

2.2. WinPAC-8000 Series

Overview



WinPAC-8000 is the new generation PAC of ICP DAS. It is equipped a PXA270 CPU (520 MHz) running a Windows CE.NET 5.0 operating system, various connectivities (VGA, USB, Ethernet, RS-232/485) and 1/4/8 slots for high performance Parallel I/O modules (high profile I-8K series) and serial I/O modules (high profile I-87K I/O modules).

Main Components:

Main Control Unit (MCU)

The MCU is the powerhouse of the WinPAC-8000. Each MCU comprises a Central Processor Module (CPM), a power supply, and a 1, 4, 8-slot backplane for 1, 4, 8 I/O modules. The CPM is powerful integrated processing engine comprising a CPU, RAM and ROM, and an option of communication interfaces including Ethernet, RS-485, CAN bus and FRnet.

I/O Modules 3

There are two types of I/O modules, Parallel and Serial. The Parallel I/O modules (I-8K high profile series) are high-speed modules and have to be installed in slots of the WinPAC. The Serial I/O modules (I-87K high profile series) can be installed in slots or Expansion Units (RU-87Pn).

WinPAC operating system, Windows CE 5.0, has many advantages, including hard real-time capability, small core size, short boot time, interrupt handling at a deeper level, achievable deterministic control, and low cost. Using Windows CE.Net 5.0 in the WinPAC-8000 gives it the ability to run PC-based Control software such as Visual Basic. NET, Visual C#, Embedded Visual C++, SCADA software, SoftPLC ... etc.

WinPAC ≒ IPC+PLC



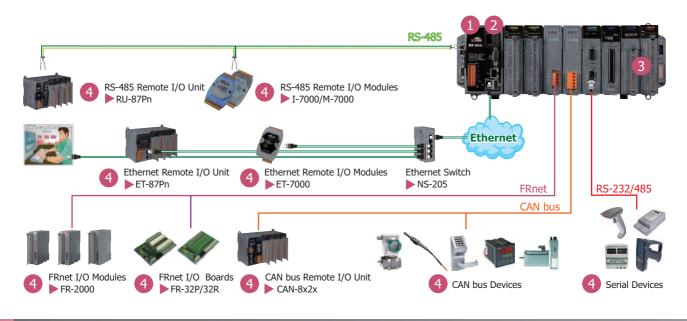
Compared with the first generation WinCon-8000, WinPAC-8000 not only improves the CPU performance (from 206 MHz to 520 MHz) and upgrading OS (from CE 4.1 to CE 5.0), but also adds many reliability features, such as dual LAN, redundant power inputs, dual battery backup SRAM, etc. It gives you all of the best features of both traditional PLCs and Windows capable PCs.

Embedded OS

All WinPAC have Windows CE OS inside, and most of the popular features in MS software are included, such as FTP Server, HTTP Server, ASP (Java/VB script), SQL Server embedded 3.5 and compact .NET Framework 2.0. WinPAC supports rich software & development solutions: VB.Net 2005/2008, Visual C#.NET 2005/2008, eVC++ 4.0, ISaGRAF, InduSoft etc.

Remote I/O Expansion 4

WinPAC uses built-in RS-485 and Ethernet ports to connect RS-485/Ethernet remote I/O units (Ru-87Pn/ET-87Pn) or modules (I-7000/M-7000/ET-7000). In this configuration, WinPAC expands the I/O very easily. Using CAN or FRnet communication module, WinPAC can connect CAN bus devices, remote I/O units or FRnet I/O modules for deterministic control system.

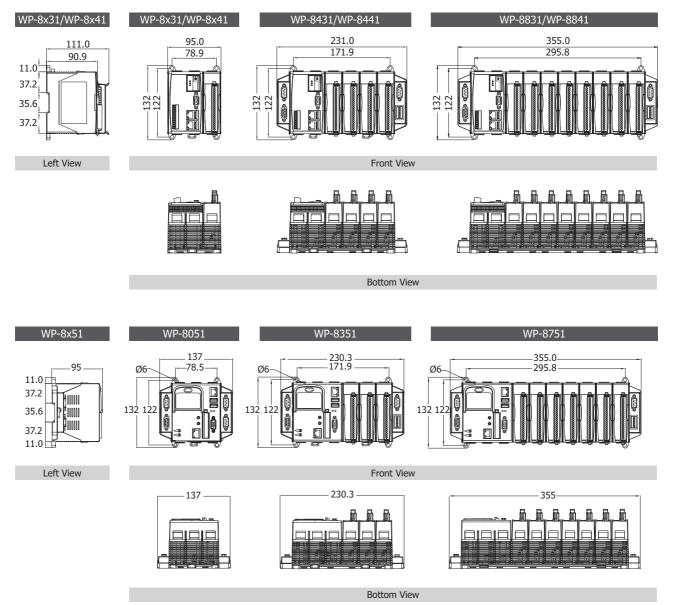


• Hardware

1. Installation



2. Dimensions (Units: mm)



2 Compact PAC



Selection Guide







3: PXA270 CPU & VGA 1024 x 768

4: PXA270 CPU & VGA 800 x 600

5: PXA270 CPU & VGA 800 x 600





9: InduSoft

Language EN: English TC: Traditional Chinese SC: Simplified Chinese

Standard WinPAC

	-										
Model Name	os	Pre-installed Software	CPU	Flash	SDRAM	VGA Resolution	USB	RS-232/RS-485	I/O Slot	Memory Expansion	Audio
WP-8131								2	1		
WP-8431	CE 5.0	None	PXA270, 520 MHz	128 MB	128 MB	1024 x 768	2	4	4	microSD	-
WP-8831			0201112						8		
WP-8141								2	1		
WP-8441	CE 5.0	None	PXA270, 520 MHz	96 MB	128 MB	800 x 600	1	4	4	microSD	-
WP-8841			5201112					4	8	1	
WP-8051								5	0		
WP-8351	CE 5.0	None	PXA270, 520 MHz	128 MB	128 MB	800 x 600	2	4	3	CF	Yes
WP-8751			520 1112					4	7		

The controller supports the following software development tools:

1. DLLs of I/O modules for eVC, VS.Net 2005/2008 2. DLLs of Modbus/RTU and Modbus/TCP for eVC and VS.Net 2005/2008

3. OPC server (Quicker)

ISaGRAF Based WinPAC

Model Name	OS	Pre-installed Software	CPU	Flash	SDRAM	VGA Resolution	USB	RS-232/RS-485	I/O Slot	Memory Expansion	Audio
WP-8137								2	1		
WP-8437	CE 5.0	ISaGRAF	PXA270, 520 MHz	128 MB	128 MB	1024 x 768	2	4	4	microSD	-
WP-8837			5201112					4	8		
WP-8147								2	1		
WP-8447	CE 5.0	ISaGRAF	PXA270, 520 MHz	96 MB	128 MB	800 x 600	1	4	4	microSD	-
WP-8847			520 1112					4	8		
WP-8057								5	0		
WP-8357	CE 5.0	ISaGRAF	PXA270, 520 MHz	128 MB	128 MB	800 x 600	2	4	3	CF	Yes
WP-8757			5201112					4	7		

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 Modbus protocol and can link to distributed I/O modules with Modbus or DCON protocol via the RS-232/485 or Ethernet.

InduSoft Based WinPAC

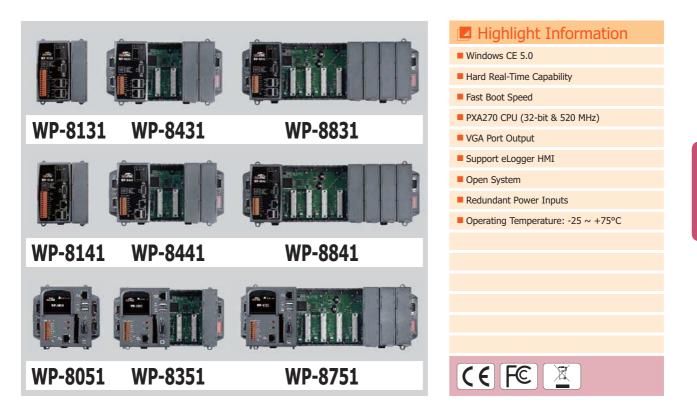
Model Name	os	Pre-installed Software	CPU	Flash	SDRAM	VGA Resolution	USB	RS-232/RS-485	I/O Slot	Memory Expansion	Audio
WP-8139								2	1		
WP-8439	CE 5.0	InduSoft	PXA270, 520 MHz	128 MB	128 MB	1024 x 768	2	4	4	microSD	-
WP-8839			5201112					4	8		
WP-8149								2	1		
WP-8449	CE 5.0	InduSoft	PXA270, 520 MHz	96 MB	128 MB	800 x 600	1	4	4	microSD	-
WP-8849			5201112					4	8		
WP-8059								5	0		
WP-8359	CE 5.0	InduSoft	PXA270, 520 MHz	128 MB	128 MB	800 x 600	2	4	3	CF	Yes
WP-8759			5201112					4	7		

The controller supports the following software development tools:

1. DLLs of I/O modules for eVC, VS.Net 2005/2008

2. DLLs of Modbus/RTU and Modbus/TCP for eVC and VS.Net 2005/2008

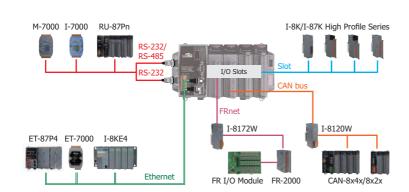
3. OPC server (Quicker)



Introduction _

WP-8x31, WP-8x41 and WP-8x51 Series are the new generation Windows CE 5.0 based PACs of ICP DAS. It is equipped with a PXA270 CPU (520 MHz), various connectivity (VGA, USB, Ethernet, RS-232/485) and I/O slots for high performance parallel I/O modules (high profile I-8K Series) and serial I/O modules (high profile I-87K series). The benefits of running Windows CE 5.0 on WinPAC include hard real-time capability, small core size, fast boot speed, interrupt handling at a deeper level and achievable deterministic control. WinPAC is also capable of running PC-based control software such as Visual Basic .NET, Visual C#, SCADA software, SoftPLC..., etc. It has all of the best features of both traditional PLCs and Windows capable PCs.

For software copy protection, programmers can design software based on the 64-bit hardware serial number for making software copy protected.



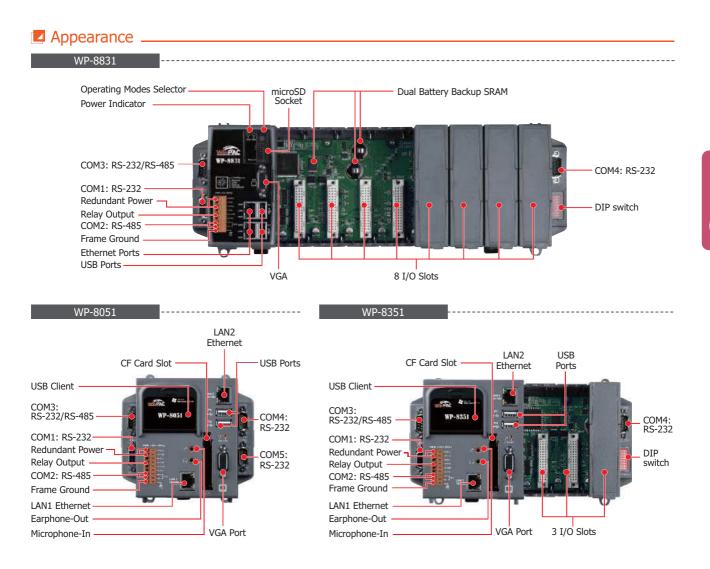
Applications _

Rich I/O Expansion Ability



Specifications _____

Models		WP-8131	WP-8431	WP-8831	WP-8141	WP-8441	WP-8841	WP-8051	WP-8351	WP-8751				
System So	oftware													
OS			Windows CE 5.0											
.Net Compa	ict Framework					2.0								
Embedded S	Service	FTP server, Web server (supports VB script, JAVA script), Embedded SQL server												
SDK Provide	ed	Dll for eVC, Dll for Visual Studio.Net 2005/2008												
Multilangua	ge Support	English, German, French, Spanish, Russian, Italian, Simplified Chinese, Traditional Chinese												
CPU Modu														
CPU					PXA270 (32-bit and	d 520 MHz) or	compatible							
SDRAM		PXA270 (32-bit and 520 MHz) or compatible 128 MB												
	y Backup SRAM					valid up to 5	vears							
Flash			128 MB		512 RD, ddd	96 MB	years		128 MB					
EEPROM			120110			16 KB			120110					
			mic	roSD cocket wit	th and 2 CP microS			aicroSDUC cord)						
microSD			mic		th one 2 GB microSE									
RTC (Real T				Provide	second, minute, ho			year						
	ware Serial Number				Yes, for Softw	are Copy Prot	ection							
Dual Watch	-					Yes								
	ble LED Indicator					1								
Rotary Swit	ch				Ye	s (0 ~ 9)								
DIP Switch		-	Yes (8 bits)	-	Yes (8 bits)	-	Yes (8 bits)				
VGA & Cor	nmunication Ports													
VGA	Extra GPU		Yes				-							
VGA	Resolution		1024 x 768				800 x	600						
Ethernet				RJ-45 x	2, 10/100 Base-TX	(Auto-negotial	ting, LED indica	tors)						
USB 1.1 (ho	ost)		2			1		2						
USB 1.1 (cli	ent)				1									
COM 0				Internal comp	nunication with the	hiah profile I-8	37K series modu	iles in slots						
COM 1				Internal comm	RS-232 (RxD, TxD									
		RS-485 (Data+,			RS-485 (Data+,	anu GND), ni								
COM 2		Data-); self-tuner ASIC inside; 2500 Vpc isolated	self-tuner	ta+, Data-); ASIC inside; c isolated	Data-); self-tuner ASIC inside; 2500 Vpc isolated	RS-485 (Data+, Data-);	self-tuner ASIC i	nside; 3000 Vr	oc i solated				
COM 3		-	RS-232/RS-485 (RxD, TxD, CTS, RTS and GND for RS- 232, Data+ and Data- for RS-485); non-isolated		-	RS-232/RS-		CTS, RTS and G or RS-485); non-i		2, Data+ and				
COM 4		-	RTS, DSR, DT	D, TxD, CTS, R, CD, RI and m-isolated	-	RS-232 (RxD	, TxD, CTS, RT	S, DSR, DTR, CD	, RI and GND)	; non-isolated				
COM 5					-			RS-232 (RxD, TxD, and GND); non-isolated						
I/O Expan	sion Slots						1							
Slot Numbe	r	1	4	8	1	4	8	0	3	7				
5.00				No	te: For High Profile	I-8K and I-87	K Modules Only							
Mechanica	al													
Dimensions (W x L x H)				137 m 231 m	m x 132 mm x 111 m x 132 mm x 111	mm: WP-8051 mm: WP-8431	, WP-8441, WP							
Installation					DIN-Rail o	or Wall Mounti	ng							
Environme	ental													
					-25	i ~ +75°C								
Operating T	emperature	-23 ~ +75 C -30 ~ +80°C												
Operating T Storage Ten				-30 ~ +80°C 10 ~ 90% RH (non-condensing)										
Storage Ten							nsing)							
Storage Ten Ambient Re	nperature						nsing)							
Storage Ten Ambient Re Power	nperature lative Humidity				10 ~ 90% R	H (non-conder	nsing)							
Storage Ten Ambient Re Power Input Range	nperature lative Humidity				10 ~ 90% R	H (non-conder ~ +30 Vdc	ising)							
Storage Ten Ambient Re Power Input Range Isolation	ative Humidity			Va	10 ~ 90% R +10	H (non-conder ~ +30 V _{DC} 1 kV								
Storage Ten Ambient Re Power Input Range Isolation Redundant	nperature lative Humidity	0.11	2E W/	1	10 ~ 90% R +10 s, with one power r	H (non-conder ~ +30 Vpc 1 kV elay (1 A @ 24	V _{DC}) for alarm		20.11/	20.11/				
Storage Ten Ambient Re Power Input Range Isolation	Power Inputs	8 W 7.3 W	25 W 9.1 W	Ye 25 W 9.1 W	10 ~ 90% R +10	H (non-conder ~ +30 V _{DC} 1 kV		15 W 8.4 W	30 W 9.6 W	30 W				



Ordering Information .

WP-8131-EN	WP-8141-EN	Standard WinPAC-8000 with 1 I/O Slot (Multilanguage Version of OS)
WP-8431-EN	WP-8441-EN	Standard WinPAC-8000 with 4 I/O Slots (Multilanguage Version of OS)
WP-8831-EN	WP-8841-EN	Standard WinPAC-8000 with 8 I/O Slots (Multilanguage Version of OS)
WP-8131-TC	WP-8141-TC	Standard WinPAC-8000 with 1 I/O Slot (Traditional Chinese Version of OS)
WP-8431-TC	WP-8441-TC	Standard WinPAC-8000 with 4 I/O Slots (Traditional Chinese Version of OS)
WP-8831-TC	WP-8841-TC	Standard WinPAC-8000 with 8 I/O Slots (Traditional Chinese Version of OS)
WP-8131-SC	WP-8141-SC	Standard WinPAC-8000 with 1 I/O Slot (Simplified Chinese Version of OS)
WP-8431-SC	WP-8441-SC	Standard WinPAC-8000 with 4 I/O Slots (Simplified Chinese Version of OS)
WP-8831-SC	WP-8841-SC	Standard WinPAC-8000 with 8 I/O Slots (Simplified Chinese Version of OS)
WP-8051		Standard WinPAC-8000 without I/O Slot (Multilanguage Version of OS)
WP-8351		Standard WinPAC-8000 with 3 I/O Slots (Multilanguage Version of OS)
WP-8751		Standard WinPAC-8000 with 7 I/O Slots (Multilanguage Version of OS)

Accessories

DP-660	24 Vpc/2.5 A, 60 W and 5 Vpc/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
DP-1200 CR	24 Vpc/5.0 A, 120 W Power Supply with DIN-Rail Mounting (RoHS)
MDR-60-24 CR	24 V _{DC} /2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)





Introduction .

WP-8x37, WP-8x47 and WP-8x57 Series are the new generation ISaGRAF based PACs of ICP DAS. It is equipped with a PXA270 CPU (520 MHz), various connectivity (VGA, USB, Ethernet, RS-232/485) and I/O slots for high performance parallel I/O modules (high profile I-8K Series) and serial I/O modules (high profile I-87K series). The benefits of running Windows CE 5.0 on WinPAC include hard real-time capability, small core size, fast boot speed, interrupt handling at a deeper level and achievable deterministic control. WinPAC is also capable of running ISaGRAF and PC-based control software such as Visual Basic .NET, Visual C#,.... etc. It has all of the best features of both traditional PLCs and Windows capable PCs.

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



CAN bus

I-8K/I-87K High Profile Series

I/O Slots

FRnet I-8172W

FR I/O Module FR-2000

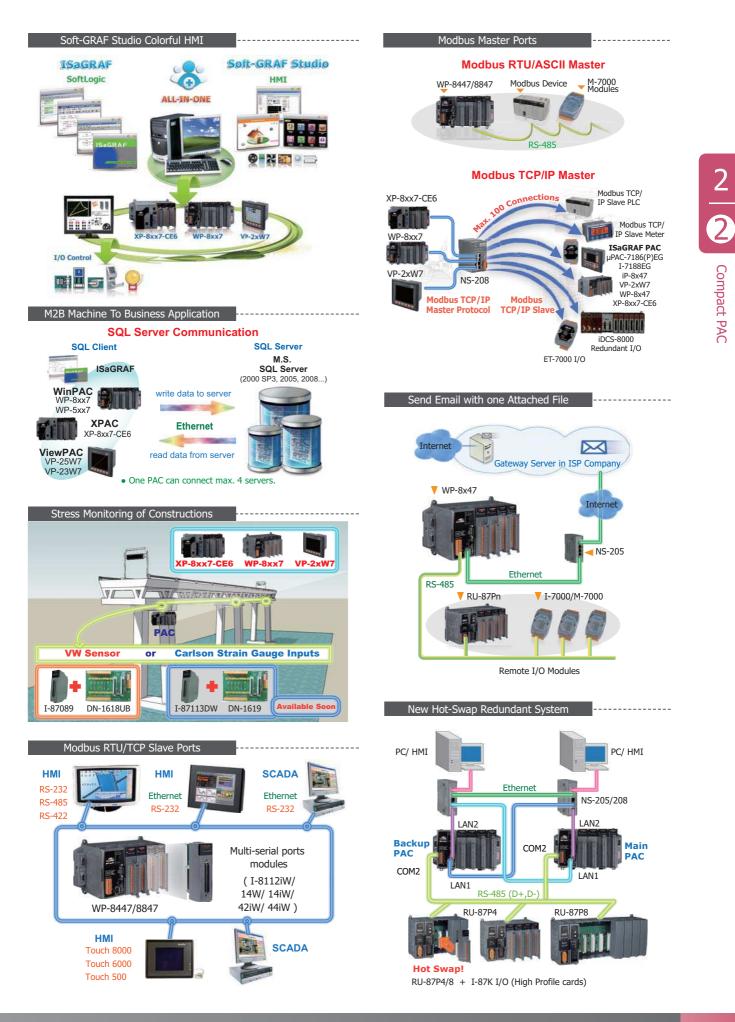
Ethernet

NS-205

I-8KE4-MTCP

ET-7000 ET-7000 I-8KE8-MTCP







PAC Specifications ______

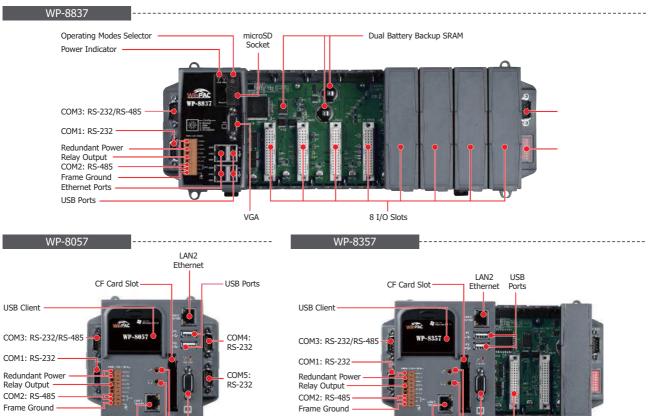
Models	-	WP-8137	WP-8437	WP-8837	WP-8147	WP-8447	WP-8847	WP-8057	WP-8357	WP-875			
System Sof	tware	1											
OS					Win	dows CE 5.0							
.Net Compac	t Framework					2.0							
Embedded Se	ervice	FTP server, Web server											
Multilanguag	e Support		English	, German, French, S	Spanish, Russia	an, Italian, Simp	olifi ed Chinese,	Traditional Chine	se				
Developme	nt Software												
	ISaGRAF Ver.3		IEC 61131-3 standard.										
ISaGRAF	Languages			LD, ST,	FBD, SFC, IL	& FC; support S	Soft-GRAF HMI.						
Software	Max. Code Size					1 MB							
	Scan Time			3 ~ 15 ms for nor	mal program;	15 ~ 50 ms for	complex or larg	ge program					
Non-ISaGRAF	F			Options: MS e	VC++ 4.0 or \	/S.NET 2005/20	08 (VB.NET, C	#.NET)					
Web Servic	e												
Web HMI				PC running Interne	et Explorer can	monitor/contro	ol PAC via Inter	net/modem					
Security				Support three level	s username ar	nd password pro	otection. (high/	middle/low)					
CPU Module	e	1											
CPU				PXA	A270 (32-bit ar	nd 520 MHz) or	compatible						
SDRAM					-	128 MB							
Dual Battery	Backup SRAM				512 KB; dat	a valid up to 5	years						
Flash			128 MB			96 MB			128 MB				
EEPROM						16 KB		1					
microSD			mic	roSD socket with on	e 2 GB microS		t up to 32 GB n	nicroSDHC card)					
RTC (Real Tir	me Clock)					our, date, day o							
-	are Serial Number					ware Copy Prot							
Dual Watchde					,	Yes							
	le LED Indicator					1							
Rotary Switch					Y	es (0 ~ 9)							
DIP Switch		-	Yes (-	1	8 bits)	-	Yes (8	bits)				
	munication Ports						,						
	Extra GPU	Yes	-	Yes			-		Yes	-			
VGA	Resolution	1024 x 768	800 x 600	1024 x 768		800) x 600		1024 x 768	800 x 60			
Ethernet					0/100 Base-TX	(Auto-negotiat		tors)					
USB 1.1 (hos	t)		2	,		1	5,		2				
USB 1.1 (clie	-			-					1				
COM 0	,			Internal communic	ation with the	high profile I-8	37K series modu	ules in slots					
COM 1						e) (RxD, TxD an							
COM 2		RS-485 (Data+, Data-); self-tuner ASIC inside; 2500 Voc isolated for WP-8137, WP-8147 RS-485 (Data+, Data-); self-tuner ASIC inside; 3000 Voc isolated for WP-8437, WP-8837, WP-8447, WP-8847, WP-8057, WP-8357, WP-8757											
		RS-485 (Dat	-	er ASIC inside; 3000 xD, TxD, CTS, RTS) VDC ISOIAted 1	or WP-8437, W	P-8837, WP-84	47, WP-8847, WP	-8057, WP-835	/, WP-8/5/			
COM 3		-	and GND for RS	-232, Data+ and 5); non-isolated	-	RS-23		, TxD, CTS, RTS ata- for RS-485);		5-232,			
COM 4		-	RS-232 (RxD, Txl	D, CTS, RTS, DSR, GND); non-isolated	-	RS-232 (RxD	, TxD, CTS, RT	S, DSR, DTR, CD,	RI and GND);	non-isolate			
COM 5				-	<u> </u>	1		RS-232 (RxD, TxD, and GND); non-isolated	-				
I/O Expans	ion Slots							non isolated					
		1	3	7	1	4	8	0	3	7			
Slot Number			-			I-8K and I-87k			-				
Mechanical					-		,						
Dimensions (WxLxH)			137 mm x 2 231 mm x 2	132 mm x 111 132 mm x 111	mm: WP-8137, mm: WP-8057 mm: WP-8437, mm: WP-8837	, WP-8447, WP						
355 mm x 132 mm x 111 mm: WP-8837, WP-8847, WP-8757 Installation DIN-Rail or Wall Mounting													
	ntal	I			erit rull		5						
Environmer	Operating Temperature -25 ~ +75°C												
Environmer Operating Te						0 ~ +80°C							
Operating Te	perature					RH (non-conder	ising)						
Operating Te Storage Temp	·					(57						
Operating Te Storage Temp	perature ative Humidity												
Operating Ten Storage Temp Ambient Rela Power	·				+1	0 ~ +30 Vrc							
Operating Ter Storage Temp Ambient Rela Power Input Range	·				+1	0 ~ +30 Vpc							
Operating Ter Storage Temp Ambient Rela Power Input Range Isolation	tive Humidity			Yes wi		1 kV	VDC) for alarm						
Operating Ten Storage Temp Ambient Rela Power	tive Humidity	8 W	25 W	Yes, wi 25 W			VDC) for alarm	8 W	30 W	30 W			

ISaGRAF Specifications _____

Image: Constraint of the start of	Modbus TCP/I Modbus RTU// Modbus RTU S								
Module MILVACIII Marter Mes. 10 prote: COMI - 1 4 for connect 1s other Modue Sine device). Support Multipareds. (*) Modue TOY/DP Sine Mes. 5 ports: COMI - 2 4 for connecting. IST MAR for an analytic transmitter to connect ope 1s SPA(MR),, When and TOY/DP Sine Mes. 5 ports: COMI - 2 4 for connecting. IST MAR for an analytic transmitter to connect ope 1s SPA(MR),, When and TOY/DP Sine Element UAII 8 J.V.W. 2000 (*) Modue TOY/DP Sine Element UAII 8 J.V.W. 2000 (*) Element Device Element UAII 8 J.V.W. 2000 (*) Modue TOY/DP LIO Element UAII 8 J.V.W. 2000 (*) Element UAII 8 J.V.W. 2000 (*) Element UAII 8 J.V.W. 2000 (*) Modue TOY/DP LIO LAG 2 separation 100 DI Element (*), L.BARCE ANT Element Elevice Element UAII 8 J.V.W. 2000 (*) Element UAII 8 J.W.W. 2000 (*) Modue TOY/DP LIO LAG 2 separation 100 DI Element (*), L.BARCE 2 and Element DIOI. LAG 2 separation 100 DI Element (*), L.BARCE 2 and Element DIOI. Modue TOY/DP LIO LAG 2 separation 100 DI Element (*), L.BARCE 2 and Element DIOI. LAG 2 separation 100 DI Element (*), L.BARCE 2 and Element DIOI. Modue TOY/DP LIO LAG 2 separation 100 DI Element (*), L.BARCE 2 and Elevice TOY 0 DIOI Elevice 100 DIOI Elev	Modbus RTU// Modbus RTU S		LINK to max. 100 devices that support Standard Modbus TCP/IP Slave protocol (FAQ-113)						
Mexbas RTU Size / Mo. Spetts CoPH, one of COPU2, COPH - 6 (Fre encreating SLGRADE, PC/HURCPC Serve 3: HM parely (r) Mexbas TCU FOR Size / Monetal MA 1. ALL Adapter Haft is no. Spects for expectation scale and pc. PML. Can connect up to 14 PC/HM1, encl connect up to 12 PC/HM1; If VM-Bory Use 3 connections of UM-PML. Can connect up to 14 PC/HM1, encl connect up to 12 PC/HM1; If VM-Bory Use 3 connections of UM-PML. Mexbas TCU FOR Size / Monetal MA 1. ALL Adapter Haft is no. The Spect of UM-PML. PLAN Size / MONELA, EXPL Data and Sceneta DC/FML. Entere Ports for connecting PC uning Internet Explorer MeXD Size / MON Size / Monetal MA 1. ALL Adapter Size / MONELA, EXPL Data + 147X. Senial VD backs and 70.49.477. Entere Ports for connecting PC uning Internet Explorer MeXD Size / MON Models. Entere Ports for COMELA (MONEL - 14) can spectrated set in the same If Monesa. Entere Ports for COMELA (MONEL - 14) Can spectrated set in the same If Monesa. MeXD Size / MON Size / MON Size / MON Size / MON Models. Entere Ports MON MONELA. Entere Ports MONELA (MONEL - 14) Can spectrated set in the same If Monesa. MeXD MON Size / MON Size / MON MON MON Size / MON MONELA (MONELA MONELA MONE	Modbus RTU S	ASCII Master							
Holdson TOY/JP Size Ethernic JUNI J, LAN2 apport Exb Jap D2 20metches. (1) WP Bod uses 1 connection to connect can b 16 CAPHU, 1. cm one Ethernic port is troken, the above can all connect to PCPHU. whe Helf Protocol Ethernic JUNI J, WP Bod uses 1 connection to connect can b 16 CAPHU, 1. cm one Ethernic port is troken, the above can all connect to PCPHU. VAD 0.4 L37X, CR-455 Stemotol (0) One of CDR2, CDR3 supports 1-2700 UD motules, 147X, base 1-147X, Seel UD baseds and RU-37TN, High Profile UD based as Remote ULO. No.25 Stemotol (From Connect Line D CaPHU) VAD000 Series Robus (U) Max. 10 5-55 Step Tot (CDN1 - + 4) cm asport 5-700 UD concluse, 147X, DBN Inhum, 1 will anish to LM3 automatically to continuously work. (UVII A-LM32 B per requested set in the same IP connect). VAD000 Series Robus (U) Max. 10 5-55 Step Tot (CDN1 - + 4) cm asport 5-700 UD concluse, 147X DDN Inhum, 1 will anish to Latternatically to continuously work. (UVII A-LM32 B per requested set in the same IP connect). VAD00 Series Robus (U) CDR1 - CCR14 Support Table 1 Sec All TAB Inhum, 1 will anish to LM32 To 2017 (FrQ-958). Exb Connect (PDR 100 Concluse). Remote Table 1 Sec All TAB Inhum, 1 will anish to LM32 To 2017 (FrQ-958). Exb Concluse Concl									
Module TUP Isoue connect up to 3 PC/HME (if WineSo Ures 2 connect one Connect one PC/HME (and connect to PC/HME (and PC/HME (a	Modbus TCP/I	Slave	Max. 5 ports: COM1, one of COM2/3, COM4 ~ 8 (For connecting ISaGRAF, PC/HMI/OPC Server & HMI panels). (*)						
Cr000 a L457K R5-H85 Remote L/O Over of COMP, COMP argument 5-7000 1/D medules, TARX have + 54% Control 1/D bandts and RU-877h + 1-87K High Profile 1/ wards as femeter L/O Mea. 255 models for exe controller. (*) N=7000 Series Medulau 1/O Max. 10 R5-H85 perts (COM1 ~ 14) can support M-7000 1/D. Each part can connect up to 32 M-7000 Modules. Medula TCM/P1 I/O LMPS apports 107 DAE Efficient 1(D L HBEE-HTCS at LANDS a breach part can connect up to 32 M-7000 Modules. Medula TCM/P1 I/O LMPS apports 107 DAE Efficient 1(D L HBEE-HTCS at LANDS a breach part can connect up FRet L/O modules, like R2:055, RF-2057 FR-328, FR-329 (rKA)-440, fac. 114 1727 Modard (an connect up FRet L/O modules, like R2:055, RF-2057 FR-328, FR-329 (rKA)-440, fac. 114 1727 Modard (an connect up FREt L/O modules, like R2:055, RF-2057 FR-328, FR-329 (rKA)-440, fac. 114 1727 Modard (an connect up FREt L/O modules, like R2:055, RF-2057 FR-328, FR-329 (rKA)-440, fac. 114 1727 Modard (an connect up FREt L/O modules, like R2:055, RF-2057 FR-328, FR-329 (rKA)-440, fac. 114 1727 Modard (an connect up FREt L/O modules, like R2:055, RF-2057 FR-328, FR-329 (rKA)-440, fac. 114 1727 Modard (an connect up FRET L/O modules, like R2:055, RF-2057 FR-238, FR-329 (rKA)-440, fac. 114 1727 Modard (an connect up FRET L/O modules, like R2:055, RF-2057 FR-328, FR-329 (rKA)-440, fac. 114 114 1747 Modard (an connect up FRET L/O modules, like R2:055, RF-2057 FR-238, FR-329 (rKA)-440, fac. 114 114 1427 Modard (an connect up FRET L/O modules, like R2:055, RF-2057 FR-328, FR-329 (rKA)-450, free Connection Modard (an anne) fac. 114 114 1427 Modard (an connect up FRET L/O module) Modem (an anne) fac. 114 114 1427 Modard (an connect up FRET L/O module) Modem (an anne) fac. 114 114 1427 Modard (an connect up FRET L/O module) Modar 114 144 1420 R2 (rKRET L/M) module) Modem (an conne	Modbus TCP/IP Slave		connect up to 32 PC/HMI; If WP-8xx7 uses 2 connections to connect each PC/HMI, it can connect up to 16 PC/HMI;) When						
Virule Name Name Standard Strends Units Virule Name Virule Nam Virule Name Virule Name	Neb HMI Prot	tocol	Ethernet Ports for connecting PC running Internet Explorer						
Hobbus TCP/JP I/J MAX Supports I/C PARE Henry Note MAX Supports I/C PARE Henry Note Hobbus TCP/JP I/J Support rack 8 pcs. 1-81/27W boards in side 0 to 7 to connect to 10 Ref. 1/O modules, like FR-2053, FR-207 FR-32R, FR-32P FReed TV Support rack 8 pcs. 1-81/27W boards in side 0 to 7 to connect to 10 Ref. 1/O modules, like FR-2053, FR-207 FR-32R, FR-32P Ered Ermail Support rack 200 so data 3 Micro 10 Connect 1/O Connect 1/	[-7000 & I-87]	K RS-485 Remote I/O	One of COM2, 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. (*)						
Notices Continuously, work, (LAN 18, MAX25 JP are requested set in the same IP domain). Finet I/O Support have Serve. Support have Serve. Signed Final J Support have Serve. Support have Serve. Signed Final J LAN2 to exclusing the data between ISSEAPE Finanted PAC4 between ISSEAPE finanted port. Signed Final J LAN2 to exclusing the data between ISSEAPE Finanted PAC4 between ISSEAPE Stermet PAC4 between ISSEAPE finanted PAC4 between ISSE	N-7000 Series	s Modbus I/O	Max. 10 RS-485 ports (COM1 ~ 14) can support M-7000 I/O. Each port can connect up to 32 M-7000 Modules.						
Name 1 y with a spectra 1 (RiQ-DRI): Each 14172W based can come tay to 256 D plaz 256 D o hannels. Exas with a spectra 1 (RiQ-DRI): Each 14172W based can come tay to 256 D plaz 256 D o hannels. Exas with a spectra 1 (RiQ-DRI): Each 14172W based can based data before to yeth benet port. Exas with a spectra 1 (RiQ-DRI): Each 14172W based port. The controller can based add as data set outs a collutar phone. (*) optical cost of white in come 1556 DRI (*) (*) (*) (*) (*) (*) (*) (*) (*) (*)	Modbus TCP/I	IP I/O							
Ebus LAN 2 to exchange data between ISGRAF Ethemet PAC via Ethemet port. MS: Short Message Service VP-94/786/75 COM/G and VP-81.07* COM/COM5 can link to a GGM Modern to support SMS. User can request data/control the controller to value protes. The confinence on a controller to value protes. The confinence on a control to value protes. The value protes. The value protes on a control to value protein the value on a control to value protein the value on a control to value protein the value. The Value VID Server VID	-Rnet I/O								
Sis Short Message Service WP 84/798/7 COM4/COM5 can link 6 ur CCM Modern to support SM5. User can request data/control th controls by Parliad phone. The controller can also and the 8 alarmin to user's calling phone. (*) Optional CSM Modern. CITM 2014/SS22 (650/900/1800/1900 CSM(GR5 External Modern) User-Defined Protocol COM4 - COM14 by Seral communication function blocks (*) UDP Server & UDP Client : CAM or CLMS and support LIDP Server and UDP Client protocol to send/receive message to/from PC/HMI or other devices. For example, to automatically report data to InduSeffs SRTX drive, or to context a location cannea. CPC Client : LAM or LAN2 (1) be safe and support LIDP Server and UDP Client protocol to send/receive message to data up to link the Internet by CPRS connection to sen an enail or communicate with renote stations by using "TPo Client" ("AQ-151) and "TCP Client" / "UDP Server / "UDP Client (FAQ-153). SQL Server Support LIS F322/LIC (C)/SG and function to write data form Microsoft SQL Server (2008) 2, 2005, 2008). This redundent system in the redundant system in an end or communicate with renote stations by using "TPo Client" ("AQ-153) and "TCP Client" / "UDP Server / "UDP Client (FAQ-153). SQL Server (2008) SQL Server (2008) CAN can consect on client system with center station system in a center (FAQ-150). SQL Server (2004) SQL Server (2004) CAN can consect on client function system in adver IP. So the PC/HMI/SCAN can can center the 1750 (PC-4959). SQL Server (2004) SQL Server (2004) CAN can cocconten centeriad to the advect ANI.	Send Email		Supports functions to send email with one attached file via Ethernet port.						
SNS: Short Hessey Service controller on allow and base and data & allow store (sellular phone. (*) Optional CSM Works (CM 2014 CSZ (26930071480010 CSM)CRRS External Modern) User: Defined Protocol COM1 < COM14 by Senial communication function blacks (*)	Ebus		LAN2 to exchange data between ISaGRAF Ethernet PAC via Ethernet port.						
NMICONULCD COM4 or COM5 and supports ICP DAS's MMICON. (*) UIP Server & UIP Client : LANI or LAN2 support IDP Server and UIP Client protocol to send/receive message to/from PC/HMI or other devices. For example, to automatically report data to inductions TXX driver. CTC Client : LANI or LAN2 support IDP Server and UIP Client protocol to send/receive message to/from PC/HMI or other devices which support TDP server protocol.) Exchange Message & Auto-Report Ex: automatically report data to inductions TXX driver. SPRS/SMS Support the 1-8212W (2G/3G) card to receive / send a short message to fold up to link the Internet by GPRS connection to sen an enal or communicate with renduct astors by using "Txp Client" (TAQ-151) and "TCP Client" / "UDP Server / / "UDP Client (rQQ-142). SQL Server Support SQL Client function to wite data to (ar read data from) Microsoft SQL Server (DSD SPL 2005, 2008). This redundant system Support SQL Client function to white data to (ar read data from) Microsoft SQL Server (DSD SPL 2005, 2008). SQL Server Support SQL Client function to white data to carrent data from Microsoft SQL Server (DSD SPL 2005, 2008). This redundant system Support SQL Client function to white data to carrent data from Microsoft SQL Server (DSD SPL 2005, 2008). SQL Server Support SQL Client function to white data to carrent data from Microsoft SQL Server (DSD SPL 2005, 2008). CAN/CANOpen COM14, COM 2000, COM14 car connounce tom F-733 (COM 200, Surenoth yacture	SMS: Short M	essage Service							
DP Sever & UDP Client : Exchange Message & Auto-Report LAN1 or LAN2 support UDP Server and UDP Client protocol to send/receive message toffmom PC/HMI or other devices. For exchange Message & Auto-Report EXchange Message & Auto-Report LAN1 or LAN2 support UDP Server and UDP Client protocol to send/receive message toffmom PC/HMI or other devices. Which support TCP server protocol.) Exchange Message & Auto-Report Support He PS12DW (2C/2G) card to rescive / send a short message tor final up to link the Internet by CRB connection to send (FAQ-143). SQL Server Support He SI2DW (2C/2G) card to rescive / send a short message tor for lalue to link the Internet by CRB connection to send (FAQ-143). SQL Server Support He SI2DW (2C/2G) card to rescive / send a short message tor for lalue to link the Internet by CRB connection to send (FAQ-143). SQL Server Support He SI2DW (2C/2G) card to rescive / send a short message tor the active LIN2 of the PC/HMI/SCRDA can access to the SCAD communicate with the redunder system value on the two og una active IE SO the PC/HMI/SCRDA can access to the scAD support the Not-swap the damage of one without Support HIN2 Cultade States one geod-card with same mod number to host-swap the damage one without Support HIN2 Cultade States (FAQ-145) CAM/CANopen COM1 cOM3 ~ COM1 4 can connect one 1-7530 (convertern B-232 to CAD) to support CAN/CANopen devices and sensors. One W bod' support HIN2 Cultade States on to connect other CANopen size devices. (FAQ-145) Support HE Client to upload files in the PAC to a renore to HE C 16 design the HMI screen and then download it to the ACC to display the HMI on the PAC. (FAQ-146) </td <td>Jser-Defined</td> <td>Protocol</td> <td>COM1 ~ COM14 by Serial communication function blocks (*)</td>	Jser-Defined	Protocol	COM1 ~ COM14 by Serial communication function blocks (*)						
Exchange Message & Auto-Report example, to automatically report data to InAuSoft's RXTX driver. CIPC Dieters LAN1 or LAN2 (To send/receive message to/from PC/HMI or other devices which support TCP server protocol.) Exc automatically report data to InAuSoft's RXTX driver, or to connect a location camera. SRPS/SMS Support TeP Edit or LAN2 (To send/receive message to/from PC/HMI or other devices which support TCP server protocol.) Exc automatically report data to InAuSoft's RXTX driver, or to connect a location camera. SQL Server Support SQL Client function to write data to (or read data from) Microsoft SQL Server (2000 SP3, 2005, 2008). This redundant system has setup two "Active IP" address point to the active LAN1 and LAN2 ports always. One or more PC/HMI System easily without any notes about which WP-Actives is damaged, the maintenance person just takes one good-card with same more number to horswap the damaged one without stopping this redundant system. (AQO-4093) CAN/CANoper COM1, COM3 + COM14 can connect one IP-750 (cornecter iR-5232 to CAN) to support CAN/CANopen devices and sensors. One WI address point terms in the 200 Support TeP Edit to communicate with other HART devices. Support the FH312W CANopen Master card to cornect other CANopen size devices. (RQ-145). ARXT Solutions Support the FH312W CANopen Master card to cornect other CANopen size devices. (RQ-145). Struggert the SH32W CANopen Master card to cornect other CANopen size devices. (RQ-145). Support the SH312W conduces in side to 10 to 7 to coronnunicate with other HART devices.	MMICON/LCD		COM4 or COM5 and supports ICP DAS's MMICON. (*)						
Eichange Message & Auto-Report Eic automatically report data to InduSoft's EXTX driver, or to connect a location camera. ErKS/SMS SPKS/SMS Erk auto-Report Eic automatically report data to InduSoft's EXTX driver, or to connect a location camera. Erk S/SMS SQL Server Support the 14212W (2G/3G) card to receive / send a short message or to dail up to link the Internet by OPRS connection to sen an email or communicate with remote stations by using "Ftp Client" (FtQ-151) and "TCP Client" ("TVDP Client" (FtQ-143). SQL Server Support SQL Client function to write data to for read data from) Microsoft SQL Server (2000 SP3, 2005, 2008). This redundant system has setup two "Active IP" address point to the active LAN1 and LAN2 ports always. One or more PC/HM SCDAA can communicate with this redundant system via one of the two given active IP. So the PC/HMI/SCDAA can access to th system casily without any notice about which VP-Mo2A' Is currently active. Microsover, the new redundant system has setup two "Active IP" address point to the active LAN1 and LAN2 ports always. One or more PC/HM SCDAA confision. If the 1/C or dails damaged. In the maintenance person just takes one good-card with same mod number to hot-swap the damaged one without stopping this redundant system. (FcQ-093) CAN/CANopen Mest COM1_CON3 COM14 can connect one F-730 (CM (FcQ-086)) CAN4 CANA point Server on PC. (FAQ-151) Support FT PC lient to upload files in the PAC to a remote FTP server on PC. (FAQ-151) Soft-GRAF HMT. Support SCD FTP client to upload files in the PAC to a remote FTP server on PC. (FAQ-151) Soft-GRAF HMT. Softwort SCD FTP client to Colles Cont PC (PG-PGF) Softwort ScD ScD FTP ScF CPGF) Softwort ScF SCF FTP ScF CPG ScF SCF CPG ScF									
GRRS/GNIS an email or communicate with remote stations by using "Ftp Client" (FAQ-151) and "TCP Client" / "UDP Server" / "UDP Client (FAQ-143). SQL Server Support SQL Client function to write data to (or read data from) Microsoft SQL Server (2000 SP3, 2005, 2008). bet-Swap and Redundant System Support SQL Client function to write data to (or read data from) Microsoft SQL Server (2000 SP3, 2005, 2008). bet-Swap and Redundant System Schop Car communicate write hier write write the two given active. IP. So the PC/HMI/SCADA can access to the system easily without any notice about which WP-Sox7 is currently active. CAN/CANOper COM1, COM3 - COM14 can connect one F-7530 (Counter: RS-2232 to CAN) to support Lakes one good-card write same mod number to hot-swap participation. If the I/O card is damaged, the maintenance person just takes one good-card write same mod number to hot-swap participation. If the I/O card is damaged, the maintenance person just takes one good-card write same mod number to hot-swap participation. If the I/O card is damaged, the maintenance person just takes one good-card write same mod number to hot-swap participation. If the I/O card is damaged, the maintenance person just takes one good-card write same mod number to hot-swap participation. If the I/O card is damaged one write davides. CAN/CANOper Support the relaxity DAY condel as in the PAC to a remote FTP sca22 to CAN) to support cAN/CANOpen devices and sensors. One With Soc Tay person and the download it to the PAC to design the HMI screen and then download it to the PAC to design the HMI screen and then download it to the PAC to design the HMI one PAC (FAQ-165). Support the Soft-GARF HMI . User can use t	TCP Client : Exchange Message & Auto-Report								
Hot-Swap and Redundant System This redundant system has setup two "Active IP" address point to the active LANI and LAN2 ports always. One or more PC/HM 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 asally without any notice about which VP-8xx7 is currently active. Moreover, the new redundant system can integrate with the RU-879K479B Expansion Unit plus the I-87X high-profile I/O cards I support the hot-swap publication. If the I/O card is damaged, the maintenance person just takes one good-card with same mod number to hot-swap the damaged one without stopping this redundant system. (FAQ-093) CAN/CANopen CCM1, COM3 ~ COM14 can connect one I-7530 (converter: RS-232 to CAN) to support CAN/CANopen devices and sensors. One WI 8x7 Supports max. IO R5-232 ports to connect max. ID-7530. (*) (FAQ-066) CAN/CANopen Support the I-8123W CANopen Master card to connect onther CANopen slave devices. Support 1-87H17W modules in slot to 1 to communicate with other HART devices. CTP Client 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) Dot Module I-7088, I-6088W, I-8708WW. Boh-1WW outputs, software support IHz~100KHz (non-continuous), duty: 0.1~99.9% VerM Output B ch. max. 50 10 fm ax. For Off=2.8. On=2 ms. Output supare wave; Off: 2-32766 ms. Optional DO Boards: I-8037W, 8041W, 8041W, 8042W, 8050W, 8051W, 8052W, 8053W, 8053W, 8054W, 8056W, 8063W, 8063W, 8063W, 8066W, 8068W, 8063W. Counter Parallel DI Counter Al i-7K/I-87K DI modules support counters. 100 Hz max. Nathus 2 max.	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 sen an email or communicate with remote stations by using "Ftp Client" (FAQ-151) and "TCP Client" / "UDP Server" / "UDP Client" (FAQ-143).						
Hot-Swap and Redundant System SCADA can communicate with this redundant system via one of the two given active IP. So the PC/HMU/SCADA can access to the System can integrate with the RU-3744786 Expansion Unit plus the 1-87. K high-profile I/O cards I submitted active. Moreover, the new redundant system can integrate with the RU-3744786 Expansion Unit plus the 1-87. K high-profile I/O cards I submitted active. Moreover, the new redundant system can integrate with the RU-37447878 Expansion Unit plus the 1-87. K high-profile I/O cards I submitted active. If AQ-0933 CAW/CAMoper CCM1, COM3 ~ COM14 can connect one 1-7530 (converter: R5-321 to CAN) to support CAN/CANopen devices and sensors. One WI Box 7 support he 1-8122W CANopen Master card to connect other CANopen slave devices. (FAQ-145) CAM/CAMOPER Support 1-87117W modules in slot 0 to 7 to communicate with other HART devices. FTP Clent Support 1-87117W modules in slot 0 to 7 to communicate with other HART devices. Soft-GRAF HIT Support 1-87417W modules in slot 0 to 7 to communicate with other HART devices. Soft-GRAF I/V Support 1-87417W modules in slot 0 to 7 to communicate with other HART devices. PMO dutate T-7088, 1-8068W; 8-ch. PWM outputs, software support 1Hz~100KHz (non-continuous), duty: 0.1~99.9% PMO dutate 1-7088, 1-8068W; 8-ch. PWM outputs, software support 1Hz~100KHz (non-continuous), duty: 0.1~99.9% PMO dutate 8-ch.max. 250 Hz max. To 67f = 2. A Core 2. Software supare wave? 0F :-0-22766 ms. Option 20 Boards: 1-8037W, 8041W, 8050W, 8050W, 8050W, 8053W, 8057W, 8053W, 8054W, 80	SQL Server		Support SQL Client function to write data to (or read data from) Microsoft SQL Server (2000 SP3, 2005, 2008).						
CAN/CANOPEN Box7 supports max.10 RS-232 ports to connect max.10 1-7530. (*) (FAQ-086) CANopen Master Support the 1-8123W CANopen Master card to connect other CANopen slave devices. (FAQ-145) HART Solutions Support THE 1-8123W CANopen Master card to connect other CANopen slave devices. (FAQ-145) Support THE TOLIENT Support THE Client to upload files in the PAC to a remote FTP server on PC. (FAQ-151) Soft-GRAF HMI Support the Soft-CRAF HMI . User can use the Soft-CRAF 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/ Functions (Refer to ISSME PAC 1/O Selection Guide for I/O Module list) I-7088, I-8088W, I-87088W: 8-ch. PUM outputs, software support 1Hz~100KHz (non-continuous), duty: 0.1~99.9% PWM Output High Speed PWM Modul I-7088, I-8088W, I-87088W: 8-ch. PUM outputs, software support 1Hz~100KHz (non-continuous), duty: 0.1~99.9% PWM Output B-ch max. 250 Hz max. For Off-2 & 0.n= 2 ms. Output square wave: Off: 2~32766 ms, On: 2~32766 ms,	Hot-Swap and	l Redundant System	Moreover, the new redundant system can integrate with the RU-87P4/87P8 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 mode						
HART Solutions Support 1-87H17W modules in slot 0 to 7 to communicate with other HART devices. FTP Client Support 1-87H17W modules in slot 0 to 7 to communicate with other HART devices. Soft-GRAF HWI Support He Soft-GRAF HMI . User can use the Soft-GRAF Studio on the PC to design the HMI screen and then download it to th PAC to display the HMI on the PAC. (FAQ-146) Optional I/ Functions (Refer to IS3GRAF PAC 1/O Selection Guide for 1/O Module list) High Speed PWM Module High Speed PWM Module 1-7088, 1-8088W, 1-87088W: 8-ch. PWM outputs, software support 1Hz~100KHz (non-continuous), duty: 0.1~99.9% PWM Output DO Module as PWM 8-ch max. 50 Hz max. For Off=2 & On=2 ms. Output square wave: Off: 2~32766 ms. Optional DD Boards: 1-8037W, 80414W, 8042W, 8050W, 8054W, 8055W, 8057W, 8063W, 8063W, 8064W, 8068W, 8068W, 8068W, 8069W. (Relay Output boards cannot generate fast square wave) PWM Output Berailel D1 Counter 8 ch. max. for 1 controller. Counter val: 32 bit. 250 Hz max. Min. ON & OFF width must > 2 ms. Optional D1 boards: 1-8040W, 8046W, 8046W, 8046W, 8050W, 8053W, 805	CAN/CANoper	1							
TP Client Support FTP client to upload files in the PAC to a remote FTP server on PC. (FAQ-151) Soft-GRAF HMI Support FTP client to upload files in the PAC to a remote FTP server on PC. (FAQ-151) Soft-GRAF HMI Support TP client to upload files in the PAC. (FAQ-146) Optional I/> Functions (Refer to Zisplay the HMI on the PAC. (FAQ-146) Optional I/> Functions (Refer to Zisplay the HMI on the PAC. (FAQ-146) Optional I/> Functions (Refer to Zisplay the HMI on the PAC. (FAQ-146) Optional I/> Functions (Refer to Zisplay the HMI on the PAC. (FAQ-146) Optional I/> Functions (Refer to Zisplay the HMI on the PAC. (FAQ-146) Optional I/> Functions (Refer to Zisplay the HMI on the PAC. (FAQ-146) Optional I/> For88, I-8008W, I-8708BW: 8-ch. PWM outputs, software support 1Hz~100KHz (non-continuous), duty: 0.1~99.9% PWM Output Do Module as PWM Be-ch max. 50 rt Contrer as the Dist. Software wave: Off: 2~32766 ms, On: 2	CANopen Mas	iter	Support the I-8123W CANopen Master card to connect other CANopen slave devices. (FAQ-145)						
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 th 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 1-7088, I-8088W, I-87088W: 8-ch. PWM outputs, software support HHz~100KHz (non-continuous), duty: 0.1~99.9% 8-ch max. 250 Hz max. For Off=2 & On=2 ms. Output square wave: Off: 2~32766 ms, On: 2 ~ 32766 ms. Optional D Boards: 1-8037W, 8041W, 8042W, 8050W, 8055W, 8055W, 8056W, 8063W, 8066W, 8063W, 8064W, 8068W, 8069W. (Relay Output boards cannot generate fast square wave) Perallel DI Counter 8 ch. max. for 1 controller. Counter val: 32 bit. 250 Hz max. Min. ON & OFF width must > 2 ms. Optional D boards: 1-80704W, 8040PW, 8042W, 8046W, 8050W, 8051W, 8053W, 8053W, 8053W, 8054W, 8055W, 8058W, 8063W. Serial DI Counter 8 ch. max. for 1 controller. Counter val: 32 bit. 250 Hz max. Min. ON & OFF width must > 2 ms. Optional D boards: 1-80704W, 8046W, 8046W, 8050W, 8051W, 8053W, 8053W, 8053W, 8054W, 8058W, 8058W, 8058W, 8058W, 8058W, 8053W, 8053W, 8053W, 8054W, 8058W, 8058W, 8058W, 8063W. Serial DI Counter All I-7K/I-87K DI boards: 1-80704W, 87046W, 87051W, 87053W, 87053W, 87053W, 87053W, 87053W, 87058W, 87058W, 87059W, 87058W, 87059W, 87058W, 87059W, 87058W, 87059W, 87058W, 87059W, 87058W, 87059W, 87059W, 87053W, 87053W, 87053W, 87053W, 87053W, 87058W, 87059W, 87051W, 87059W, 87051W, 87059W, 87051W, 8	HART Solution	าร	Support I-87H17W modules in slot 0 to 7 to communicate with other HART devices.						
PAC to display the HMI on the PAC. (FAQ-146) Optional I/> Functions (Refer to IS=CRF 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 1Hz~100KHz (non-continuous), duty: 0.1~99.9% Ob Module as PWM B-ch max. 250 Hz max. For Off=2 & 0.n=2 ms. Output square wave: Off: 2~32766 ms, On: 2 ~ 32766 ms. Optional DD Boards: I-8037W, 8041W, 8041W, 8050W, 8050W, 805W, 8057W, 8060W, 8063W, 8064W, 8068W, 8068W, 8068W. (Relay Output boards cannot generate fast square wave) Parallel DI Counter B 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, 8048W, 8050W, 8051W, 8053W, 8053W, 8053W, 8053W, 8053W, 8053W, 8055W,	TP Client		Support FTP client to upload files in the PAC to a remote FTP server on PC. (FAQ-151)						
High Speed PWM Module 1-7088, I-8088W, I-87088W: 8-ch. PVM outputs, software support 1Hz~100KHz (non-continuous), duty: 0.1~99.9% PWM Output Do Module as PWM 8-ch max. 250 Hz max. For Off=2 & 0.n=2 ms. Output square wave: Off: 2~32766 ms, On: 2 ~ 32766 ms. Optional DO Boards: I-8037W, 8014W, 8041AW, 8042W, 8050W, 8054W, 8055W, 8056W, 8057W, 8060W, 8063W, 8064W, 8068W, 8069W. (Relay Output boards cannot generate fast square wave) 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, 8040W, 8042W, 8048W, 8050W, 8053W, 8053	Soft-GRAF HM	11	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 th PAC to display the HMI on the PAC. (FAQ-146)						
PWM Output Do Module as PWM 8-ch max. 250 Hz max. For Off=2 & On=2 ms. Output square wave: 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, 8068W. (Relay Output boards cannot generate fast square wave) 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, 8053W, 8053PW, 8053W, 8053W, 8053W, 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, 87053W, 87053W, 87053W, 87055W, 87055W, 87053W, 87053W	Optional I/C	D Functions (Refer to IS	aGRAF PAC I/O Selection Guide for I/O Module list)						
Number DO Module as PWM Optional DO Boards: I-8037W, 8041W, 8041AW, 8042W, 8050W, 8054W, 8055W, 8056W, 8057W, 8066W, 8063W, 8064W, 8068W, 8068W, 8069W. (Relay Output boards cannot generate fast square wave) Number 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, 8053PW, 8054W, 8055W, 8058W, 8063W. Serial DI Counter Serial DI Counter Counter input: 100 Hz max. Counter value: 0 ~ 65535 (16 bit) Optional serial I-87K DI boards: I-87040W, 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 Frequency I-87082W: 100 kHz max.; 1-8084W: 250 kHz max. 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., 640-100) I-87082W: 2-ch, 1 Hz ~ 100 kHz; I-87088W: 8-ch, 0.1 Hz ~ 500 kHz; 1-8084W: 8-ch, 1 Hz ~ 250 kHz Motion Motion Control Integrate with one I-8091W (2-axis) or two I-8091W (4-axis)		High Speed PWM Module	I-7088, I-8088W, I-87088W: 8-ch. PWM outputs, software support 1Hz~100KHz (non-continuous), duty: 0.1~99.9%						
Parallel DI Counter Optional DI boards: I-8040W, 8042W, 8046W, 8048W, 8050W, 8051W, 8052W, 8053W, 8053PW, 8054W, 8055W, 8058W, 8063W. Counter Counter input: 100 Hz max. Counter value: 0 ~ 65535 (16 bit) Optional serial I-87K DI boards: I-87040W, 87046W, 87051W, 87052W, 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.; I-8084W: 250 kHz max. 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, can be dir/pulse, 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 Integrate with one I-8091W (2-axis) or two I-8091W (4-axis)	PWM Output	DO Module as PWM	Optional DO Boards: I-8037W, 8041W, 8041AW, 8042W, 8050W, 8054W, 8055W, 8056W, 8057W, 8060W, 8063W, 8064W,						
Serial DI Counter Optional serial I-87K DI boards: I-87040W, 87051W, 87052W, 87053W, 87053W-A5, 87054W, 87055W, 87058W, 87059W, 87059W		Parallel DI Counter	Optional DI boards: I-8040W, 8040PW, 8042W, 8046W, 8048W, 8050W, 8051W, 8052W, 8053W, 8053PW, 8054W, 8055W,						
Wotion High Speed Counter I-87082W: 100 kHz max.; I-8084W: 250 kHz max.; I-8084W: 250 kHz max. Encoder, Frequency 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, can be dir/pulse, 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 Integrate with one I-8091W (2-axis) or two I-8091W (4-axis)		Serial DI Counter	Optional serial I-87K DI boards: I-87040W, 87046W, 87051W, 87052W, 87053W, 87053W-A5, 87054W, 87055W, 87058W,						
Encoder, Frequency High Speed Counter I-87082W: 100 kHz max.; I-8084W: 250 kHz max. 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, can be dir/pulse, 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 Integrate with one I-8091W (2-axis) or two I-8091W (4-axis)	Counter	Remote DI Counter	All I-7K/I-87K DI modules support counters. 100 Hz max. value: 0 ~ 65535						
Encoder (FAQ-112) I-8084W: 250 KHz max., 4-ch encoder, can be dir/pulse, 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 Integrate with one I-8091W (2-axis) or two I-8091W (4-axis)	Encoder,	High Speed Counter							
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 Integrate with one I-8091W (2-axis) or two I-8091W (4-axis)		Encoder	(FAQ-112) I-8084W: 250 kHz max., 4-ch encoder, can be dir/pulse, or up/down or A/B phase (Quad. mode), Not support Encoder Z-index.						
Motion Motion Control Integrate with one I-8091W (2-axis) or two I-8091W (4-axis)		Frequency	I-87082W: 2-ch, 1 Hz ~ 100 kHz; I-87088W: 8-ch, 0.1 Hz ~ 500 kHz;						
		Motion Control							
Notal LOMP + LOMI / are resided at the expansion beards if they are plugged on elet 0.7 at U.D. 0.137 (01.17 heavy COM3.0, COM3	Motion								



Appearance



Ordering Information -

VGA Port

LAN1 Ethernet

Earphone-Out

Microphone-In-

WP-8137-EN	WP-8147-EN	ISaGRAF based WinPAC-8000 with 1 I/O Slot (Multilanguage Version of OS)
WP-8437-EN	WP-8447-EN	ISaGRAF based WinPAC-8000 with 4 I/O Slots (Multilanguage Version of OS)
WP-8837-EN	WP-8847-EN	ISaGRAF based WinPAC-8000 with 8 I/O Slots (Multilanguage Version of OS)
WP-8137-TC	WP-8147-TC	ISaGRAF based WinPAC-8000 with 1 I/O Slot (Traditional Chinese Version of OS)
WP-8437-TC	WP-8447-TC	ISaGRAF based WinPAC-8000 with 4 I/O Slots (Traditional Chinese Version of OS)
WP-8837-TC	WP-8847-TC	ISaGRAF based WinPAC-8000 with 8 I/O Slots (Traditional Chinese Version of OS)
WP-8137-SC	WP-8147-SC	ISaGRAF based WinPAC-8000 with 1 I/O Slot (Simplified Chinese Version of OS)
WP-8437-SC	WP-8447-SC	ISaGRAF based WinPAC-8000 with 4 I/O Slots (Simplified Chinese Version of OS)
WP-8837-SC	WP-8847-SC	ISaGRAF based WinPAC-8000 with 8 I/O Slots (Simplified Chinese Version of OS)
WP-8057		ISaGRAF based WinPAC-8000 without I/O Slot (Multilanguage Version of OS)
WP-8357		ISaGRAF based WinPAC-8000 with 3 I/O Slots (Multilanguage Version of OS)
WP-8757		ISaGRAF based WinPAC-8000 with 7 I/O Slots (Multilanguage Version of OS)

LAN1 Ethernet Earphone-Out

Microphone-In

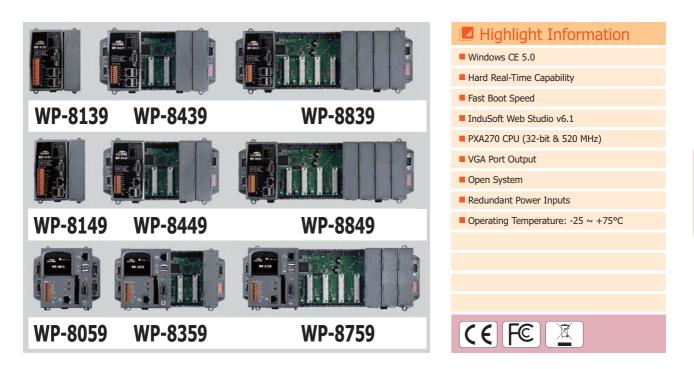
Accessories

ICP DAS CO., LTD.

ISaGRAF Develo	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 Vbc/2.5 A, 60 W and 5 Vbc/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting								
DP-1200 CR	24 Vbc/5.0 A, 120 W Power Supply with DIN-Rail Mounting (RoHS)								
MDR-60-24 CR	24 V _{DC} /2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)								

3 I/O Slots

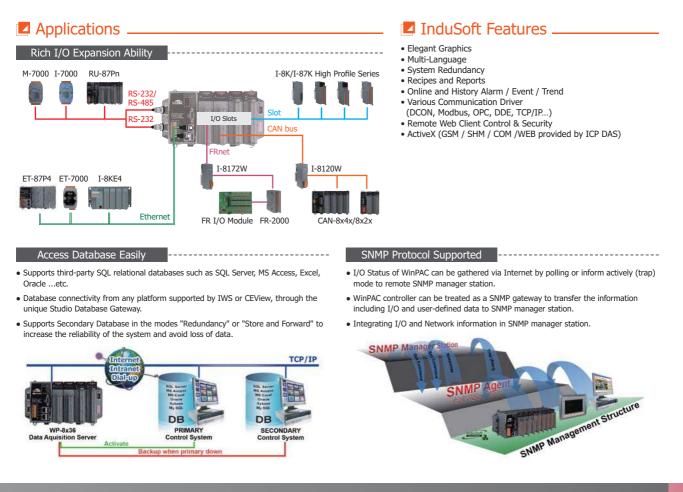
VGA Port



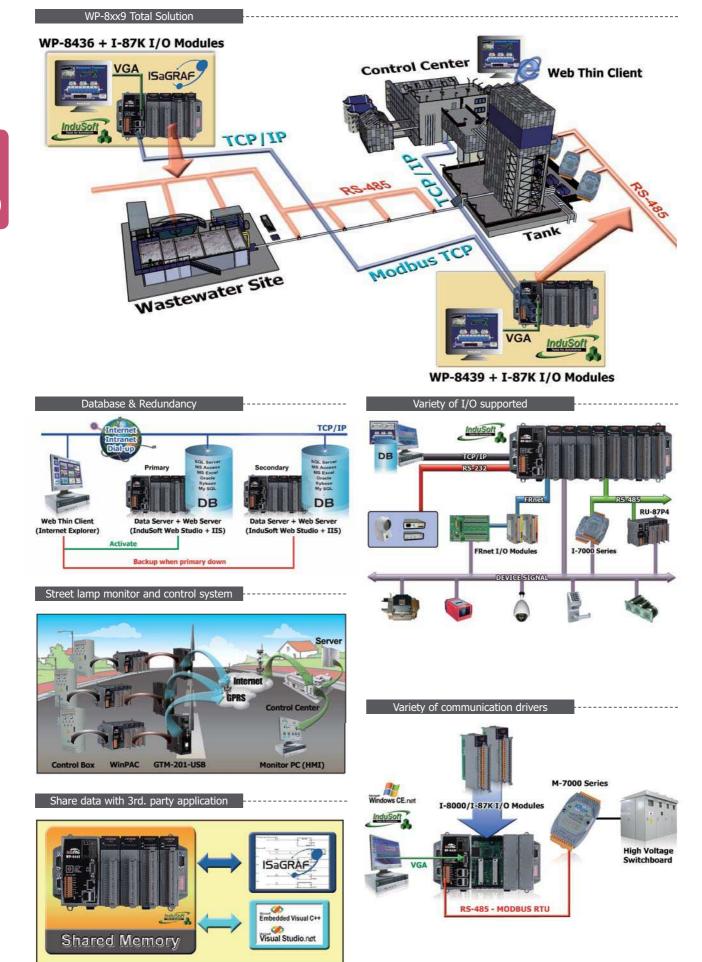
Introduction ____

WP-8x39, WP-8x49 and WP-8x59 Series are the new generation InduSoft based PACs of ICP DAS. It is equipped with a PXA270 CPU (520 MHz), various connectivity (VGA, USB, Ethernet, RS-232/485) and 1/4/8 I/O slots for high performance parallel I/O modules (high profile I-8K Series) and serial I/O modules (high profile I-87K series). The benefits of running Windows CE 5.0 on WinPAC include hard real-time capability, small core size, fast boot speed, interrupt handling at a deeper level and achievable deterministic control. WinPAC is also capable of running InduSoft and PC-based control software such as Visual Basic .NET, Visual C#,.... etc. It has all of the best features of both traditional PLCs and Windows capable PCs.

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.



2 Compact PAC

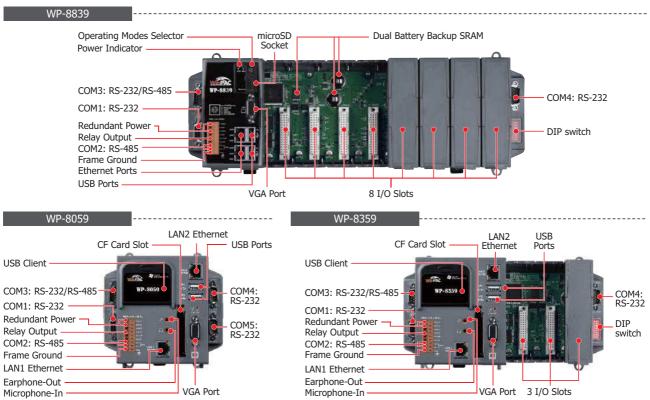


Specifications _____

Models		WP-8139	WP-8439	WP-8839	WP-8149	WP-8449	WP-8849	WP-8059	WP-8359	WP-875			
System So	ftware												
OS		L			Wir	ndows CE 5.0							
	act Framework	ļ											
Embedded S	Service	L	FTP server, Web server (supports VB script, JAVA script), Embedded SQL server										
Multilangua	ige Support		English, German, French, Spanish, Russian, Italian, Simplified Chinese, Traditional Chinese										
Developm	ent Software												
InduSoft So	oftware			I	nduSoft Web S	studio v6.1 Ser	vice Pack 6						
Non-ISaGRA	AF		Options:	Microsoft EVC++4.	0 or VS .NET 2	005/2008 (VB	NET 2005/200	8, C# .NET 2005/	2008)				
Web Servi	ce												
Web HMI		Support Web HMI function, PC running Internet Explorer can access to the WP-8x39 via Local Ethernet or Internet or dial Modem, monitoring and control.											
Security				Web HMI supp	oorts three leve	els user name a	and password p	protection					
CPU Modu	le												
CPU				PX	A270 (32-bit a	nd 520 MHz) o	r compatible						
SDRAM						128 MB							
Dual Battery	y Backup SRAM				512 KB; da	ta valid up to 5	years						
Flash			128 MB			96 MB			128 MB				
EEPROM						16 KB							
microSD			mi	croSD socket with o	ne 2 GB micros	SD card (suppo	rt up to 32 GB	microSDHC card)					
RTC (Real T	Time Clock)			Provide sec	ond, minute, h	our, date, day	of week, month	n, year					
54-bit Hard	ware Serial Number				Yes, for Sof	tware Copy Pro	tection						
Dual Watch	dog Timers					Yes							
	ble LED Indicator					1							
Rotary Swite					Y	(es (0 ~ 9)							
DIP Switch		- Yes (8 bits) - Yes (8 bits) -							Yes (8 bits)				
VGA & Con	mmunication Ports		1										
	Extra GPU		Yes					-					
VGA	Resolution	1024 x 768 800 x 600											
Ethernet		RJ-45 x 2, 10/100 Base-TX (Auto-negotiating, LED indicators)											
USB 1.1 (ho	ost)		2			1			2				
USB 1.1 (client)				-					1				
COM 0				Internal communi	ication with the	e hiah profile I-	87K series mo	dules in slots					
COM 1						e) (RxD, TxD a							
COM 2				er ASIC inside; 2500 er ASIC inside; 3000	VDC isolated for	or WP-8139, W	P-8149		-8059, WP-835	59, WP-8759			
COM 3		-	RTS and GND f	i (RxD, TxD, CTS, or RS-232, Data+ -485); non-isolated	-	RS-232/RS-485 (RxD, TxD, CTS, RTS and GND for RS-232, Data+ and Data- for RS-485); non-isolated							
COM 4		-		D, CTS, RTS, DSR, GND); non-isolated	-	RS-232 (RxI	D, TxD, CTS, R	rs, dsr, dtr, cd,	RI and GND);	non-isolated			
COM 5				-				RS-232 (RxD, TxD, and GND); non-isolated		-			
I/O Expan	ision Slots												
Slot Numbe	۲	1	4	8 Note:	1 For High Profil	4 e I-8K and I-87	8 'K Modules Onl	0 y	3	7			
Mechanica	al												
Dimensions (W x L x H)		95 mm x 132 mm x 111 mm: WP-8139, WP-8149 137 mm x 132 mm x 111 mm: WP-8059 231 mm x 132 mm x 111 mm: WP-8439, WP-8449, WP-8359 355 mm x 132 mm x 111 mm: WP-8839, WP-8849, WP-8759											
Installation					DIN-Rai	l or Wall Mount	ing						
Environme	ental												
Operating T	Temperature				-2	25 ~ +75°C							
Storage Temperature					-3	30 ~ +80°C							
-	lative Humidity				10 ~ 90%	RH (non-conde	nsing)						
Power													
	e				+1	.0 ~ +30 V _{DC}							
		<u> </u>											
Input Range		1 kV											
Input Range Isolation	Power Inputs			Yes w	ith one power		4 V _{DC}) for alarr	n					
Input Range Isolation	Power Inputs	8 W	25 W	Yes, w 25 W	vith one power 8 W	relay (1 A @ 2 30 W	4 Vbc) for alarr 30 W	n 8 W	30 W	30 W			



Appearance



Ordering Information

WP-8139-EN	WP-8149-EN	InduSoft based WinPAC-8000 with 1 I/O Slot (Multilanguage Version of OS)
WP-8439-EN	WP-8449-EN	InduSoft based WinPAC-8000 with 4 I/O Slots (Multilanguage Version of OS)
WP-8839-EN	WP-8849-EN	InduSoft based WinPAC-8000 with 8 I/O Slots (Multilanguage Version of OS)
WP-8139-TC	WP-8149-TC	InduSoft based WinPAC-8000 with 1 I/O Slot (Traditional Chinese Version of OS)
WP-8439-TC	WP-8449-TC	InduSoft based WinPAC-8000 with 4 I/O Slots (Traditional Chinese Version of OS)
WP-8839-TC	WP-8847-TC	InduSoft based WinPAC-8000 with 8 I/O Slots (Traditional Chinese Version of OS)
WP-8139-SC	WP-8149-SC	InduSoft based WinPAC-8000 with 1 I/O Slot (Simplified Chinese Version of OS)
WP-8439-SC	WP-8449-SC	InduSoft based WinPAC-8000 with 4 I/O Slots (Simplified Chinese Version of OS)
WP-8839-SC	WP-8849-SC	InduSoft based WinPAC-8000 with 8 I/O Slots (Simplified Chinese Version of OS)
WP-8059		InduSoft based WinPAC-8000 without I/O Slot (Multilanguage Version of OS)
WP-8359		InduSoft based WinPAC-8000 with 3 I/O Slots (Multilanguage Version of OS)
WP-8759		InduSoft based inPAC-8000 with 7 I/O Slots (Multilanguage Version of OS)
Note: The defau	ult 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 Runtime License	
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 Voc/2.5 A, 60 W and 5 Voc/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
DP-1200 CR	24 Vpc/5.0 A, 120 W Power Supply with DIN-Rail Mounting (RoHS)
MDR-60-24 CR	24 V _{DC} /2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)