

ViewPAC



3.1. ViewPAC Overview

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3.1. ViewPAC Overview

• Overview

ViewPAC Family

All-in-one

Rich Development Tools

- ISaGRAF
- InduSoft
- Microsoft Visual Studio.net

Colorful, IP65 Waterproof Touch Screen

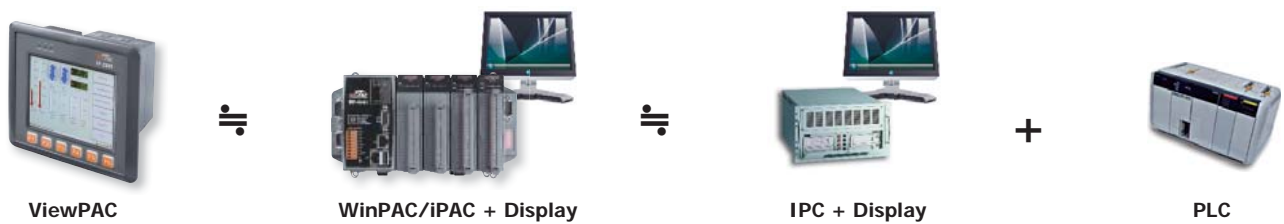
Various Communications

- Ethernet
- RS-232/485
- USB (Host)
- CAN bus
- FRnet
- GPS, GPRS
- ZigBee

I/O Slots

More than 60 types of I/O are supported

ViewPAC is an innovative PAC that combines a display, an I/O module and control in a single unit, and provide the perfect solution for integrating HMI, data acquisition and control in an individual PAC. Normally, HMIs and controllers operate separately.



The ViewPAC family includes two CPU teyps (80186, PXA270), two OS options (WinCE 5.0, MiniOS7) and a range of software development toolkits (C, Visual Studio .NET, ISaGRAF, InduSoft), each of which feature the same stability and flexibility as the standard PAC family produced by ICP DAS. ViewPAC is the ideal choice for a variety of applications, including factory automation, bulding automation, machine automation, manufacturing management , and environment monitoring, etc.

• Features

1. A variety of CPU and OS options for selection



MiniOS7
80186 CPU
VP-211x
VH-2110

- DOS-like
- Boot up in 0.4 ~ 0.8 seconds
- Built-in hardware diagnostics
- Standard version for C language programming
- ISaGRAF version for IEC 61131-3 programming



WinCE
PXA270 CPU
VP-2xWx
VP-413x

- Supports PC based software: eVC and Visual Studio .NET 2005/2008
- Web server, FTP server, Telnet server
- ISaGRAF version for IEC 61131-3 programming
- InduSoft version for SCADA solution

2. LCD Display & Rubber Keypad

1. 128 x 64 dot matrix STN LCD
2. 3.5" TFT LCD
3. 5.7" TFT LCD with touch panel
4. 10.4" TFT LCD with touch panel

The rubber keypad provides the following benefits:

1. Easy to dial
2. Long operation life up to 500k cycles
3. Function key characters are customizable



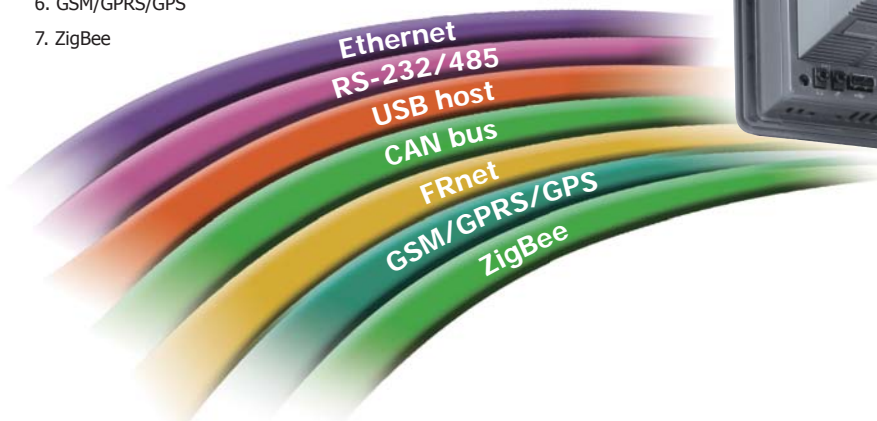
3. I/O Slots

The I/O slots support parallel bus (high profile I-8K series) and serial bus (high profile I-87K series) type I/O modules, and there are more than 60 kinds of module available for AI, AO, DI, DO, counter input, frequency input, PWM output, motion control, memory, and communication, etc.

4. Multiple Communication Interfaces

Several different types of communication interface are available that enable I/O modules to be expanded and connected to external devices:

- | | |
|---------------|-----------------|
| 1. Ethernet | 5. FRnet |
| 2. RS-232/485 | 6. GSM/GPRS/GPS |
| 3. USB host | 7. ZigBee |
| 4. CAN bus | |



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ViewPAC

• Hardware

1. Appearance

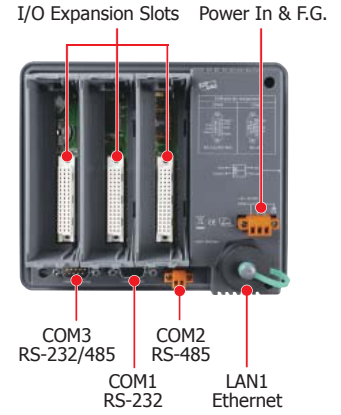
VP-2111/VP-2117/VH-2110



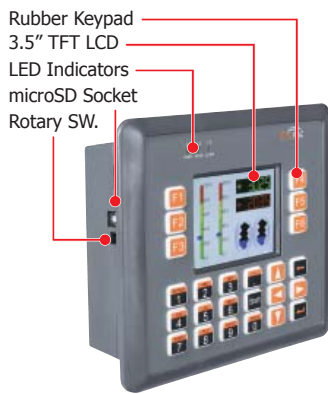
VH-2110



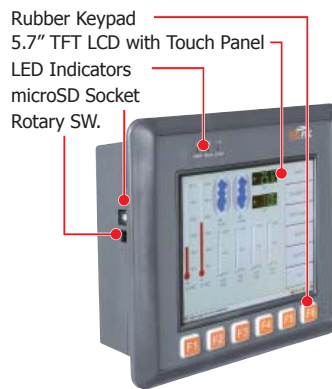
VP-2111/VP-2117



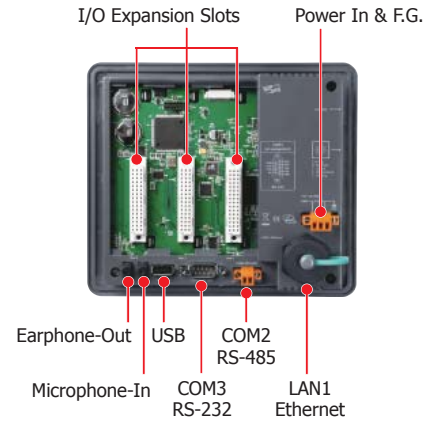
VP-23W1/VP-23W7/VP-23W9



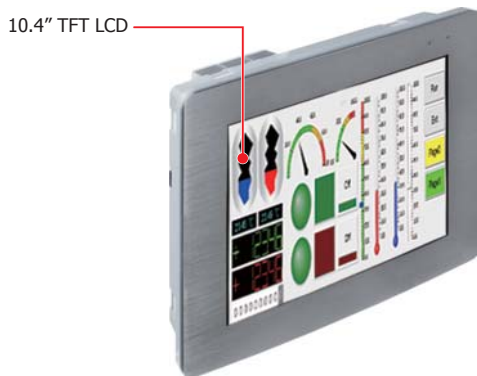
VP-25W1/VP-25W7/VP-25W9



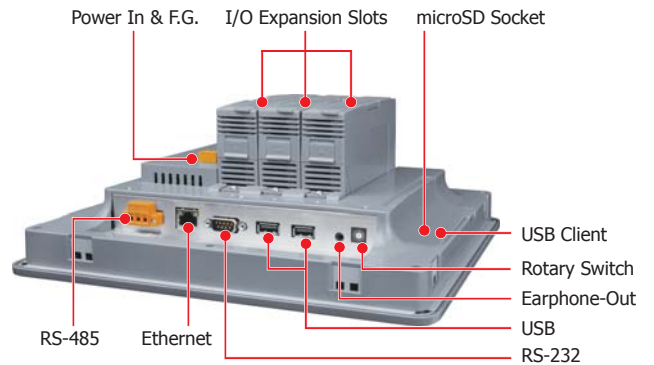
VP-23Wx/VP-25Wx



VP-4131/VP-4137/VP-4139



VP-4131/VP-4137/VP-4139



2. Installation



IP 66 Industrial Enclosure: I-3625-ENC



Panel Mounting-1



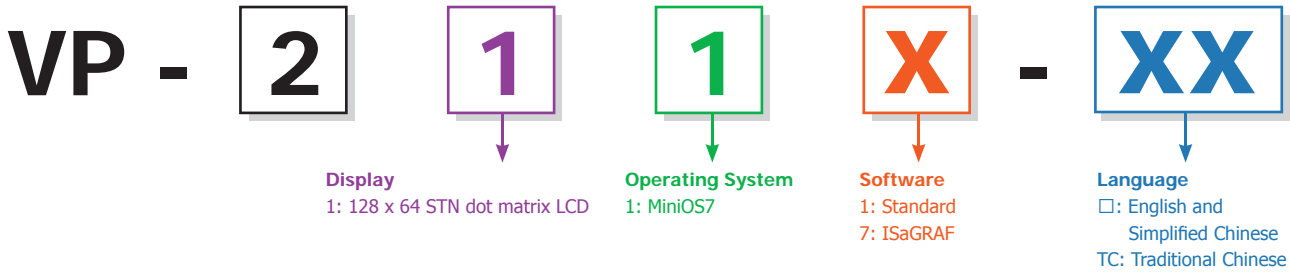
Panel Mounting-2



Panel Mounting-3

ViewPAC 3 1

• Selection Guide



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C Language Based ViewPAC											
Model Name	Special Feature	OS	CPU	Flash	SRAM	Dual Battery Backup SRAM	Flash Disk	STN LCD Resolution	Ethernet Port	RS-232/RS-485	I/O Slot
VP-2111	-	MiniOS7	80 MHz	512 KB	768 KB	512 KB	64 MB	128 x 64	1	3	3
VH-2110	-	MiniOS7	80 MHz	512 KB	512 KB	-	-	128 x 64	1	3	-

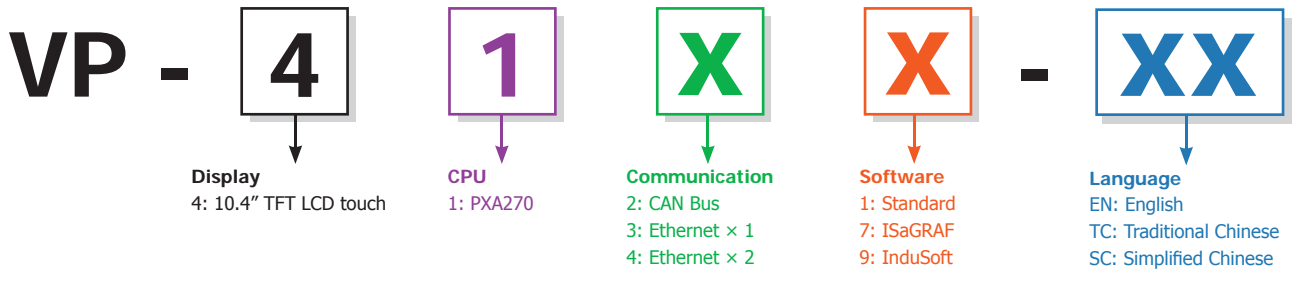
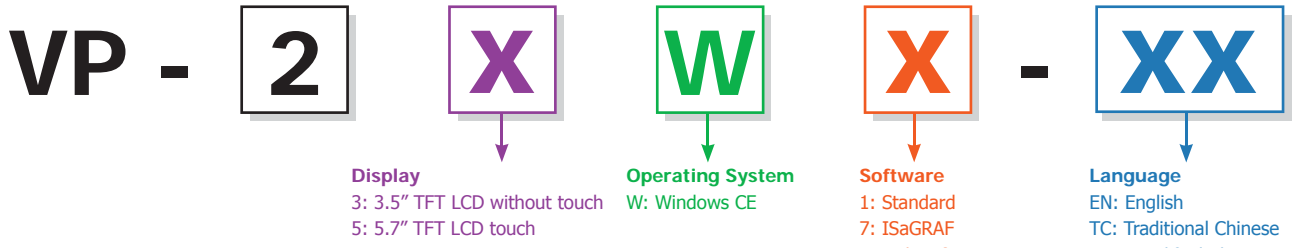
The ViewPAC VP-2111/VH-2110 series has a 16-bit CPU, a 128 x 64 resolution graphic display, a silicon rubber keypad, Ethernet, RS-232, RS-485 communication ports, and three I/O expansion slots. Each is also equipped with a DOS-like OS, called MiniOS7. Users can develop their custom programs in C and use a compiler such as Turbo C 2.0 or Turbo C++ 1.01 (recommended) to create a 16-bit executable file that can then be uploaded to the VP-211/VH-2110 controller via the RS-232 or Ethernet port. ICP DAS provides a variety of demo programs for your reference. In addition, for TCP/IP programming, ICP DAS provides a TCP/IP server template, called Xserver, that is a very powerful, easy to use and flexible tool that can reduce your development time by up to 90%.

ISaGRAF Based ViewPAC											
Model Name	Special Feature	OS	CPU	Flash	SRAM	Dual Battery Backup SRAM	Flash Disk	STN LCD Resolution	Ethernet Port	RS-232/RS-485	I/O Slot
VP-2117	-	MiniOS7	80 MHz	512 KB	768 KB	512 KB	64 MB	128 x 64	1	3	3

The controller fully supports all five of the IEC61131-3 standard PLC languages:

1. Ladder diagram
2. Function block diagram
3. Sequential function chart
4. Structured text
5. Instruction List plus flow chart

It supports the Modbus protocol and can link to distributed I/O modules using either the Modbus or DCON protocol via the RS-232/485 or Ethernet port.



ViewPAC 3 1



Standard ViewPAC											
Model Name	OS	Pre-Installed Software	CPU	Flash	SDRAM	Dual Battery Backup SRAM	TFT LCD (Resolution)	Ethernet Port	RS-232/RS-485	USB	I/O Slot
VP-23W1	CE 5.0	None	PXA270, 520 MHz	96 MB	128 MB	512 KB	3.5" (320 x 240)	1	2	1	3
VP-25W1				128 MB			5.7" (640 x 480)			2	
VP-4131				10.4" (800 x 600)			2				

The controller supports the following software development tools:

- DLLs of I/O modules for eVC, VS.Net 2005/2008
- DLLs of Modbus/RTU and Modbus/TCP for eVC and VS.Net 2005/2008
- OPC server (Quicker)

ISaGRAF Based ViewPAC											
Model Name	OS	Pre-Installed Software	CPU	Flash	SDRAM	Dual Battery Backup SRAM	TFT LCD (Resolution)	Ethernet Port	RS-232/RS-485	USB	I/O Slot
VP-23W7	CE 5.0	ISaGRAF	PXA270, 520 MHz	96 MB	128 MB	512 KB	3.5" (320 x 240)	1	2	1	3
VP-25W7				128 MB			5.7" (640 x 480)			2	
VP-4137				10.4" (800 x 600)			2				

The controller fully supports all five of the IEC61131-3 standard PLC languages:

- Ladder diagram
- Function block diagram
- Sequential function chart
- Structured text
- Instruction List plus flow chart

It supports the Modbus protocol and can link to distributed I/O modules using either the Modbus or DCON protocol via the RS-232/485 or Ethernet port.

InduSoft Based ViewPAC											
Model Name	OS	Pre-Installed Software	CPU	Flash	SDRAM	Dual Battery Backup SRAM	TFT LCD (Resolution)	Ethernet Port	RS-232/RS-485	USB	I/O Slot
VP-23W9	CE 5.0	InduSoft	PXA270, 520 MHz	96 MB	128 MB	512 KB	3.5" (320 x 240)	1	2	1	3
VP-25W9				128 MB			5.7" (640 x 480)			2	
VP-4139				10.4" (800 x 600)			2				

The controller can be used to develop following applications:

- Human Machine Interfaces (HMI)
- Supervisory Control and Data Acquisition System (SCADA)
- Web server



Features

- 80186, 80 MHz CPU
- C Language Based and MiniOS7 Inside
- 3 I/O Slots
- IP65 Compliant Front Panel
- STN LCD with English and Chinese Fonts
- Rubber Keypad with 24 Keys
- Operating Temperature: -15 ~ +55°C



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ViewPAC

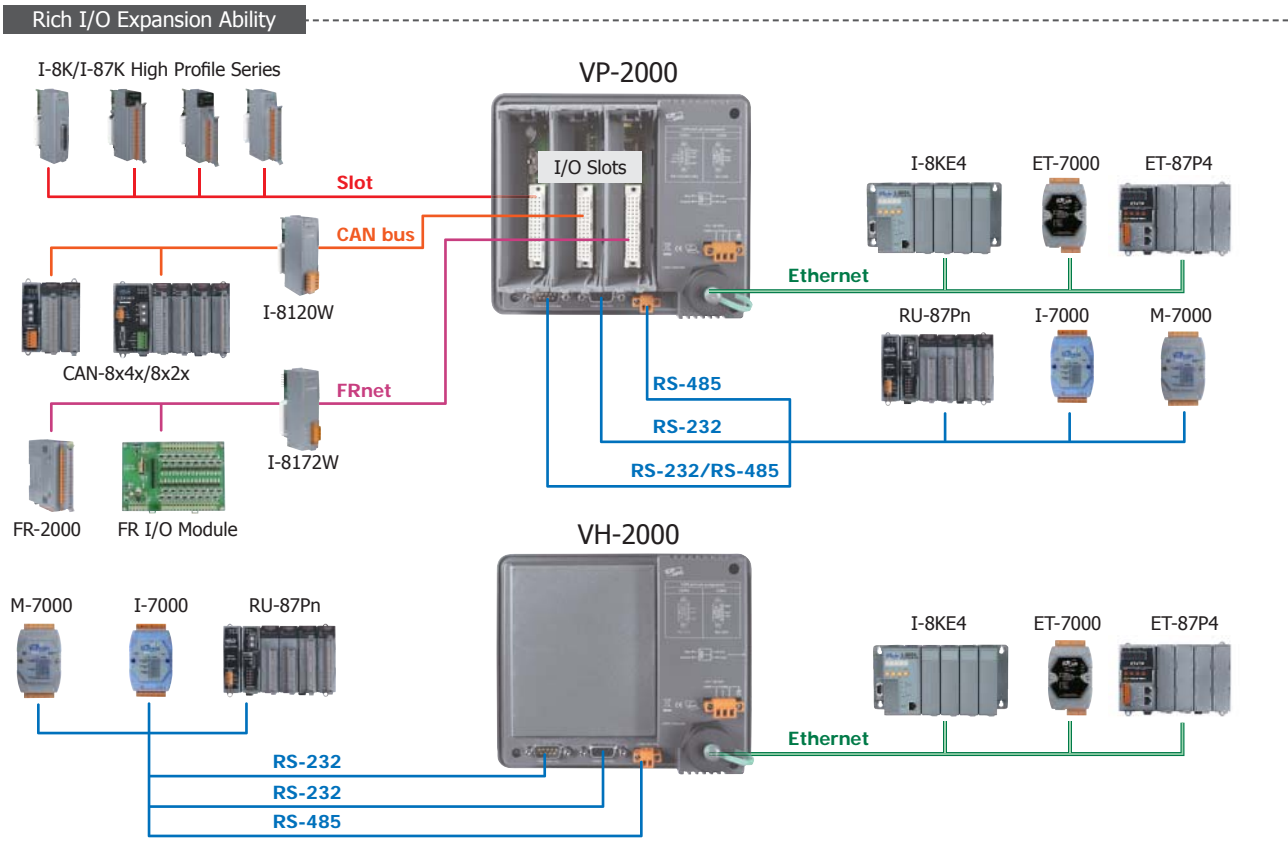
Introduction

The VP-2111/VH-2110 are MiniOS7 based PACs that combine a graphic display and a keypad into a single unit. They are equipped with an 80186 CPU (16-bit, 80 MHz) running a MiniOS7 operating system, several communication interfaces (Ethernet, RS-232/485), three I/O slots (VP-2111), a STN LCD and a rubber keypad.

The MiniOS7 operating system boots up within a very short time (0.4 ~ 0.8 seconds). VP-2111/VH-2110 has a built-in hardware diagnostic function, and supports the full range of functions required to access all high profile I-8K and I-87K series I/O modules, such as DI, DO, DI/DO, AI, AO, Counter/Frequency, motion control modules, etc.

Compared to regular HMI + PLC solutions, VP-2111 and VH-2110 reduce overall system cost and space, and provide all the best features of HMIs and PLCs.

Applications



Specifications

Models	VP-2111	VH-2110
System Software		
OS	MiniOS7 (DOS-like embedded operating system)	
Program Download Interface	RS-232 (COM1) or Ethernet	
Programming Language	C language	
Compilers to create.exe Files	TC++ 1.01; TC 2.01; BC++ 3.1 ~ 5.2x; MSC 6.0; MSVC++ (before version 1.5.2)	
CPU Module		
CPU	80186, 80 MHz	
SRAM	768 KB	512 KB
Dual Battery Backup SRAM	512 KB; data valid up to 5 years	-
Flash	512 KB	
Flash Disk	64 MB NAND Flash	-
EEPROM	16 KB	
NVRAM	31 bytes (battery backup, data valid up to 5 years)	
RTC (Real Time Clock)	Provide second, minute, hour, date, day of week, month, year	
64-bit Hardware Serial Number	Yes, for Software Copy Protection	
Watchdog Timers	Yes (0.8 second)	
Communication Ports		
Ethernet	RJ-45 x 1, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)	
COM 0	Internal communication with the high profile I-87K series modules in slots	
COM 1	RS-232 (Rx, Tx and GND) Program download port; non-isolated	
COM 2	RS-485 (Data+, Data-) with internal self-tuner ASIC; 2500 V _{DC} isolated	
COM 3	RRS-232/RS-485 (Rx, Tx, CTS, RTS and GND for RS-232, Data+ and Data- for RS-485); non-isolated	RS-232 (Rx, Tx, CTS, RTS and GND for RS-232); non-isolated
MMI (Man Machine Interface)		
LCD	STN, 128 x 64 Dot Matrix LCD	
Display Mode	Text + Graphics	
Text Font	English + Simplified Chinese/Traditional Chinese	
Rubber Keypad	24 keys	
Buzzer	Yes	
LED Indicators	3 Dual-Color LEDs (PWR, RUN, LAN1, L1, L2, L3; L1~L3 for User Programmable)	2 Dual-Color LEDs (RUN, LAN1, L1, L2; L1~L2 for User Programmable)
I/O Expansion Slots		
Slot Number	3 (For High Profile I-8K and I-87K Modules Only)	-
Data Bus	8/16 bits	-
Address Bus Range	2 K for each slot	-
Mechanical		
Dimensions (W x H x D)	182 mm x 158 mm x 125 mm	
Installation	Panel Mounting	
Ingress Protection	Front panel: IP65	
Environmental		
Operating Temperature	-15 ~ +55°C	
Storage Temperature	-30 ~ +80°C	
Ambient Relative Humidity	10 ~ 90% RH (non-condensing)	
Power		
Input Range	+10 ~ +30 V _{DC}	+12 ~ +48 V _{DC}
Isolation	1 kV	-
Capacity	15 W	-
Consumption	6 W	3.6 W

Ordering Information

VP-2111 CR	C Language Based ViewPAC with 3 I/O Slots (English + Simplified Chinese Font) (RoHS)
VP-2111-TC CR	C Language Based ViewPAC with 3 I/O Slots (English + Traditional Chinese Font) (RoHS)
VH-2110 CR	C Language Based ViewPAC without I/O Slot (English + Simplified Chinese Font) (RoHS)
VH-2110-TC CR	C Language Based ViewPAC without I/O Slot (English + Traditional Chinese Font) (RoHS)

Accessories

DP-660	24 V _{DC} /2.5 A, 60 W and 5 V _{DC} /0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
MDR-60-24 CR	24 V _{DC} /2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)



Features

- 80186, 80 MHz CPU
- ISaGRAF Ver.3 SoftLogic Inside (IEC 61131-3)
- 3 I/O Slots
- IP65 Compliant Front Panel
- STN LCD with English and Chinese Fonts
- Rubber Keypad with 24 Keys
- Operating Temperature: -15 ~ +55°C



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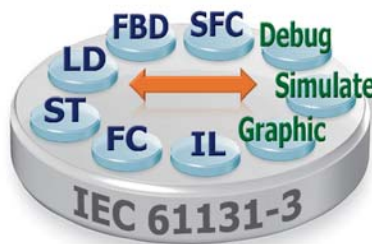
Introduction

VP-2117 is a ISaGRAF based PAC which integrates a graphic display and a keypad into a single unit. It is equipped with an 80186 CPU (16-bit, 80 MHz) running a MiniOS7 operating system, a STN LCD, a rubber keypad, three I/O slots, and a variety of connectivities including Ethernet and RS-232/485, etc. MiniOS7 operating system boots up within a very short time (0.4 ~ 0.8 seconds). VP-2117 has a built-in hardware diagnostic function, and supports the full range of functions required to access all high profile I-8K and I-87K series I/O modules, such as DI, DO, DI/DO, AI, AO, Counter/Frequency, motion control modules, etc. Users can also choose RS-485 remote I/O modules (I-7000 series) or expansion units (RU-87Pn or I-87Kn) plugged with high profile I-87K serial I/O modules. Compared to regular HMI + PLC solutions, VP-2117 reduces overall system cost and space, and provide all the best features of HMIs and PLCs.

ISaGRAF Features

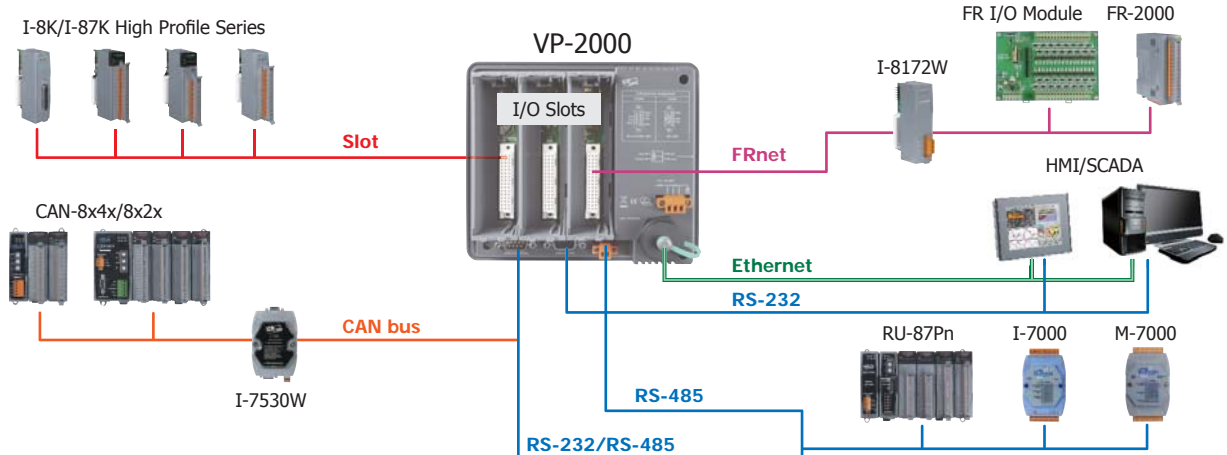
The ISaGRAF workbench Ver. 3.x features:

- IEC 61131-3 Standard Open PLC Programming Languages (LD, FBD, SFC, ST, IL, FC) + Flow Chart (FC)
- Auto-Scan I/O
- On-Line Debug/Control/Monitor, Off-Line Simulation
- Simple Graphic HMI



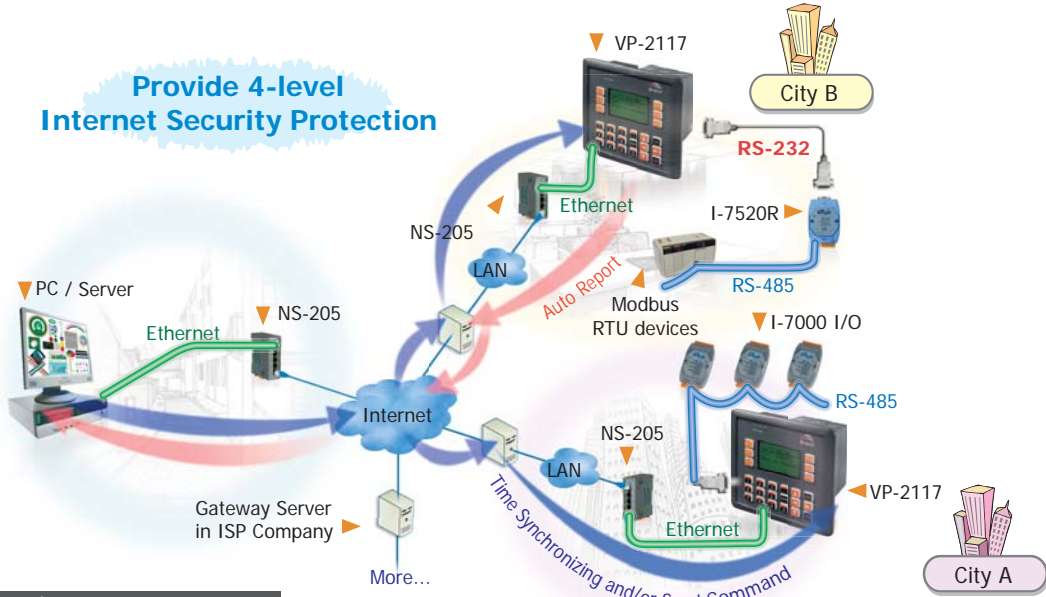
Applications

Rich I/O Expansion Ability

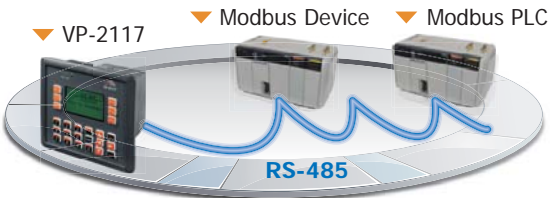


Cost-effective Auto-Report Data Acquisition/Control System

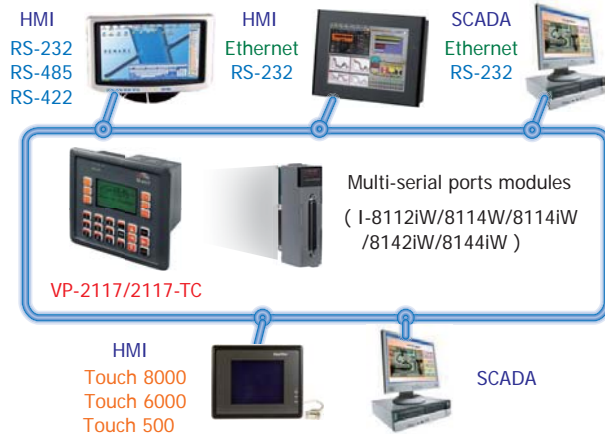
Provide 4-level Internet Security Protection



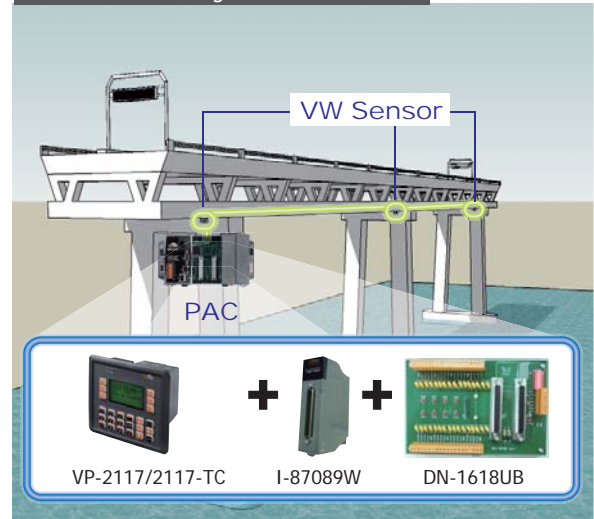
Modbus RTU/ASCII Master Ports



Modbus RTU/TCP Slave Ports

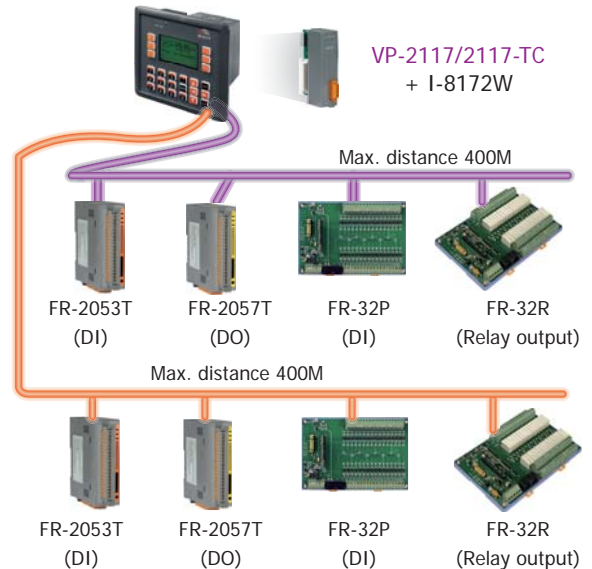


Stress Monitoring of Constructions

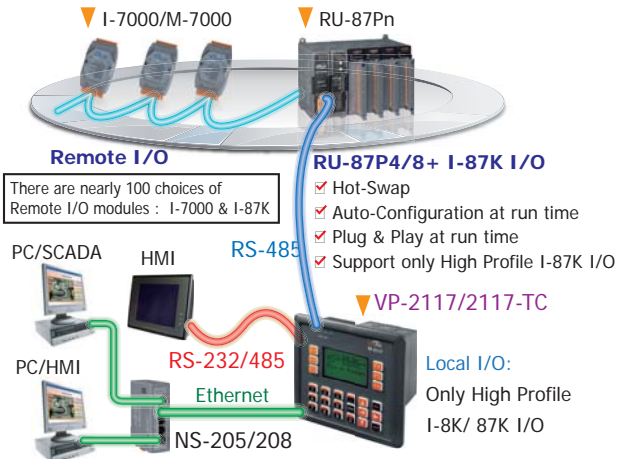


VP-2117/2117-TC + I-87089W + DN-1618UB

FRnet I/O Application



Local/Remote I/O Expansion & Multi-HMI



There are nearly 100 choices of Remote I/O modules : I-7000 & I-87K

- ✓ Hot-Swap
- ✓ Auto-Configuration at run time
- ✓ Plug & Play at run time
- ✓ Support only High Profile I-87K I/O

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ViewPAC

Specifications

Models		VP-2117
System Software		
OS	MiniOS7 (DOS-like embedded operating system)	
Development Software		
ISaGRAF Software	ISaGRAF Version 3	IEC 61131-3 standard
	Languages	LD, ST, FBD, SFC, IL & FC
	Max. Code Size	64 KB
	Scan Time	2 ~ 25 ms for normal program 10 ~ 125 ms (or more) for complex or large program
CPU Module		
CPU	80186, 80 MHz	
SRAM	768 KB	
Flash	512 KB	
Flash Disk	64 MB NAND Flash	
Dual Battery Backup SRAM	512 KB; data valid up to 5 years (for retain variables)	
EEPROM	16 KB	
NVRAM	31 bytes (battery backup, data valid up to 5 years)	
RTC (Real Time Clock)	Provide second, minute, hour, date, day of week, month, year	
64-bit Hardware Serial Number	Yes, for Software Copy Protection	
Watchdog Timers	Yes (0.8 second)	
Communication Ports		
Ethernet	RJ-45 x 1, 10/100 Base-TX (Auto-negotiating, LED indicators)	
COM 0	Internal communication with the I-87K High Profile modules in slot 0 ~ 2	
COM 1	RS-232 (Rx/D, Tx/D and GND) Program download port; Non-isolated	
COM 2	RS-485 (Data+, Data-) with internal self-tuner ASIC; 2500 V _{DC} isolated	
COM 3	RS-232/RS-485 (Rx/D, Tx/D, CTS, RTS and GND for RS-232, Data+ and Data- for RS-485); Non-isolated	
MMI (Man Machine Interface)		
LCD	STN, 128 x 64 Dot Matrix LCD	
Display Mode	Text + Graphics	
Text Font	English + Simplified Chinese/Traditional Chinese	
Rubber Keypad	24 keys	
Buzzer	Yes	
LED Indicators	3 Dual-Color LEDs (PWR, RUN, LAN1, L1,L2, L3; L1~L3 for User Programmable)	
I/O Expansion Slots		
Slot Number	3 (For High Profile I-8K and I-87K Modules only)	
Mechanical		
Dimensions (W x L x H)	182 mm x 158 mm x 125 mm	
Installation	Panel Mounting	
Ingress Protection	Front panel: IP65	
Environmental		
Operating Temperature	-15 ~ +55°C	
Storage Temperature	-30 ~ +80°C	
Ambient Relative Humidity	10 ~ 90% RH (non-condensing)	
Power		
Input Range	+10 ~ +30 V _{DC}	
Isolation	1 kV	
Capacity	15 W	
Consumption	6 W	

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ISaGRAF Specifications

Protocols (some protocols need optional devices)		
NET ID	1 ~ 255, user-assigned by software	
Modbus RTU/ASCII Master	Max. 2 COM Ports: COM1 ~ COM3 and COM5. (To connect to other Modbus Slave devices.) (*) Max. Modbus_XXX Function Block amount for 2 ports: 128.	
Modbus RTU Slave	Max. 2 COM Ports, COM1 and one of COM2 or COM3. (For connecting ISaGRAF, PC/HMI/OPC Server & MMI panels.)	
Modbus TCP/IP Slave	Max. 6 connections. For connecting ISaGRAF & PC/HMI.	
Remote I/O	One of COM2 or 3 supports I-7000 I/O modules, and I-87Kn base or RU-87P1/2/4/8 + I-87K High Profile I/O boards as Remote I/O. Max. 64 Remote I/O module for one PAC.	
Fbus	Built-in COM3 Port to exchange data between ICP DAS's ISaGRAF PACs.	
Ebus	To exchange data between ICP DAS's ISaGRAF Ethernet PACs via Ethernet port.	
SMS:Short Message Service	One of COM3 or COM5 can link to a GSM modem to support SMS. User can request data/control the controller by cellular phone. The controller can also send data & alarms to user's cellular phone. (*) Optional GSM/GPRS modem: GTM-201-RS232 (850/900/1800/1900 GSM/GPRS External Modem) or visit to the web site for recommended GSM/GPRS modem.	
User-Defined Protocol	COM1 ~ COM3, COM5 ~ COM16 by serial communication function blocks (*)	
CAN/CANopen	Max. 3 COM Ports: COM1, 3 or COM5 ~ COM12 (*) can connect one I-7530 (RS-232 to CAN converter) to support CAN/CANopen devices and sensors. One VP-2117 supports max. 3 RS-232 Ports to connect max. 3 I-7530. (FAQ-086)	
FRnet I/O	Support Max. 3 I-8172W FRnet Master cards to connect FRnet I/O modules (Max. 768-ch. DI + 768-ch. DO)	
Sending E-mail	Actively or passively sending E-mail via Ethernet port through internet. Max. 10 receivers for each sending and can send E-mail with an attached file. (Max. file size is about 488 KB)	
Optional I/O Functions (Refer to ISaGRAF PAC I/O Selection Guide for I/O Module list)		
PWM Output	High Speed PWM Module	I-8088W, 8-ch PWM outputs, software support 1 Hz ~ 100 kHz (non-continuous), duty: 0.1 ~ 99.9%
	DO Module as PWM	8-ch. max. 500 Hz max. For Off=1 & On=1 ms. Output square wave: Off: 1 ~ 32766 ms, On: 1 ~ 32766 ms. Optional DO Boards: I-8037W, 8041W, 8041AW, 8042W, 8050W, 8054W, 8055W, 8056W, 8057W, 8060W, 8063W, 8064W, 8068W, 8069W. (Relay Output boards cannot generate fast square wave)
Counters, Encoder, Frequency	Parallel DI Counter	8 ch. max. for 1 controller. Counter Val: 32-bit.; 500 Hz max. Min. ON & OFF width must > 1ms Optional DI boards: I-8040W, 8040PW, 8042W, 8046W, 8048W, 8050W, 8051W, 8052W, 8053W, 8053PW, 8054W, 8055W, 8058W, 8063W...
	Serial DI Counter	Counter input: 100 Hz max. Counter value: 0 ~ 65535 (16-bit) Optional serial I-87K DI boards: I-87040W, 87046W, 87051W, 87052W, 87053W, 87053W-A5, 87054W, 87055W, 87058W, 87059W, 87063W.
	Remote DI Counter	All remote I-7000 & I-87K DI modules support counters. 100 Hz max. value: 0 ~ 65535
	High Speed Counter	I-87082W: 100 kHz max. 32-bit; I-8084W: 250 kHz max. 32-bit
	Encoder	I-8093W: 3-axis Encoder Module, max. 1M Hz for quadrant input mode, max. 4M Hz for pulse/direction and cw/ccw input mode. (FAQ-112) I-8084W: 250 kHz max., 4-ch encoder, can be pulse/direction, or Up/Down or A/B phase (Quad. mode); Not support Encoder Z-index. (FAQ-100)
Motion	Motion Control	I-87082W: 2-ch, 1 Hz ~ 100 kHz; I-87088W: 8-ch, 0.1 Hz ~ 500 kHz; I-8084W: 8-ch, 1 Hz ~ 250 kHz;
		Can integrate with one I-8091W (2-axis) or two I-8091W (4-axis) to do motion control. Ethernet communication is also available when doing motion control.
* Note: COM5 ~ COM16 are resided at the expansion boards if they are plugged on slot0~2 of VP-2117.		
* ISaGRAF FAQ: http://www.icpdas.com/faq/isagraf.htm		

Ordering Information

VP-2117 CR	ISaGRAF based ViewPAC with 3 I/O Slots (English + Simplified Chinese Font) (RoHS)
VP-2117-TC CR	ISaGRAF based ViewPAC with 3 I/O Slots (English + Traditional Chinese Font) (RoHS)

Accessories

ISaGRAF Development Software	
ISaGRAF-256-E	ISaGRAF Workbench Software Ver.3 (256 I/O Tags) with One Application Book (English version) and one USB Dongle
ISaGRAF-256-C	ISaGRAF Workbench Software Ver.3 (256 I/O Tags) with One Application Book (Chinese version) and one USB Dongle
ISaGRAF-32-E	ISaGRAF Workbench Software Ver.3 (32 I/O Tags) with One Application Book (English version)
ISaGRAF-32-C	ISaGRAF Workbench Software Ver.3 (32 I/O Tags) with One Application Book (Chinese version)
Note: No upgrade service from ISaGRAF-32 to ISaGRAF-256 (Using ISaGRAF-32 can control more than 32 I/O tags. Please refer to ISaGRAF User's Manual Ch. 3.4)	
Power Supply	
DP-660	24 Vdc/2.5 A, 60 W and 5 Vdc/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
MDR-60-24 CR	24 Vdc/2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)



Features

- PXA270, 520 MHz CPU
- Windows CE 5.0
- Hard Real-Time Capability
- 3 I/O Slots
- IP65 Compliant Front Panel
- 3.5"/5.7" TFT LCD
- Support eLogger HMI
- Audio with Microphone-In and Earphone-Out
- Operating Temperature: -20 ~ +70°C



3
2
ViewPAC

Introduction

The VP-23W1 and VP-25W1 are Windows CE 5.0 based PACs that combines a color graphic display and I/O expansion slots into a single unit. It is equipped with a PXA270 CPU (520 MHz), a variety of connectivities (USB, Ethernet, RS-232/485), three I/O slots, 3.5" or 5.7" TFT LCD and a rubber keypad. The benefits of running Windows CE 5.0 on ViewPAC include hard real-time capability, small core size, fast boot speed, interrupt handling at a deeper level and achievable deterministic control. The VP23W1 and VP-25W1 are also capable of running PC-based control software such as Visual Basic .NET and Visual C#, etc.

Compared to regular HMI + PLC solutions, VP-23W1 and VP-25W1 reduce overall system cost and space, and provide all the best features of HMIs and PLCs.

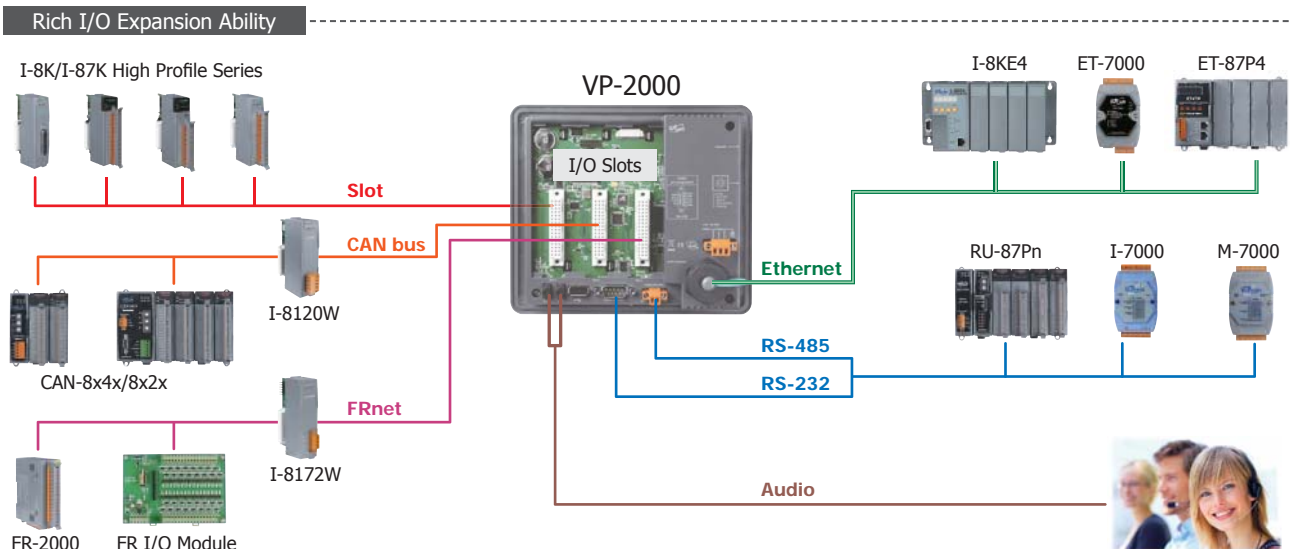
Windows CE5



Windows CE 5 is a compact and real-time OS used to quickly create time critical and high performance applications. Using Windows CE 5 gives an ability to run PC-based control software such as Visual Basic .NET, Virtual C#, SCADA software, SoftPLC... etc.

- ★ FTP Server
- ★ Web Server
- ★ SQL Compact Edition 3.5
- ★ .NET Compact Framework 3.5
- ★ Virtual CE Pro (VCEP)
- ★ OPC Server (NAPOPC_CE5 DA Server)
- ★ Soft PLC solution: WP-8xx7, WP-5xx7 and VP-25W7 (ISaGRAF inside)
- ★ SCADA solution: WP-8xx9, WP-5xx9 and VP-25W9 (InduSoft inside)

Applications



Specifications

Models	VP-23W1	VP-25W1
System Software		
OS	Windows CE 5.0	
.Net Compact Framework	3.5	
Embedded Service	FTP server, Web server (supports VB script, JAVA script), Embedded SQL server	
SDK Provided	DII for eVC, DII for Visual Studio.Net 2005/2008	
Multilanguage Support	English, German, French, Spanish, Russian, Italian, Korean, Simplified Chinese, Traditional Chinese	
CPU Module		
CPU	PXA270, 520 MHz	
SDRAM	128 MB	
Dual Battery Backup SRAM	512 KB; data valid up to 5 years	
Flash	96 MB	
EEPROM	16 KB	
Expansion Flash Memory	microSD socket with one 2 GB microSD card (support up to 32 GB microSDHC card)	
RTC (Real Time Clock)	Provide second, minute, hour, date, day of week, month, year	
64-bit Hardware Serial Number	Yes, for Software Copy Protection	
Dual Watchdog Timers	Yes (0.8 second)	
Rotary Switch	Yes (0 ~ 9)	
VGA & Communication Ports		
Ethernet	RJ-45 x 1, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)	
USB 1.1 (host)	1	
USB 1.1 (client)	-	
COM 0	Internal communication with the high profile I-87K series modules in slots	
COM 1	-	
COM 2	RS-485 (Data+, Data-) with internal self-tuner ASIC; 2500 V _{DC} isolated	
COM 3	RS-232 (Rx/D, Tx/D, CTS, RTS, DSR, DTR, CD, RI and GND); Non-isolated	
MMI (Man Machine Interface)		
LCD	3.5" TFT (Resolution 320 x 240)	5.7" TFT (Resolution 640 x 480)
Touch Panel	-	Yes
Rubber Keypad	24 keys	6 Keys
Audio	Microphone-In and Earphone-Out	
LED Indicators	3 Dual-Color LEDs (PWR, RUN, LAN1, L1, L2, L3; L1 ~ L3 for User Programmable)	
I/O Expansion Slots		
Slot Number	3	
Mechanical		
Dimensions (W x H x D)	182 mm x 158 mm x 125 mm	
Installation	Panel Mounting	
Ingress Protection	Front panel: IP65	
Environmental		
Operating Temperature	-20 ~ +70°C	
Storage Temperature	-30 ~ +80°C	
Ambient Relative Humidity	10 ~ 90% RH (non-condensing)	
Power		
Input Range	+10 ~ +30 V _{DC}	
Isolation	1 kV	
Capacity	12.5 W	
Consumption	7.2 W	

Ordering Information

VP-23W1-EN CR	Standard ViewPAC with 3.5" LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-25W1-EN CR	Standard ViewPAC with 5.7" LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-23W1-TC CR	Standard ViewPAC with 3.5" LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
VP-25W1-TC CR	Standard ViewPAC with 5.7" LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
VP-23W1-SC CR	Standard ViewPAC with 3.5" LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)
VP-25W1-SC CR	Standard ViewPAC with 5.7" LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)

Accessories

DP-660	24 V _{DC} /2.5 A, 60 W and 5 V _{DC} /0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
MDR-60-24 CR	24 V _{DC} /2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)



Features

- PXA270, 520 MHz CPU
- Windows CE 5.0
- Hard Real-Time Capability
- 3 I/O Slots
- IP65 Compliant Front Panel
- 10.4" TFT LCD
- Support eLogger HMI
- Audio with Earphone-Out
- Operating Temperature: -20 ~ +70°C



3
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ViewPAC

Introduction

The VP-4131 is a Windows CE 5.0 based PAC that combines a color graphic display and I/O expansion slots into a single unit. It is equipped with a PXA270 CPU (520 MHz), a variety of connectivities (USB, Ethernet, RS-232/485), 3 I/O slots, 10.4" TFT LCD and a rubber keypad. The benefits of running Windows CE 5.0 on ViewPAC include hard real-time capability, small core size, fast boot speed, interrupt handling at a deeper level and achievable deterministic control. The VP-4131 is also capable of running PC-based control software such as Visual Basic .NET and Visual C#, etc.

Compared to regular HMI + PLC solutions, VP-4131 reduces overall system cost and space, and provide all the best features of HMIs and PLCs.

Windows CE5



Windows CE 5 is a compact and real-time OS used to quickly create time critical and high performance applications. Using Windows CE 5 gives an ability to run PC-based control software such as Visual Basic .NET, Virtual C#, SCADA software, SoftPLC... etc.

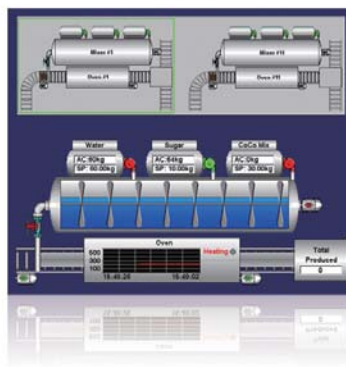
- ★ FTP Server
- ★ Web Server
- ★ SQL Compact Edition 3.5
- ★ .NET Compact Framework 3.5
- ★ Virtual CE Pro (VCEP)
- ★ OPC Server (NAPOPC_CES DA Server)
- ★ Soft PLC solution: WP-8xx7, WP-5xx7 and VP-25W7 (ISaGRAF inside)
- ★ SCADA solution: WP-8xx9, WP-5xx9 and VP-25W9 (InduSoft inside)

Applications

Machine Automation



SCADA System



Factory Automation



Specifications

Models	VP-4131
System Software	
OS	Windows CE 5.0
.Net Compact Framework	3.5
Embedded Service	FTP server, Web server (supports VB script, JAVA script), Embedded SQL server
SDK Provided	Dll for eVC, Dll for Visual Studio.Net 2005/2008
Multilanguage Support	English, German, French, Spanish, Russian, Italian, Korean, Simplified Chinese, Traditional Chinese
CPU Module	
CPU	PXA270, 520 MHz
SDRAM	128 MB
Dual Battery Backup SRAM	512 KB; data valid up to 5 years
Flash	128 MB
EEPROM	16 KB
Expansion Flash Memory	microSD socket with one 2 GB microSD card (support up to 32 GB microSDHC card)
RTC (Real Time Clock)	Provide second, minute, hour, date, day of week, month, year
64-bit Hardware Serial Number	Yes, for Software Copy Protection
Dual Watchdog Timers	Yes (0.8 second)
Rotary Switch	Yes (0 ~ 9)
VGA & Communication Ports	
Ethernet	RJ-45 x 1, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)
USB 1.1 (host)	2
USB 1.1 (client)	1
COM 0	Internal communication with the high profile I-87K series modules in slots
COM 1	-
COM 2	RS-485 (Data+, Data-) with internal self-tuner ASIC; 2500 V _{DC} isolated
COM 3	RS-232 (Rx, Tx, CTS, RTS, DSR, DTR, CD, RI and GND); Non-isolated
MMI (Man Machine Interface)	
LCD	10.4" TFT (Resolution 800 x 600)
Touch Panel	Yes
Rubber Keypad	-
Audio	Earphone-Out
LED Indicators	2 LEDs (PWR, RUN)
I/O Expansion Slots	
Slot Number	3
Mechanical	
Dimensions (W x H x D)	293 mm x 231 mm x 129 mm
Installation	Panel Mounting
Ingress Protection	Front panel: IP65
Environmental	
Operating Temperature	-20 ~ +70°C
Storage Temperature	-30 ~ +80°C
Ambient Relative Humidity	10 ~ 90% RH (non-condensing)
Power	
Input Range	+10 ~ +30 V _{DC}
Isolation	1 kV
Capacity	12.5 W
Consumption	8.5 W

Ordering Information

VP-4131-EN CR	Standard ViewPAC with 10.4" LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-4131-TC CR	Standard ViewPAC with 10.4" LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
VP-4131-SC CR	Standard ViewPAC with 10.4" LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)

Accessories

DP-660	24 V _{DC} /2.5 A, 60 W and 5 V _{DC} /0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
MDR-60-24 CR	24 V _{DC} /2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)



Features

- PXA270, 520 MHz CPU
- Windows CE 5.0
- ISaGRAF Ver.3 SoftLogic Inside (IEC 61131-3)
- Hard Real-Time Capability
- 3 I/O Slots
- IP65 Compliant Front Panel
- 3.5"/5.7"/10.4" TFT LCD
- Modbus RTU/TCP (Master, Slave)
- Support Soft-GRAF HMI
- Audio with Microphone-In and Earphone-Out
- Operating Temperature: -20 ~ +70°C

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ViewPAC

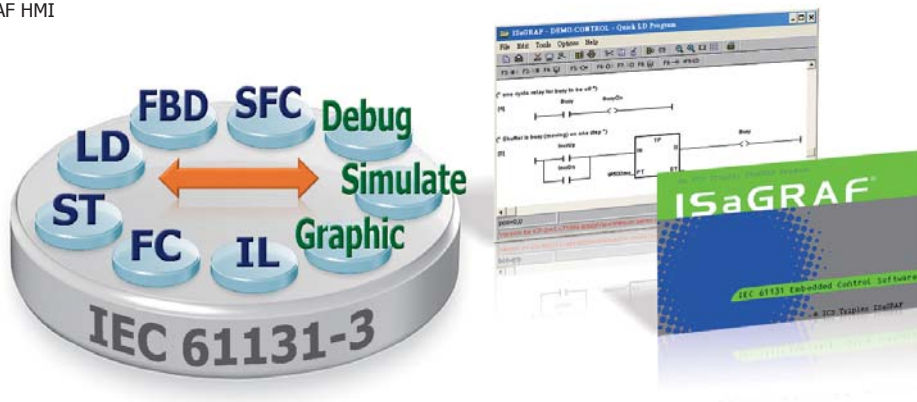
Introduction

VP-23W7/25W7/4137 are ISaGRAF based PACs which integrate a color graphic display and I/O expansion slots into a single unit. It is equipped with a PXA270 CPU (520 MHz), various connectivity (USB, Ethernet, RS-232/485), three I/O slots, a 3.5"/5.7"/10.4" TFT LCD and a rubber keypad. The benefits of running Windows CE 5.0 on VP-23W7/25W7/4137 include hard real-time capability, small core size, fast boot speed, interrupt handling at a deeper level and achievable deterministic control. VP-23W7/25W7/4137 is also capable of running ISaGRAF and PC-based control software such as Visual Basic .NET, Visual C#, etc.

ISaGRAF Features

ISaGRAF is the most powerful SoftLogic package on the market. ISaGRAF is a PLC-like software and it supports IEC 61131-3 standard PLC programming languages (LD, FBD, SFC, ST, IL, FC), and can run the application generated by the workbench on any ISaGRAF PACs. The ISaGRAF workbench Ver. 3.x features.

- IEC 61131-3 Standard Open PLC Programming Languages (LD, FBD, SFC, ST, IL, FC) + Flow Chart (FC)
- Auto-Scan I/O
- On-Line Debug/Control/Monitor, Off-Line Simulation
- Simple Graphic HMI
- Support Soft-GRAF HMI

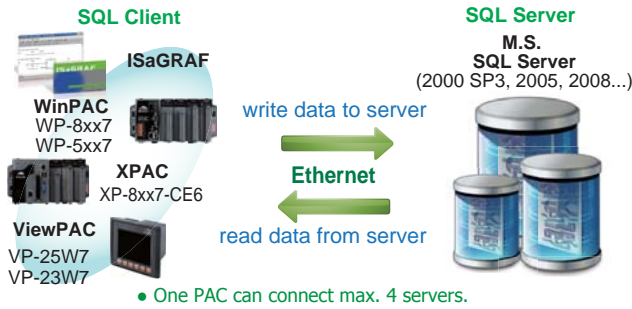


Soft-GRAF Studio Colorful HMI

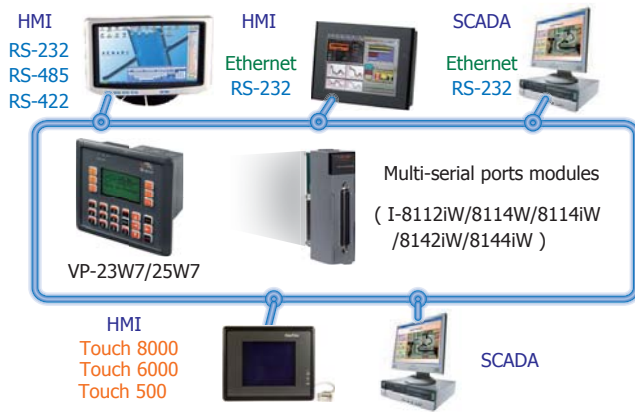


M2B Machine To Business Application

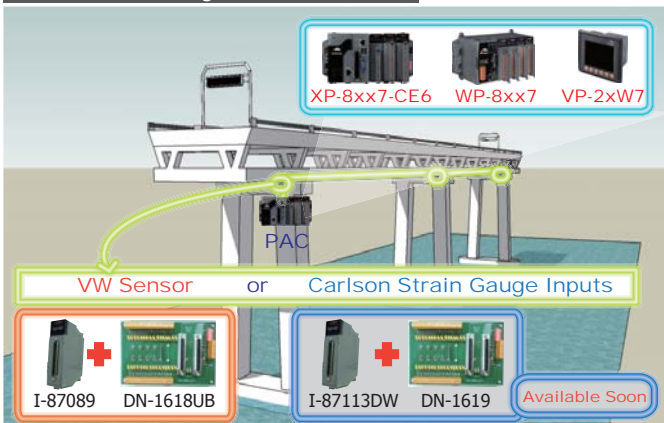
SQL Server Communication



Modbus RTU/TCP Slave Ports

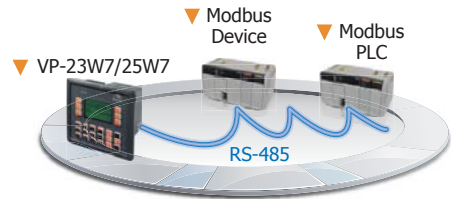


Stress Monitoring of Constructions

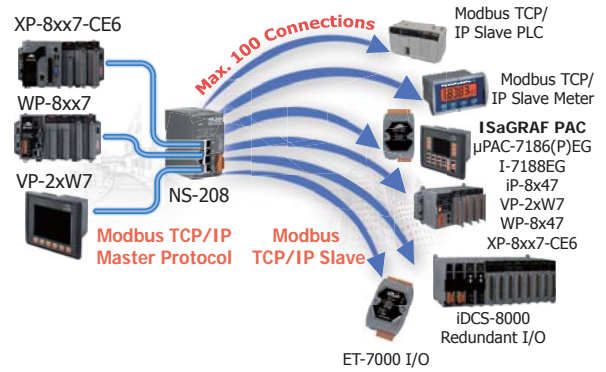


Modbus Master Ports

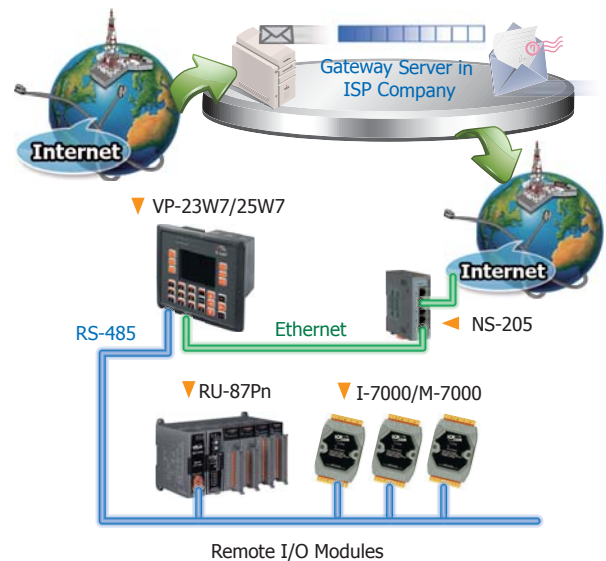
Modbus RTU/ASCII Master



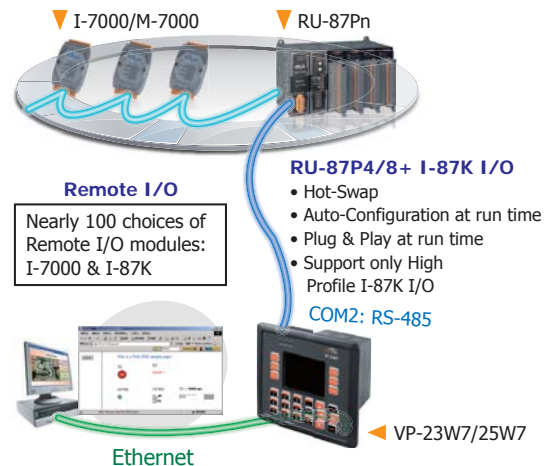
Modbus TCP/IP Master



Send Email with one Attached File



Remote I/O Application



Specifications

Models	VP-23W7	VP-25W7	VP-4137
System Software			
OS	Windows CE 5.0		
.Net Compact Framework	3.5		
Embedded Service	FTP server, Web server (supports VB script, JAVA script), Embedded SQL server		
SDK Provided	DII for eVC, DII for Visual Studio.Net 2005/2008		
Multilanguage Support	English, German, French, Spanish, Russian, Italian, Korean, Simplified Chinese, Traditional Chinese		
Development Software			
ISaGRAF Software	ISaGRAF Ver.3	IEC 61131-3 standard	
	Languages	LD, ST, FBD, SFC, IL & FC; Support Soft-GRAF HMI: XP-8xx7-CE6, WP-8xx7, VP-2xx7 and WP-5xx7 PAC	
	Max. Code Size	1 MB	
	Scan Time	3 ~ 15 ms for normal program 15 ~ 50 ms (or more) for complex or large program	
Non-ISaGRAF	Options: MS eVC++ 4.0 or VS .NET 2005/2008 (VB.NET, C# .NET)		
Web Service			
Web HMI	PC running Internet Explorer can monitor/control PAC via Internet/modem		
Security	Support three-level username and password protection. (high/middle/low)		
CPU Module			
CPU	PXA270, 520 MHz		
SDRAM	128 MB		
Flash	96 MB		128 MB
Expansion Flash Memory	microSD socket with one 2 GB microSD card (support up to 32 GB microSDHC card)		
Dual Battery Backup SRAM	512 KB; data valid up to 5 years (for retain variables)		
EEPROM	16 KB		
RTC (Real Time Clock)	Provide second, minute, hour, date, day of week, month, year		
64-bit Hardware Serial Number	Yes, for Software Copy Protection		
Dual Watchdog Timers	Yes (0.8 second)		
Rotary Switch	Yes (0 ~ 9)		
Communication Interface			
Ethernet	RJ-45 x 1, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)		
USB 1.1 (host)	1		
USB 1.1 (client)	-		1
COM 0	Internal communication with the high profile I-87K series modules in slots		
COM 1	-		
COM 2	RS-485 (Data+, Data-) with internal self-tuner ASIC; 2500 V _{DC} isolated		
COM 3	RS-232 (Rx/D, Tx/D, CTS, RTS, DSR, DTR, CD, RI and GND); Non-isolated		
MMI (Man Machine Interface)			
LCD	3.5" TFT (Resolution 320 x 240)	5.7" TFT (Resolution 640 x 480)	10.4" TFT (Resolution 800 x 600)
Touch Panel	-		Yes
Rubber Keypad	24 keys	6 Keys	-
Audio	Microphone-In and Earphone-Out		Earphone-Out
LED Indicators	3 Dual-Color LEDs (PWR, RUN, LAN1, L1, L2, L3; L1 ~ L3 for User Programmable)		2 LEDs (PWR, RUN)
I/O Expansion Slots			
Slot Number	3		
	Note: For High Profile I-8K and I-87K Modules Only		
Mechanical			
Dimensions (W x L x H)	182 mm x 158 mm x 125 mm		293 mm x 231 mm x 129 mm
Installation	Panel Mounting		
Ingress Protection	Front panel: IP65		
Environmental			
Operating Temperature	-20 ~ +70°C		
Storage Temperature	-30 ~ +80°C		
Ambient Relative Humidity	10 ~ 90% RH (non-condensing)		
Power			
Input Range	+10 ~ +30 V _{DC}		
Isolation	1 kV		
Capacity	12.5 W		
Consumption	7.2 W		8.5 W

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ViewPAC

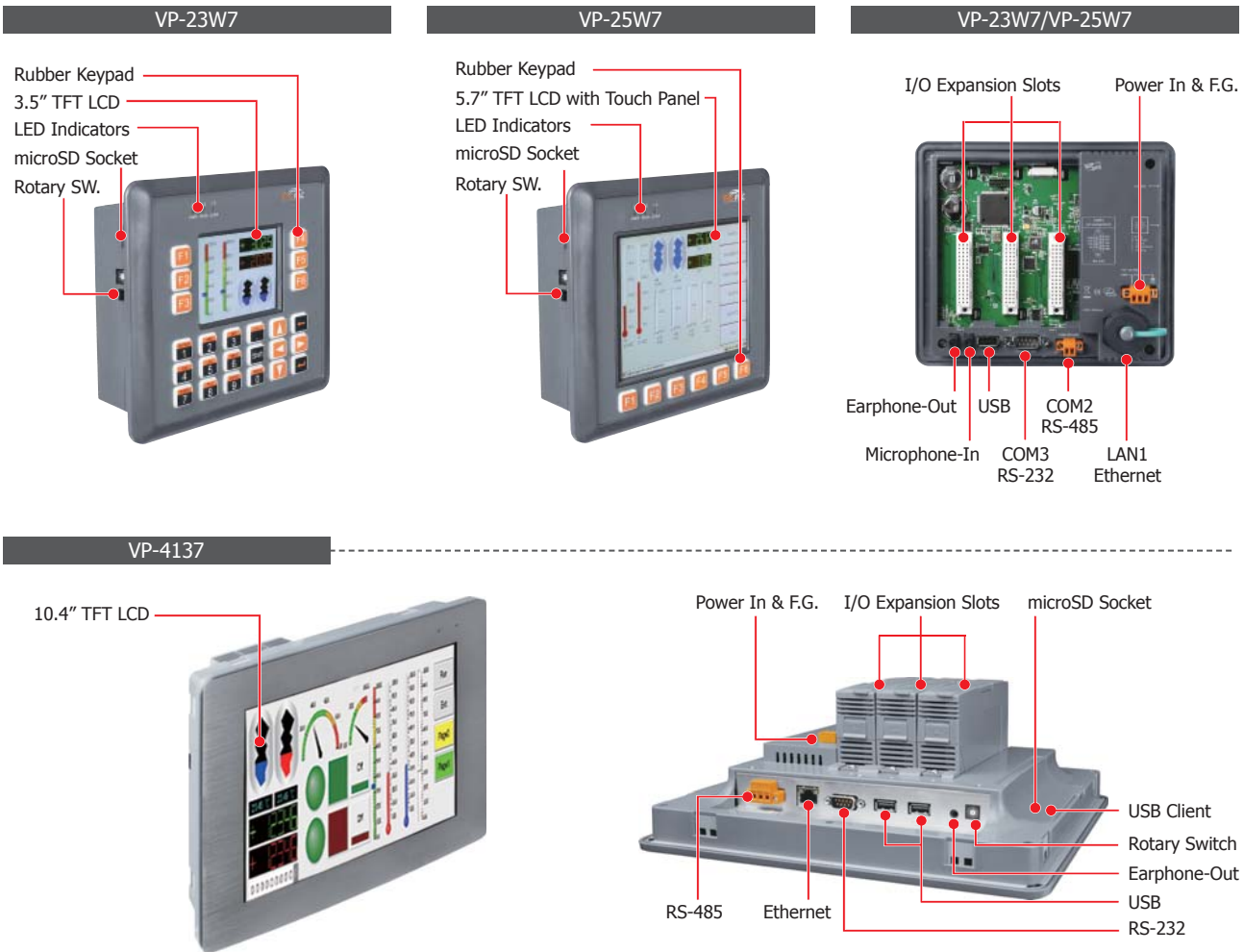
ISaGRAF Specifications

Protocols (some protocols need optional devices)		
NET ID		1 ~ 255, user-assigned by software
Modbus TCP/IP Master		Link to max. 100 devices that support Standard Modbus TCP/IP Slave protocol (FAQ-113)
Modbus RTU/ASCII Master		Max. 10 ports: COM2, 3 and COM5 ~ 14. (To connect to other Modbus Slave devices). Support Multi-port. (*)
Modbus RTU Slave		Max. 5 Ports: one of COM2/3, COM5 ~ 8. (For connecting ISaGRAF, PC/ HMI/ OPC Server & HMI panels.) (*)
Modbus TCP/IP Slave		Yes, LAN1 and optional 2nd Ethernet Port in I-8135W support total up to 32 connections (for connecting ISaGRAF & PC / HMI). When one Ethernet port is broken, the other one can still connect to PC/HMI.
Web HMI Protocol		Ethernet Ports for connecting PC running Internet Explorer
I-7000 & I-87K RS-485 Remote I/O		One of COM2 or COM3 supports I-7000 I/O modules, I-87K base + I-87K Serial I/O boards and RU-87Pn + I-87K High Profile I/O boards as Remote I/O. Max. 255 modules for one controller.
M-7000 Series Modbus I/O		Max. 10 RS-485 ports: COM2, 3, 5 ~ 14. Each port can connect up to 32 M-7000 Modules. (with optional I-7510 repeater connected can connect up to more than 32 M-7000 Modules) (*)
Modbus TCP/IP I/O		Supports ICP DAS Ethernet I/O : I-8KE4-MTCP and I-8KE8-MTCP (FAQ-042). If LAN1 is broken, it will switch to the 2nd Ethernet port (in optional I-8135W card) automatically to continuously work. (This need LAN1 & the 2nd Ethernet's IP are set in the same IP domain)
FRnet I/O		Support max 3 pcs. I-8172W boards in slot 0 ~ 2 to connect to FRnet I/O modules, like FR-2053, FR-2057, FR-32R, FR-32P (FAQ-048). Each I-8172W board can connect up to 256 DI plus 256 DO channels.
Send Email		Support functions to send email with one attached file via Ethernet port.
Ebus		To exchange data between ISaGRAF Ethernet PAC via Ethernet port. (LAN1 Port only)
SMS: Short Message Service		COM3 or COM5 can link to a GSM Modem to support SMS. User can request data/control the controller by cellular phone. (*) The controller can also send data & alarms to user's cellular phone. Optional GSM Modems: GTM-201-RS232 (850/900/1800/1900 GSM/GPRS External Modem)
User-Defined Protocol		User can write his own protocol applied at COM2, 3 and COM5 ~ COM14 by Serial communication function blocks (*).
MMICON/LCD		COM3 or COM5 supports ICP DAS's MMICON. (*) The MMICON is featured with a 240 x 64 dot LCD & a 4 x 4 Keyboard to display picture, string, integer, float, & input a char, string, integer & float.
UDP Server & UDP Client : Exchange Message & Auto-Report		LAN1 or the 2nd Ethernet (in optional I-8135W card) support UDP Server and UDP Client protocol to send/receive message to/from PC/HMI or other devices. Ex: to automatically report data to InduSoft's RXTX driver.
TCP Client : Exchange Message & Auto-Report		LAN1 or the 2nd Ethernet (in optional I-8135W card) can send/receive message to/from PC/HMI or other devices which support TCP server protocol. Ex: automatically report data to InduSoft's RXTX driver, or to connect a location camera.
GPRS/SMS		Support the I-8212W (2G/3G) card to receive/send a short message or to dial up to link the Internet by GPRS connection to send an email or communicate with remote stations by using "Ftp Client" (FAQ-151) and "TCP Client" / "UDP Server" / "UDP Client" (FAQ-143).
SQL Client		Support SQL Client function to write data to (or read data from) Microsoft SQL Server (2000 SP3, 2005, 2008).
Hot-Swap and Redundant System		Must enable the 2nd Ethernet port in the optional I-8135W card. This redundant system has setup two "Active IP" address point to the active VP-2xW7/2xW6's LAN1 and 2nd Ethernet ports always. One or two or more PC / HMI / SCADA can communicate with this redundant system via one of the two given active IP. So the PC / HMI / SCADA can access to the system easily without any notice about which VP-2xW7/2xW6 is currently active. Moreover, the new redundant system can integrate with the RU-87P4 and RU-87P8 expansion unit plus the I-87K high-profile I/O cards to support the hot-swap application. If the I/O card is damaged, the maintenance person just takes one good-card with same model number to hot-swap the damaged one without stopping this redundant system. (FAQ-093)
CAN/CANopen		COM3 or COM5 ~ COM14 can connect one I-7530 (Converter: RS-232 to CAN) to support CAN/CANopen devices and sensors. One PAC supports max.10 RS-232 ports to connect max.10 I-7530. (*)
CANopen Master		Support the I-8123W CANopen Master card to connect other CANopen slave devices. (FAQ-145)
HART Solutions		Support I-87H17W modules in slot 0 to 2 to communicate with other HART devices.
FTP Client		Support FTP client to upload files in the PAC to a remote FTP server on PC. (FAQ-151)
Soft-GRAF HMI		Support the Soft-GRAF HMI . User can use the Soft-GRAF Studio on the PC to design the HMI screen and then download it to the PAC to display the HMI on the PAC. (FAQ-146)
Optional I/O Functions (Refer to ISaGRAF PAC I/O Selection Guide for I/O Module list)		
PWM Output	High Speed PWM Module	I-7088, I-8088W, I-87088W: 8-ch. PWM outputs, software support 1 Hz~100 kHz (non-continuous), duty: 0.1~99.9%
	DO Module as PWM	8-ch. max. 250 Hz max. For Off=2 & On=2 ms. Output square curve: Off: 2 ~ 32766 ms, On: 2 ~ 32766 ms. Optional DO Boards: I-8037W, 8041W, 8041AW, 8042W, 8050W, 8054W, 8055W, 8056W, 8057W, 8060W, 8063W, 8064W, 8068W, 8069W. (Relay Output boards cannot generate fast square wave)
Counter, Encoder, Frequency	Parallel DI Counter	8-ch. max. For 1 controller. Counter val: 32-bit. 250 Hz max. Min. ON & OFF width must > 2 ms. Optional DI boards: I-8040W, 8040PW, 8042W, 8046W, 8048W, 8050W, 8051W, 8052W, 8053W, 8053PW, 8054W, 8055W, 8058W, 8063W.
	Serial DI Counter	Counter input: 100 Hz max. Counter value: 0 ~ 65535 (16-bit) Optional serial I-87K DI boards: I-87040W, 87046W, 87051W, 87052W, 87053W, 87053W-A5, 87054W, 87055W, 87058W, 87059W, 87063W.
	Remote DI Counter	All I-7K/I-87K DI modules support counters. 100 Hz max. Value: 0 ~ 65535
	High Speed Counter	I-87082W: 100 kHz max. 32 bit; I-8084W: 250 kHz max. 32 bit
	Encoder	I-8093W: 3-axis Encoder Module, max. 1M Hz for quadrant input mode, max. 4 MHz for pulse/direction and cw/ccw input mode. (FAQ-112) I-8084W: 250 kHz max., 4-ch encoder, pulse/direction or up/down or A/B phase (Quad. mode), Not support Encoder Z-index. (FAQ-100)
	Frequency	I-87082W: 2-ch, 1 Hz ~ 100 kHz; I-87088W: 8-ch, 0.1 Hz ~ 500 kHz; I-8084W: 8-ch, 1 Hz ~ 250 kHz;
Motion	Motion Control	one I-8091W (2-axis) or two I-8091W (4-axis) can do motion control. only one I-8091W can do X-Y dependent motion.
Port	Second Ethernet	VP-2xW7 / VP-2xW6 can add one optional I-8135W card in its slot 0 ~ 2 to expand the second Ethernet port.

* Note: COM5 ~ COM14 are resided at the expansion boards if they are plugged on slot0~2 of VP-2xW7.

* ISaGRAF FAQ: <http://www.icpdas.com/faq/isagraf.htm>

Appearance



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ViewPAC

Ordering Information

VP-23W7-EN CR	ISaGRAF based ViewPAC with 3.5" LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-25W7-EN CR	ISaGRAF based ViewPAC with 5.7" LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-23W7-TC CR	ISaGRAF based ViewPAC with 3.5" LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
VP-25W7-TC CR	ISaGRAF based ViewPAC with 5.7" LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
VP-23W7-SC CR	ISaGRAF based ViewPAC with 3.5" LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)
VP-25W7-SC CR	ISaGRAF based ViewPAC with 5.7" LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)
VP-4137-EN CR	ISaGRAF based ViewPAC with 10.4" LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-4137-TC CR	ISaGRAF based ViewPAC with 10.4" LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
VP-4137-SC CR	ISaGRAF based ViewPAC with 10.4" LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)

Accessories

ISaGRAF Development Software	
ISaGRAF-256-E	ISaGRAF Workbench Software Ver.3 (256 I/O Tags) with One Application Book (English version) and one USB Dongle
ISaGRAF-256-C	ISaGRAF Workbench Software Ver.3 (256 I/O Tags) with One Application Book (Chinese version) and one USB Dongle
ISaGRAF-32-E	ISaGRAF Workbench Software Ver.3 (32 I/O Tags) with One Application Book (English version) Note: No upgrade service from ISaGRAF-32 to ISaGRAF-256. (Using ISaGRAF-32 can control more than 32 I/O tags. Please refer to ISaGRAF User's Manual Ch. 3.4)
ISaGRAF-32-C	ISaGRAF Workbench Software Ver.3 (32 I/O Tags) with One Application Book (Chinese version) Note: No upgrade service from ISaGRAF-32 to ISaGRAF-256. (Using ISaGRAF-32 can control more than 32 I/O tags. Please refer to ISaGRAF User's Manual Ch. 3.4)
Power Supply	
DP-660	24 Vdc/2.5 A, 60 W and 5 Vdc/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
MDR-60-24 CR	24 Vdc/2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)



Features

- PXA270, 520 MHz CPU
- Windows CE 5.0
- InduSoft Web Studio v6.1
- Hard Real-Time Capability
- 3 I/O Slots
- IP65 Compliant Front Panel
- 3.5"/5.7"/10.4" TFT LCD
- Audio with Microphone-In and Earphone-Out
- Operating Temperature: -20 ~ +70°C



Introduction

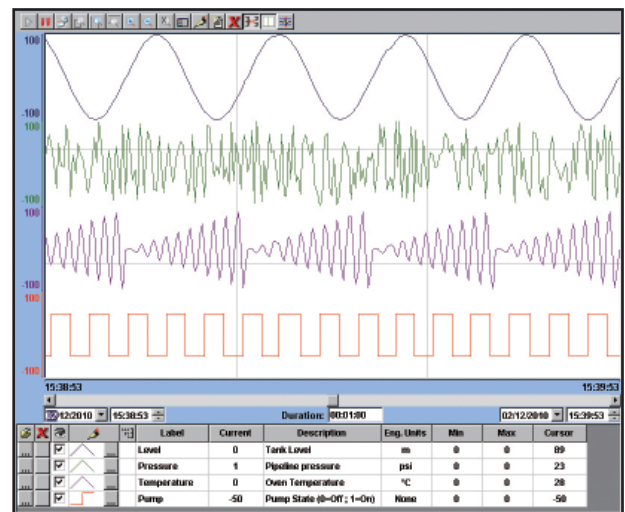
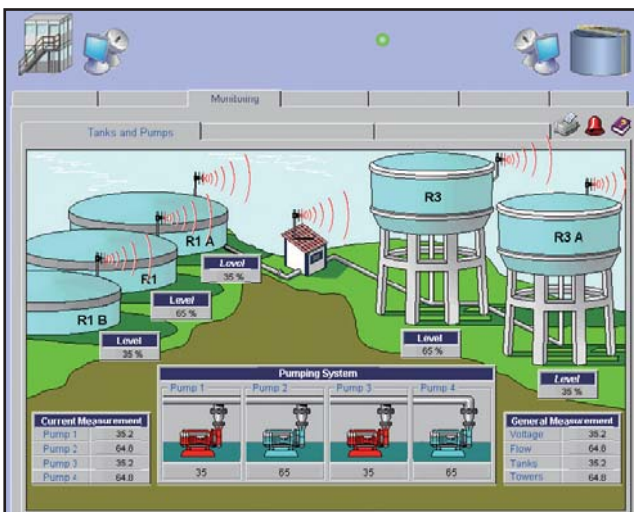
VP-23W9/25W9/4139 are InduSoft based PACs which integrate a color graphic display and I/O expansion slots into a single unit. It is equipped with a PXA270 CPU (520 MHz), various connectivity (USB, Ethernet, RS-232/485), three I/O slots, a 3.5"/5.7"/10.4" TFT LCD and a rubber keypad. The benefits of running Windows CE 5.0 on VP-23W9/25W9/4139 include hard real-time capability, small core size, fast boot speed, interrupt handling at a deeper level and achievable deterministic control. VP-23W9/25W9/4139 is also capable of running InduSoft and PC-based control software such as Visual Basic .NET, Visual C#, etc.

InduSoft Features



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 ViewPAC 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.

- Elegant Graphics
- Multi-Language
- Database (Access, Excel, SQL, Oracle...)
- Recipes and Reports
- Online and History Alarm / Event / Trend
- Remote Web Client Control & Security
- Various Communication Driver (DCON, Modbus, OPC, DDE, TCP/IP...)
- ActiveX (GSM / SHM / COM /WEB provided by ICP DAS)
- System Redundancy
- Online Configuration and debugging
- Others (VBScript, E-mail, FTP, SNMP...)



Specifications

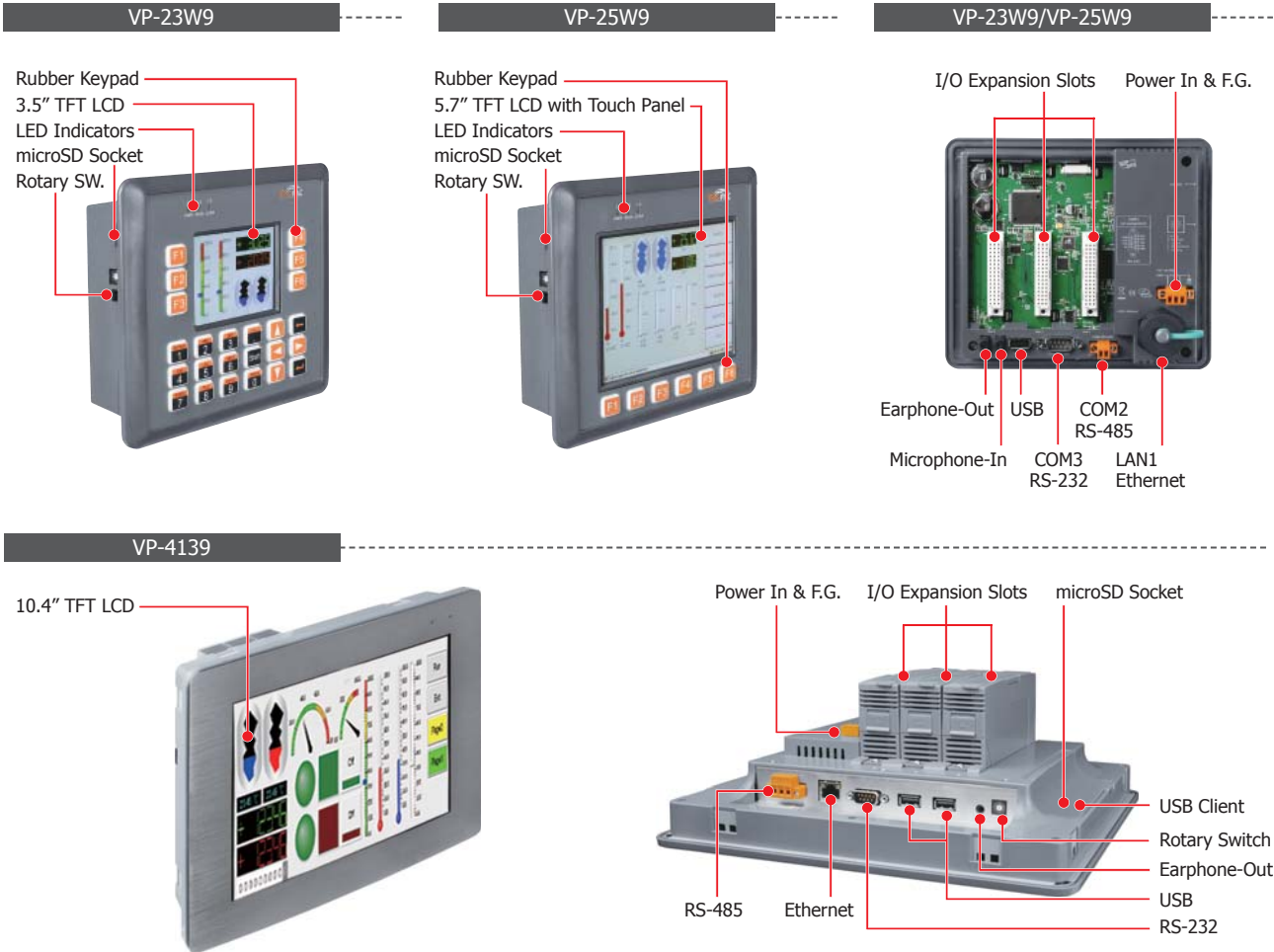
Models	VP-23W9	VP-25W9	VP-4139
System Software			
OS	Windows CE 5.0		
.Net Compact Framework	3.5		
Embedded Service	FTP server, Web server (supports VB script, JAVA script), Embedded SQL server		
SDK Provided	DII for eVC, DII for Visual Studio.Net 2005/2008		
Multilanguage Support	English, German, French, Spanish, Russian, Italian, Korean, Simplified Chinese, Traditional Chinese		
Development Software			
InduSoft Software	InduSoft Web Studio v6.1 Service Pack 6		
Others	Options: Microsoft EVC++4.0 or VS .NET 2005/2008 (VB .NET 2005/2008, C# .NET 2005/2008)		
Web Service			
Web HMI	Support Web HMI function, PC running Internet Explorer can access to the VP-2XW9 via Local Ethernet or Internet or dial Modem, monitoring and control.		
Security	Web HMI supports three levels user name and password protection		
CPU Module			
CPU	PXA270, 520 MHz		
SDRAM	128 MB		
Dual Battery Backup SRAM	512 KB; data valid up to 5 years		
Flash	96 MB		128 MB
EEPROM	16 KB		
Expansion Flash Memory	microSD socket with one 2 GB microSD card (support up to 32 GB microSDHC card)		
RTC (Real Time Clock)	Provide second, minute, hour, date, day of week, month, year		
64-bit Hardware Serial Number	Yes, for Software Copy Protection		
Dual Watchdog Timers	Yes (0.8 second)		
Rotary Switch	Yes (0 ~ 9)		
VGA & Communication Ports			
Ethernet	RJ-45 x 1, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)		
USB 1.1 (host)	1		
USB 1.1 (client)	-		1
COM 0	Internal communication with the high profile I-87K series modules in slots		
COM 1	-		
COM 2	RS-485 (Data+, Data-) with internal self-tuner ASIC; 2500 V _{oc} isolated		
COM 3	RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI and GND); Non-isolated		
MMI (Man Machine Interface)			
LCD	3.5" TFT (Resolution 320 x 240)	5.7" TFT (Resolution 640 x 480)	10.4" TFT (Resolution 800 x 600)
Touch Panel	-	Yes	
Rubber Keypad	24 keys	6 Keys	-
Audio	Microphone-In and Earphone-Out		Earphone-Out
LED Indicators	3 Dual-Color LEDs (PWR, RUN, LAN1, L1, L2, L3; L1 ~ L3 for User Programmable)		2 LEDs (PWR, RUN)
I/O Expansion Slots			
Slot Number	3		
	Note: For High Profile I-8K and I-87K Modules Only		
Mechanical			
Dimensions (W x H x D)	182 mm x 158 mm x 125 mm		293 mm x 231 mm x 129 mm
Installation	Panel Mounting		
Ingress Protection	Front panel: IP65		
Environmental			
Operating Temperature	-20 ~ +70°C		
Storage Temperature	-30 ~ +80°C		
Ambient Relative Humidity	10 ~ 90% RH (non-condensing)		
Power			
Input Range	+10 ~ +30 V _{oc}		
Isolation	1 kV		
Capacity	12.5 W		
Consumption	7.2 W		8.5 W

3

2

ViewPAC

Appearance



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2

ViewPAC

Ordering Information

VP-23W9-EN CR	InduSoft based ViewPAC with 3.5" LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-25W9-EN CR	InduSoft based ViewPAC with 5.7" LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-23W9-TC CR	InduSoft based ViewPAC with 3.5" LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
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VP-23W9-SC CR	InduSoft based ViewPAC with 3.5" LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)
VP-25W9-SC CR	InduSoft based ViewPAC with 5.7" LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)
VP-4139-EN CR	InduSoft based ViewPAC with 10.4" LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-4139-TC CR	InduSoft based ViewPAC with 10.4" LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
VP-4139-SC CR	InduSoft based ViewPAC with 10.4" LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)

Note: The default runtime license (CEView Lite Plus - 300 tags and 3 driver) is installed.

Accessories

InduSoft Development Software	
InduSoft-NT512000D	Advanced Server for Windows NT/2000/XP (512,000 Tags, unlimited drivers)
InduSoft-NT64000D	Control Room for Windows NT/2000/XP (64,000 Tags, 8 drivers)
InduSoft-NT4000D	Operator Workstation for Windows NT/2000/XP (4,000 Tags, 5 drivers)
InduSoft-NT1500D	Local Interface for Windows NT/2000/XP (1500 Tags, 3 drivers)
InduSoft-NT300D	NTView PRO for Windows NT/2000/XP (300 Tags, 3 drivers)
InduSoft Development Software	
InduSoft-CE1500R	CEView standard for Windows CE Run-time (CE View)(1500 Tags, 3 drivers)
InduSoft-CE300R	CEView Lite Plus for Windows CE Run-time (300 Tags, 3 drivers)
Power Supply	
DP-660	24 Vdc/2.5 A, 60 W and 5 Vdc/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
MDR-60-24 CR	24 Vdc/2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)