use with Internet Browsers (Internet Explorer).

Embedded OS

Windows CE .NET is pre-installed and ready to run your embedded applications with or without a display. It is easy to use either Microsoft Embedded Visual C++, Visual Basic .NET or Visual C# to develop your application programs. Windows CE .NET is a Hard Real-time System, which supports handling priority inversion to a depth of one level and provides the same level of deterministic control as a PLC (or better). In addition, Windows CE .NET provides a number of benefits over traditional PLC systems, including network communications, graphical user interface, information processing, mass storage management, standard PC interface support and ease of programming. The combination of Windows CE .NET with the hard real-time characteristics of a PLC, yields a very powerful control solution. The WinCon-8000 series is a diskless, runtime control platform that gives you the best features of both traditional PLCs and Windows capable PCs.

I/O modules:

WinCon-8000 can talk across the backplane to our original i-8000 and I-87K series digital/analog input and output modules, including many specialty modules. For further information, refer to the part of I-8000 and I-87K series I/O modules.

Expansion Units:

WinCon-8000 can connect to the original I-8000 series I/O expansion units, 87K4/87K5/87K8/87K9, through an RS-485 to extend the number of available I/O modules. Please refer to the part of I-8000 series I/O expansion units.

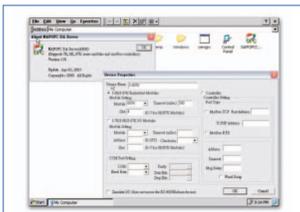
WinCon-8000 Software

WinCon-8000

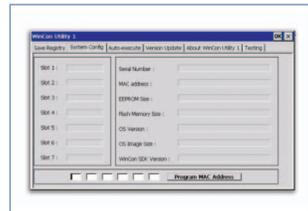
SDK

Microsoft
Windows CE.net

WinConSDK
(WinCon-8000
DLL Drivers)



WinConOPC
(WinCon-8000
Windows CE
OPC Server)



WinConUtility
(WinCon-8000
Windows CE Utility)

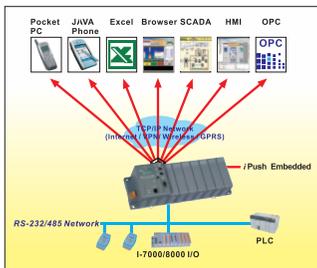
What is iPush® Embedded

Conventionally, the industrial I/O devices are built over a relatively closed environment (such as Modbus/RS232/422/485). However, with the prevalence of TCP/IP network technologies (such as ADSL/GPRS), the automation industry has come to a stage of integration with the technologies. To begin with, a common platform is needed to manage the I/O devices more easily. Secondly, the fact that remote automation still cannot fulfill the real-time requirement, so a more efficient message-delivering mechanism is necessarily required. A solution to achieve the purpose of remote automation as real-time as local connection is now available and embedded into WinCon series.

iPush® Embedded is an industrial edition of ICE iPush® Server, which is developed by ICE Technology Corp. It introduces a messaging platform over TCP/IP, which can locally collect and transmit data to remote applications in real time. As a result, it greatly accelerates the integration of industrial automation and network technologies.

Features of iPush® Embedded

- **Active Push**
When receiving a message from the I/O modules, iPush® Embedded will automatically push the data to subscribers, with no pulling efforts by request.
- **Bi-directional Real-Time Communication**
iPush® Embedded can immediately send a message to the subscribers. The subscribers that receive messages are also able to send control commands to the I/O modules (within milliseconds).
- **Massive Messaging**
iPush® Embedded is able to send a great amount of data (including meters, status and alarms) that are received from the I/O modules.
- **Wide Range Receiver**
Data can be accessed easily by a variety of remote devices, such as PC, Pocket PC and mobile phone.
- **Massive Connection**
iPush® Server can be installed to manage the massive connection of WinCon-8000's group.
- **SDK Supported - Windows DLL, ActiveX Control, Java Class**
- **User Management Configuration**

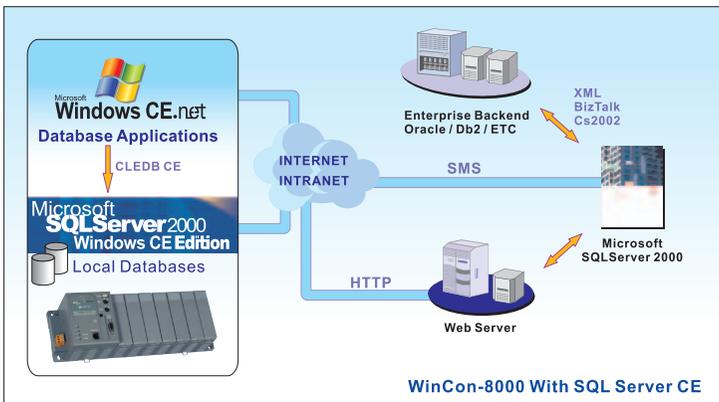
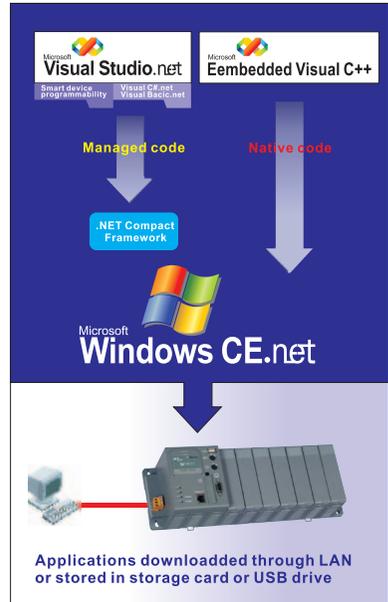


WinCon-8000 with iPush® Embedded will bring about real-time automation regardless the distance, and serve as the best infrastructure in the industrial automation field. WinCon-8000 with iPush® Embedded can be installed at unmanned remote station to collect relevant data including meters, status and alarms and send it to the remote center with iPush® Server for advanced real-time monitoring and control.

WinCon-8000

Application Development Support

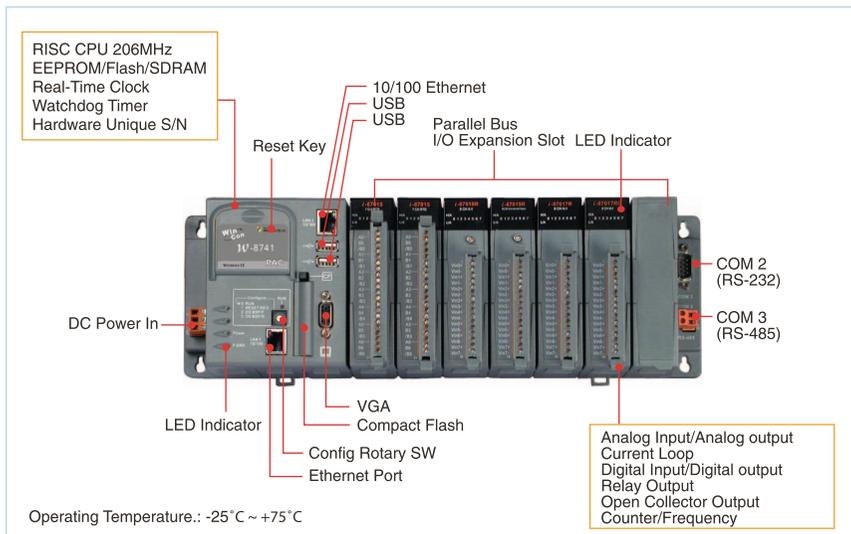
- HATL, ActiveX Component and MFC for Windows CE
- Embedded Visual C++
- Visual Basic .NET and Visual C#
- WinCon-8000 SDK to control I-8000 I/O modules
- OPC server and Modbus/TCP Protocol
- RS-232/485 Device Connection
- HTTP server, FTP server and web-based automation/control application development
- SQL Server CE and connectivity to ERP
- WinCon-8000 system configuration utility
- Remote management utility
- Integrated SCADA/HMI S/W or User's AP via Modbus/TCP Driver, ActiveX Component or Modbus/TCP OPC Server
- Database application development
- ADOCE/OLEDBCE, ADO.NET
- Robust connectivity to ERP including HTTP, IIS, RDA, Replication



WinCon-8X4X Dual-LAN PAC

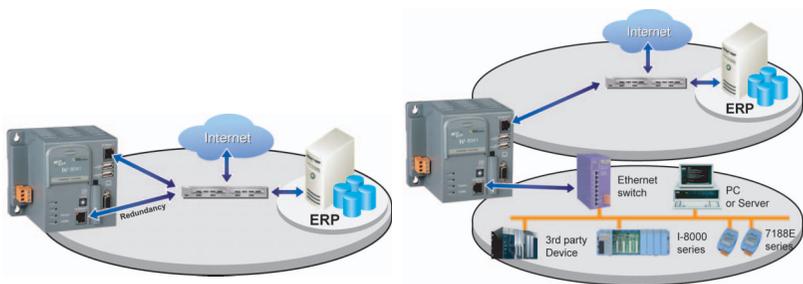


WinCon-8000



What's new?

The ICP DAS WinCon-8x4x series embedded controllers are derived and upgraded from existing WinCon-8x3x series. This evolution includes dual USB host ports to support more connectivity to USB I/O devices, dual Ethernet 10/100M ports to provide higher network performance, network security, and redundancy capability, and a rotate switch to configure your system and applications. Dual Ethernet ports usually help customers with the flexibility and extensibility. System integrators can implement their network redundant policies, or to plan their business systems and industrial Ethernet network in two separated network segments to gain more network security.



Implement network redundancy mechanism Implement separate networks to gain security

WinCon-8X4X Dual-LAN PAC



Specifications & Features

NEW!!



Ordering Information:
W-8041-G: Compact PAC

NEW!!



Ordering Information:
W-8341-G: Compact PAC

NEW!!



Ordering Information:
W-8741-G: Compact PAC

- Intel Strong ARM CPU, 206MHz
- SDRAM: 64M bytes
- Flash : 32M bytes
- EEPROM: 16K bytes
- 64-bit hardware unique serial number
- Built-in Watchdog Timer
- Real-Time Clock
- 10/100 BaseT x 2
- VGA port:
320x240x16 to 1024x768x16
Default is 640x480x16
- 1 x Compact Flash type II insert with ejector
- USB 1.1 x 2
- Reset button & rotate switch
- Power LEDs
- COM0: Internal use
- COM2: RS-232
- COM3: RS-485
- COM1: Serial Control for 87K Series
- I/O Expansion Slot:
W-8041: 0 slot, W-8341: 3 slots,
W-8741: 7 slots
- Power Supply:
20W, Unregulated +10Vdc to +30Vdc
- Operating Temp.: -25°C to +75°C
- Storage Temp.: -30°C to +85°C
- Humidity: 5~95%
- Dimensions (LxHxD)(mm):
114 x 110 x 90(W-8041)
229 x 110 x 90(W-8341)
354 x 110 x 90(W-8741)

Option

- DM-64T:6.4" LCD Module
- DM-121D-AL:12.1" LCD monitor
- NS-205: 5-Port Industrial 10/100 Base-TX Ethernet Switch
- NS-208: 8-Port Industrial 10/100 Base-TX Ethernet Switch

Note:Please use NS-205 or NS-208 Industrial Ethernet Switch with Wincon-8x4x series of controllers.

WinCon-8X4X ISaGRAF/InduSoft PAC



Specifications & Features

NEW!!



W-8047-G

W-8347-G



W-8747-G



Ordering Information: ISaGRAF Dual-LAN PAC

W-8047-G: Without I/O Expansion
W-8347-G: 3 slot I/O Expansion
W-8747-G: 7 slot I/O Expansion

- The same hardware specifications of WinCon-8041/8341/8741
- The ISaGRAF Wincon target driver & target license are included
- Two Wincon-8x47/8x46 can be set up as Redundancy system. If one is damaged, the other one still works. More information at <http://www.icpdas.com/faq/isagraf.htm> "FAQ036"

Option

- DM-64T:6.4" LCD Module
- DM-121D-AL:12.1" LCD monitor
- NS-205: 5-Port Industrial 10/100 Base-TX Ethernet Switch
- NS-208: 8-Port Industrial 10/100 Base-TX Ethernet Switch

Note:

Please use NS-205 or NS-208 Industrial Ethernet Switch with Wincon-8x4x series of controllers.

Specifications & Features

NEW!!



W-8049-G

W-8349-G



W-8749-G



Ordering Information: InduSoft Dual-LAN PAC

W-8049-G: Without I/O Expansion
W-8349-G: 3 slot I/O Expansion
W-8749-G: 7 slot I/O Expansion
W-8049-G W-8349-G

- The same hardware specifications of WinCon-8x41 series
- The W-8x49 has 300 tags runtime license with one driver and one web thin client.
- The W-8x49-G 1500 has 1500 tags runtime with 3 drivers and one web thin client.

Option

- InduSoft-NT1500D: Local Interface development version for Windows NT/2000/XP (1500Tag, 3 drivers)
- InduSoft-CE1500D: Local Interface development version for Windows CE(CE View) (1500 Tags, 3 drivers)
- InduSoft-NT300D: Launch version for Windows NT/2000/XP(300Tag,3 drivers)
- InduSoft-CE300D: Launch version for Windows CE (300 Tags, 3 drivers)
- NS-205: 5-Port Industrial 10/100 Base-TX Ethernet Switch
- NS-208: 8-Port Industrial 10/100 Base-TX Ethernet Switch

Note:

Please use NS-205 or NS-208 Industrial Ethernet Switch with Wincon-8x4x series of controllers.

KinCon-8000 KW PAC



Introduction

The ICP DAS KinCon-8000 (K-8045/K-8345/K-8745) is a Windows CE.NET based SoftLogic PAC(Programmable Automation Controller) which bundles KW-Software solution inside. In KinCon-8000, the ProConOS, OPC Server, and ProVisIT(RT) integrate SoftLogic and HMI to be a real-time multitasking PAC. In PC ,the relative programming tools include MultiProg(the standard IEC-61131 programming system), and ProVisIT(the machine visualization tool).

MultiProg -standard IEC-61131 programming system

The programming system is based on a modern 32 bit windows technology, providing comfortable handling including zoom, drag & drop and dockable windows. The system allows the handling of IEC configuration elements, including libraries and provides a powerful debug system. The programming system consists of a PLC independent kernel for programming in the various IEC programming languages. To do so, the textual languages ST and IL as well as the graphical languages LD, FDB and SFC are provided.

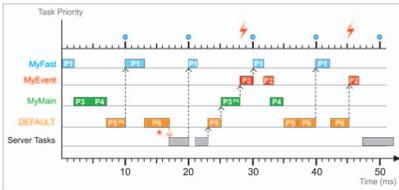
ProVisIT -the machine visualization tool

Using it, visualizations are created intuitively within the graphical editor which provides a large number of standard objects and dynamizations for example Size, Position, Rotation, Color changes and different Actions.

Features

Intel Strong ARM CPU

- Built-in Windows CE.net real-time multitasking system

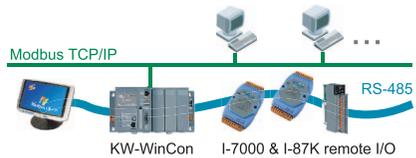


- Built-in logic analyzer
- Supports KW-MULTIPROG 4.0 IEC-61131 design system
- Online change function
- Supports KW-ProVisIT2.3 machine visualization



- Wide range of I/O modules
- Supports retain variables & battery backup memory
- More interface ports

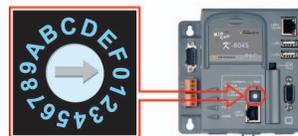
- Default serial port: one COM2: RS-232 & one COM3:RS-485
- Supports Modbus TCP/IP Slave protocol



- Supports Multi RS-485 ports
- Dual Ethernet ports



- Built-in 1 Rotary switch



KinCon-8000 KW PAC

Specifications & Features

NEW!!



K-8045-G
KW PAC without I/O expansion

NEW!!



K-8345-G
KW PAC with 3-slot I/O expansion

NEW!!



K-8745-G
KW PAC with 7-slot I/O expansion

- Intel Strong ARM CPU, 206MHz
- SDRAM: 64M bytes
- Flash: 32M bytes
- EEPROM: 16K bytes
- 64-bit hardware unique serial number
- Built-in Watchdog Timer
- Real Time Clock
- 10/100 BaseT x2
- VGA port x 1:
320x240x16 to 1024x768x16
Default is 640x480x16
- 1 x Compact Flash type II insert with ejector
- USB1.1 x 2
- Rest button
- Power LEDs
- COM0: Internal use
- COM2: RS-232
- COM3: RS-485
- COM1: Serial Control for 87K series
- I/O expansion slot:
K-8045: 0 slot, K-8345: 3 slots,
K-8745: 7 slots
- Power supply:
20W, Unregulated +10Vdc to +30Vdc
- Operating Temp.: -25°C to +75°C
- Storage Temp.: -30°C to +85°C
- Humidity: 5~95%
- Dimensions (LxHxD)(mm):
114x110x90(K-8045)
229x110x90(K-8345)
354x110x90(K-8745)
- Built-in Rotary Switch x 1

Option

- NS-205: 5-Port Industrial 10/100 Base-TX Ethernet Switch
- NS-208: 8-Port Industrial 10/100 Base-TX Ethernet Switch

Note: Please use NS-205 or NS-208 Industrial Ethernet Switch with Kincon-8000 series of controllers.

Ordering Information

Model	Description
K-8045-G	0-slot KinCon PAC, dual Ethernet dual USB, support KW-software
K-8345-G	3-slot KinCon PAC, dual Ethernet dual USB, support KW-software
K-8745-G	7-slot KinCon PAC, dual Ethernet dual USB, support KW-software
MULTIPROG 4.0	KW-software MULTIPROG 4.0 IEC 61131 programming system for windows 2000/XP
OPC-Server 2.0	KW-software OPC-Server 2.0 software
ProVisIT 2.3	KW-software ProVisIT 2.3 machine visualization