



- ### 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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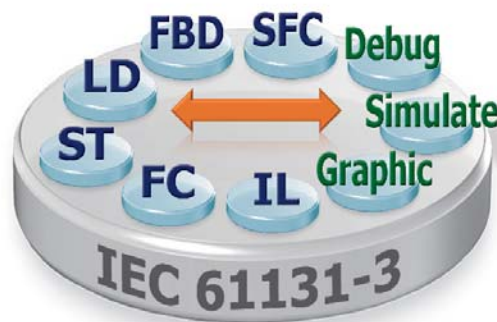
Introduction

VP-23W7/25W7/4137/4147 are the new generation ISaGRAF based PACs of ICP DAS. ViewPAC integrates WinPAC, color graphic display with keypad or touch function into one unit. It is equipped with a PXA270 CPU (520 MHz), various connectivity (USB, Ethernet, RS-232/485), 3 I/O slots, 3.5" TFT LCD and a rubber keypad or 5.7"/10.4" TFT Touch LCD. 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. ViewPAC 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



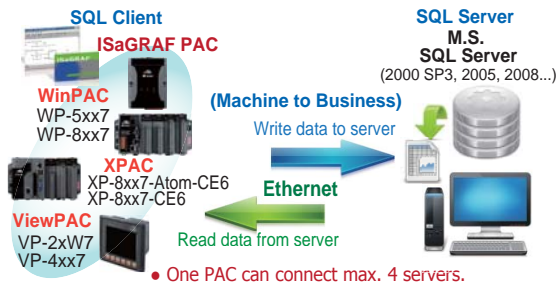
Applications

Soft-GRAF Studio Colorful HMI

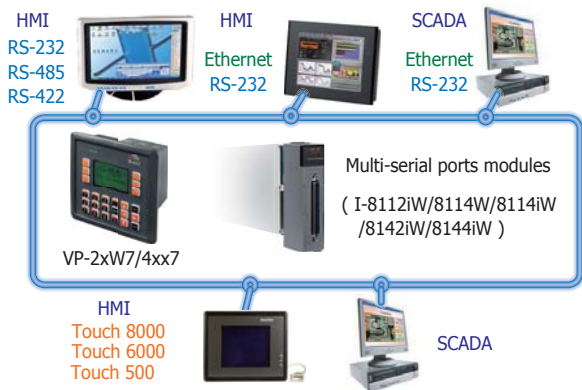


Database Application

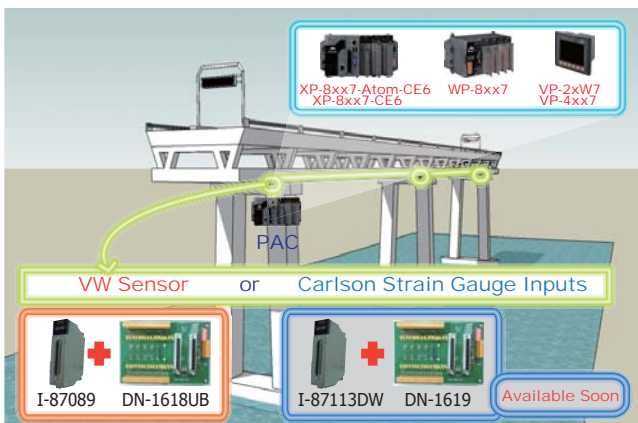
SQL Server Communication



Modbus RTU/TCP Slave Ports

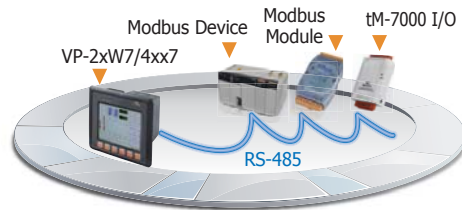


Stress Monitoring of Constructions

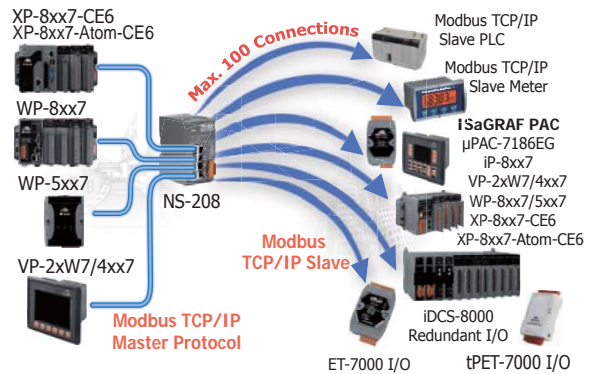


Modbus Master Ports

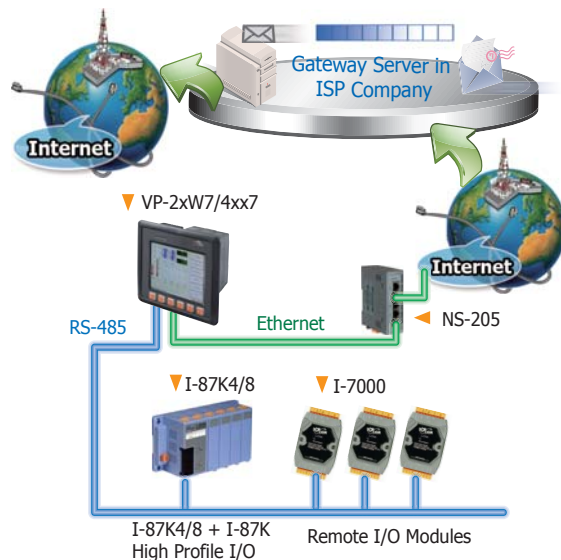
Modbus RTU/ASCII Master



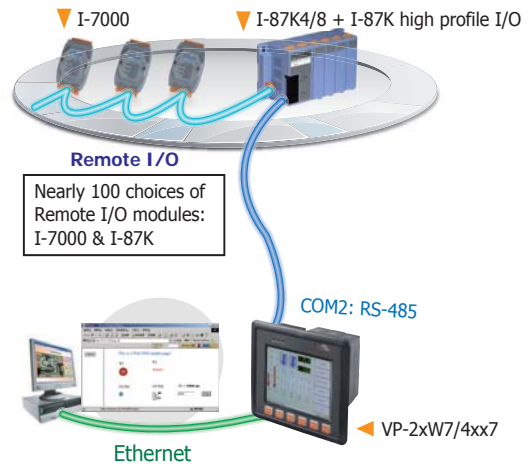
Modbus TCP/IP Master



Send Email with one Attached File



Remote I/O Application



ViewPAC Specifications

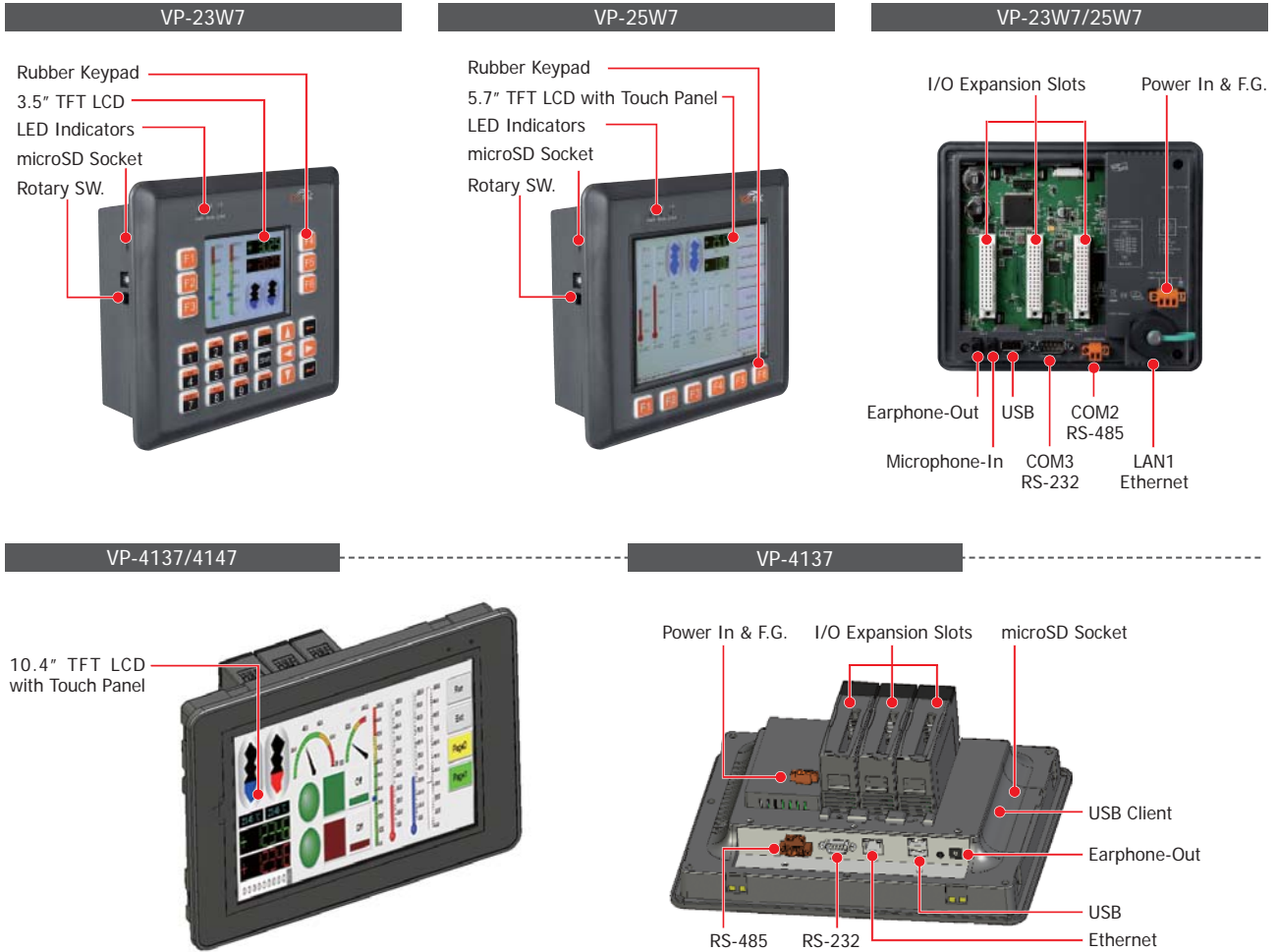
Models	VP-23W7	VP-25W7	VP-4137	VP-4147
System Software				
OS	Windows CE 5.0			
.Net Compact Framework	3.5			
Embedded Service	FTP server, Web server (supports VB script, JAVA script), Embedded SQL server			
SDK Provided	DII for eVC, DII for Visual Studio.Net 2005/2008			
Multilanguage Support	English, 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-CE6/8xx7-Atom-CE6, WP-8xx7/5xx7 and VP-2xW7/4xx7 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 microSD card (support up to 32 GB)			
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		RJ-45 x 2	
	10/100 Base-TX (Auto-negotiating, LED indicators)			
USB 1.1 (host)	1			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 VDC 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 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 VDC			
Isolation	1 kV			
Capacity	12.5 W			
Consumption	7.2 W			8.5 W

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	
User-Defined Protocol	User can write his own protocol applied at COM2, 3 and COM5 ~ COM14 by Serial communication function blocks (*).	
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-082, 154). 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)	
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's g_Alarm & g_Logger1 HMI objects support FTP client, too. (FAQ-146)	
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 remote 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-2xW7/2xW6/4137 can add one optional I-8135W card in its slot 0 ~ 2 to expand the second Ethernet port.
<p>* Note: COM5 ~ COM14 are resided at the expansion boards if they are plugged on slot0~2 of VP-2xW7/4xx7. * ISaGRAF FAQ: http://www.icpdas.com/faq/isagraf.htm * Recommend to use NS-205/208 or RS-405/408 (Ring Switch) Industrial Ethernet Switch.</p>		

ViewPAC

Appearance



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-23W7-TC CR	ISaGRAF based ViewPAC with 3.5" 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-EN CR	ISaGRAF based ViewPAC with 5.7" Touch LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-25W7-TC CR	ISaGRAF based ViewPAC with 5.7" Touch LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
VP-25W7-SC CR	ISaGRAF based ViewPAC with 5.7" Touch LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)
VP-4137-EN CR	ISaGRAF based ViewPAC with 10.4" Touch LCD and 3 I/O slots (Multilanguage Version of OS) (RoHS)
VP-4137-TC CR	ISaGRAF based ViewPAC with 10.4" Touch LCD and 3 I/O slots (Traditional Chinese of OS) (RoHS)
VP-4137-SC CR	ISaGRAF based ViewPAC with 10.4" Touch LCD and 3 I/O slots (Simplified Chinese of OS) (RoHS)
VP-4147-EN CR	ISaGRAF based ViewPAC with 10.4" Touch LCD, 3 I/O slots and 2 Ethernet ports (Multilanguage Version of OS) (RoHS)
VP-4147-TC CR	ISaGRAF based ViewPAC with 10.4" Touch LCD, 3 I/O slots and 2 Ethernet ports (Traditional Chinese of OS) (RoHS)
VP-4147-SC CR	ISaGRAF based ViewPAC with 10.4" Touch LCD, 3 I/O slots and 2 Ethernet ports (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)
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)