Performance Comparison Table 1 of ISaGRAF PACs

PACs	CPU	Compared with I-8417		Ethernet	ISaGRAF code size limitation (bytes)	Memory for running program (bytes)
		Normal running Speed (Normal PLC scan-time)	Normal Speed for floating point calculation (scan-time)			
XP-8xx7 -CE6	LX 800 **500** MHz	About **10~50** (times) (3~15 ms)	About **10~50** (times) (3~15 ms)	**2** ports **10/100** Mbps	**2 MB**	About **200~400 MB**
WP-8xx7	PXA270, **520** MHz or compatible	About **10~30** (times) (3~15 ms)	About **10~30** (times) (3~15 ms)	**2** ports **10/100** Mbps	**1 MB**	About **20~40 MB**
W-8347 W-8747	Strong-ARM 206 MHz or compatible	About 10~20 (times) (3~15 ms)	About 10~20 (times) (3~15 ms)			
W-8337 W-8737				1 port 10 Mbps		
VP-25W7 VP-23W7	PXA270, **520** MHz or compatible	About **10~30** (times) (3~15 ms)	About **10~30** (times) (3~15 ms)	1 port **10/100** Mbps	**1 MB**	About **20~40 MB**
VP-2117	80186,**80** MHz or compatible	About **4** (times) (2~25 ms)	About **0.8** (times) (10~125 ms)	1 port **10/100** Mbps	64 KB	About **768 KB**
iP-8447 iP-8847	80186,**80** MHz or compatible	About **4** (times) (2~25 ms)	About **0.8** (times) (10~125 ms)	**2** ports **10/100** Mbps	64 KB	About **768 KB**
I-8437-80 I-8837-80				1 port 10 Mbps		About 512 KB
I-8437 I-8837	80188 40 MHz or compatible	About 1 (times) (5~100 ms)	About **0.2** (times) (25~500 ms)			
I-8417 I-8817				-		
µPAC-5x07(P)	80186,**80** MHz or compatible	About **4** (times) (2~5 ms)	About **0.8** (times) (10~125 ms)	1 port **10/100** Mbps	64 KB	About **768 KB**
µPAC-7186PEG						
µPAC-7186EG						About **640 KB**
I-7188EG	80188,40 MHz or compatible	About 1 (times) (5~100 ms)	About **0.2** (times) (25~500 ms)	1 port 10 Mbps		About 512 KB
I-7188XG				-		

Note: W-8xx7/I-8x37 has phased out. Please select compatible WP-8x47/iP-8x47.

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Performance Comparison Table 2 of ISaGRAF PACs

A. XPAC, WinPAC Series with iPAC:

OS	WinCE		MiniOS7
Model	XP-8xx7 *1	WP-8x37/WP-8x47 *1	iP-8447 iP-8847 *1
Modbus TCP Master (Max. Connecting)	Max. 100 devices		-
Modbus RTU/ASCII Master Function Block (Max.)	(Per port) 256		(Total) 128
Modbus RTU/ASCII Master COM Port (Max.) *3	33 ports / COM1 ~ 33	10 ports / 1 ~ 14	2 ports / 1 ~ 5
Modbus RTU Slave COM Port (Max.) *3	9 ports / COM1 ~ 33	5 ports / 1 ~ 8	2 ports / 1 or 2/3
Modbus TCP/IP Slave Connections *4	64	32	6
Modbus Address Range	1 ~ 8191		1 ~ 4095
VGA Resolution (Max.)	1024x768	1024x768/800x600	-
USB Port *5	2	2/1	-
Battery Backup SRAM *6	512 KB		
PAC to PAC Data Exchange	Ebus		Fbus, Ebus
Send E-mail (file attached)*7	Yes		
Redundant Ethernet Port *8	Yes		
Mbus24r & mbus24r1 Function Block	Yes		
Mbus_xr & Mbus_xr1 Function Block *9	Yes		-
Software Features (Require Optional Accessories)			
Support FRnet I/O *10	Yes		
Support CAN/CANopen *11	Yes		
Support VW Sensor	Yes		
Support New Redundant System *12	Yes		-
Remote I/O Modules (Optional Accessories)			
Support Ethernet I/O (with I-8KE4/E8-MTCP)	Yes		-
Support I-7K/87K I/O (*Only support 1 COM Port)	Max. Connecting: 255 / COM 3 or 4	2 or 3	64 / 2 or 3 or 4

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B. ViewPAC Series PAC:

OS	WinCE	MiniOS7
Model	**VP-25W7/VP-23W7**	**VP-2117**
Modbus TCP Master (Max. Connecting)	**Max. 100 devices**	-
Modbus RTU/ASCII Master	(Per port)	(Total)
Function Block (Max.)	**256**	128
Modbus RTU/ASCII Master	10 ports	2 ports
COM Port (Max.) ***3**	COM 2, 3, 5 ~ 14	1 ~ 3, 5
Modbus RTU Slave	5 ports	2 ports
COM Port (Max.) ***3**	COM 2, 3, 5 ~ 8	1 or 2/3
Modbus TCP/IP Slave Connections ***4**	32	6
Modbus Address Range	1 ~ 8191	1 ~ 4095
LCD Monitor	TFT 5.7”/3.5”	STN
Touch Panel	Yes/ -	-
VGA Resolution (Max.)	640x480/320x240	128x64
USB Port ***5**	1	-
Battery Backup SRAM ***6**	512 KB	
PAC to PAC Data Exchange	Ebus	Fbus, Ebus
Send E-mail (file attached) ***7**	Yes	
Redundant Ethernet Port ***8**	Yes	-
Mbus24r & mbus24r1 Function Block	Yes	
Mbus_xr & Mbus_xr1 Function Block ***9**	Yes	-
Software Features (Require Optional Accessories)		
Support FRnet I/O ***10**	Yes	
Support CAN/CANopen ***11**	Yes	
Support VW Sensor	Yes	
Support New Redundant System ***12**	Yes	-
Remote I/O Modules (Optional Accessories)		
Support Ethernet I/O (with I-8KE4/E8-MTCP)	Yes	-
Support I-7K/87K I/O	Max. Connecting: **255**	64
(*Only support 1 COM Port)	COM 2 or 3	

C. I-8000, iPAC Series with WinPAC:

OS	MiniOS7			WinCE
Model	I-8417/8817	I-8x37-80 *1	iP-8447 iP-8847 *1	WP-8x37/ WP-8x47 *1
Modbus TCP Master (Max. Connecting)	-			Max. 100 devices
Modbus RTU/ASCII Master Function Block (Max.)	(Total)			(Per Port)
	64		128	256
Modbus RTU/ASCII Master COM Port (Max.) *3	2 ports			10 ports
	COM 1, 3, 4, 5		1 ~ 5	1 ~ 14
Modbus RTU Slave COM Port (Max.) *3	2 ports			5 ports
	COM 1, 2	1, 3	1 or 2/3	1 ~ 8
Modbus TCP/IP Slave Connections *4	0	4	6	32
Modbus Address Range	1 ~ 4095			1 ~ 8191
VGA Resolution (Max.)	-			1024x768/800x600
USB Port *5	-			2/1
Battery Backup SRAM *6	Optional		512 KB	
PAC to PAC Data Exchange	Fbus	Fbus, Ebus		Ebus
Send E-mail (file attached) *7	-	Yes		
Redundant Ethernet Port *8	-		Yes	Yes
Mbus24r & mbus24r1 Function Block	-		Yes	
Mbus_xr & Mbus_xr1 Function Block *9	-			Yes
Software Features (Require Optional Accessories)				
Support FRnet I/O *10	-		Yes	
Support CAN/CANopen *11	-		Yes	
Support VW Sensor	Yes			
Support New Redundant System *12	-			Yes
Remote I/O Modules (Optional Accessories)				
Support Ethernet I/O (with I-8KE4/E8-MTCP)	-			Yes
Support I-7K/87K I/O (*Only support 1 COM Port)	Max. Connecting: 64			255
	COM 3 or 4		2 or 3 or 4	2 or 3

D. I-7188, µPAC Series PAC:

OS	MiniOS7			
Model	**I-7188 XG**	**I-7188 EG**	**µPAC-7186EG/PEG** *2	**µPAC-5x07** *1,2
Modbus RTU/ASCII Master Function Block (Max.)	64 (Total)		128	
Modbus RTU/ASCII Master COM Port (Max.) *3	COM2, 3	COM1, 2, 3		
Modbus RTU Slave COM Port (Max. 2 Port) *3	COM1 or 2/3			
Modbus TCP/IP Slave Connections *4	0	4	6	
Modbus Address Range	1 ~ 4095			
Battery Backup SRAM *6	Optional			512K
PAC to PAC Data Exchange	Fbus	Fbus, Ebus		
Send E-mail (file attached) *7	-		Yes	
Mbus24r & mbus24r1 Function Block	-		Yes	
Software Features (Require Optional Accessories)				
Support FRnet I/O *10	-		Yes	-
Support CAN/CANopen *11	-		Yes	
Remote I/O Modules (Optional Accessories)				
Support I-7K/87K I/O (*Only support 1 COM Port)	Max. Connecting: 64 COM 2 or 3			

Annotations:

*1. µPAC-5x07 represents µPAC-5007(P)/5107(P)/5207/5307.
I-8x37/I-8x37-80 represents the products of I-8437/8837/8437-80/8837-80.
iP-8x47 represents the products of iP-8447/8847.
WP-8x37 represents the products of WP-8137/8437/8837.
WP-8x47 represents the products of WP-8147/8447/8847.
XP-8xx7-CE6 represents the products of XP-8047-CE6/8347-CE6/8747-CE6

*2. µPAC-7186PEG is µPAC-7186EG with PoE (Power-over-Ethernet).
µPAC-5007P/5107P is µPAC-5007/5107 with PoE (Power-over-Ethernet).

*3. I-8000's COM5 ~ 20 & W-8x47/ 8x37's COM5 ~ 14 resides at the I-8112/8114 /8142/8144/ 8142i expansion modules ;

iP-8x47's COM5~20 & VP-2117's COM5~16 resides at the I-8112iW/ I-8114W/ I-8114iW/ I-8142iW/ I-8144iW expansion modules;

WP-8x47, WP-8x37 and VP-25W7/23W7's COM5 ~ 14 resides at the I-8112iW/ I-8114W/ I-8114iW/ I-8142iW/ I-8144iW expansion modules;

XP-8x47-CE6's COM6 ~ 33, resides at the I-8112iW/ I-8114W/ I-8114iW/ I-8142iW/ I-8144iW expansion modules;

I-7188/ µPAC-7186's COM3 ~ 8 resides at the X-board (X5xx) expansion boards.
µPAC-5x07's COM3 ~ 8 resides at the XW-board (XW5xx) expansion boards.

*4. The Ethernet communication of the XP-8xx7-CE6 is more efficient than WP-8xx7 and VP-2xW7. It supports up to 64 Modbus TCP/IP connections.

The W-8x47 with driver version 4.02 or older version only supports 8 Modbus TCP/IP connections, while supports up to 32 Modbus TCP/IP connections since the version 4.03.
If the controller is W-8347/8747 (two Ethernet ports), its OS image must update to the version released on July, 1, 2008 to ensure the network communications is correct.
Please refer to www.icpdas.com > FAQ > Software > ISaGRAF > 095 for more information.

*5. The USB port for the mouse device of the XP-8xx7-CE6 is more efficient than the WP-8xx7 and VP-2xW7. The WP-8x37 supports 2 USB Port, the WP-8x47 supports 1 USB Port.

*6. I-8x17/8x37-80 equip with S256/S512, µPAC-7186EG, I-7188EG/XG equip with X607 (128K) / X608 (512K), can support up to 1024 retained variables. The data, date & time can also be stored in it.

*7. µPAC-7186EG has to use an extra X607/X608 battery backup SRAM expansion card for sending E-mail with an attached file, or it can only send E-mail without attached file.

*8. If the cable of one Ethernet port is broken or damaged, the PC/HMI can communicate with the other Ethernet port by Modbus TCP/IP protocol.
(Please plug one I-8135W in VP-25W7/23W7 to enable the 2nd Ethernet port)

*9. The Mbus_xr and Mbus_xr1 can read max. 120 words or 60 long integers or 60 real values. Please refer to www.icpdas.com > FAQ > Software > ISaGRAF > FAQ-101 for more information.

*10. To support FRnet I/O in µPAC-7186EG, please insert one FX-016 in it.
VP-2xW7 & VP-2117 support Max. **3** pcs. of I-8172W (Max. ch.768 DI & 768 DO).
iP-8x47 support Max. **4** pcs. of I-8172W (Max. ch. 1024 DI & 1024 DO).
WP-8x47 & WP-8x37 support Max. **8** pcs. of I-8172W (Max. ch.2048 DI & 2048 DO)
XP-8xx7-CE6, W-8x47/8x37 support Max. **7** pcs. of I-8172W (Max. ch.1792 DI & 1792 DO).

*11. XP-8xx7-CE6, µPAC-5x07, µPAC-7186EG, iP-8x47, WP-8x47, WP-8x37, VP-25W7/23W7 and W-8xx7 supports the I-7530 (RS-232 to CAN converter) to connect to other CAN/CANopen devices.

*12. Only the XP-8xx7-CE6, WP-8x47, WP-8x37, VP-25W7/23W7 and W-8x47 supports new redundant system, the W-8x37 doesn't support it.