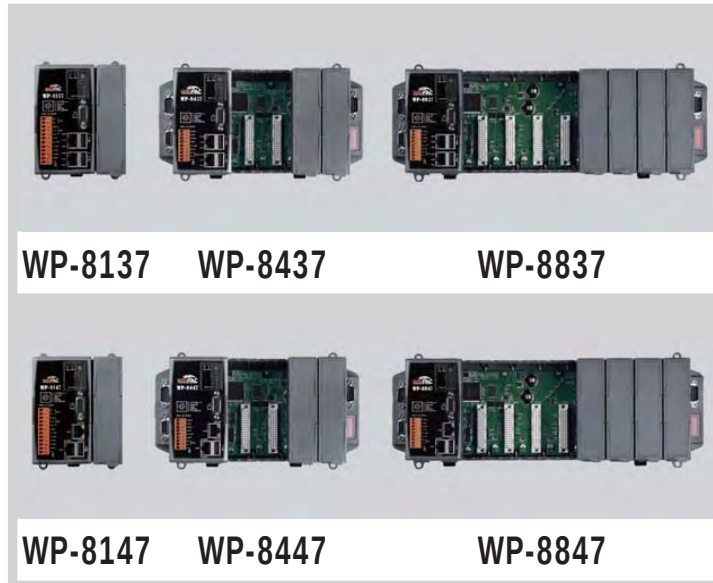




## ISaGRAF Based WinPAC



### Introduction

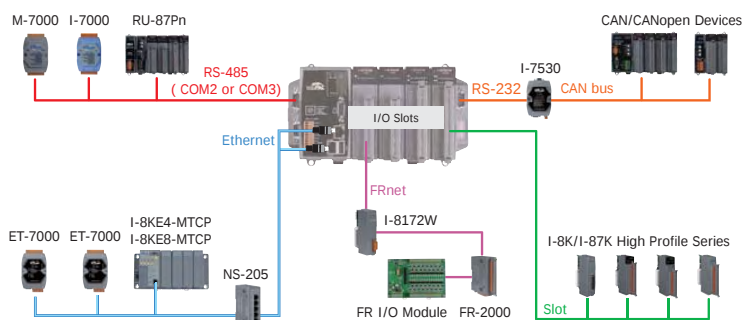
WP-8x37 and WP-8x47 Series are the new generation ISaGRAF based PACs of ICP DAS. It is equipped with a PXA270 CPU (520 MHz), various connectivity (VGA, USB, Ethernet, RS-232/485) and 1/4/8 I/O slots for high performance parallel I/O modules (high profile I-8K Series) and serial I/O modules (high profile 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 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

- 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

#### Rich I/O Expansion Ability



### Highlight Information

- Windows CE 5.0
- Hard Real-Time Capability
- Fast Boot Speed
- ISaGRAF Ver.3 SoftLogic Inside (IEC 61131-3)
- PLC Feel
- PXA270 CPU (32-bit & 520 MHz)
- VGA Port Output
- Modbus RTU/TCP (Master, Slave)
- Support Soft-GRAF HMI
- Open System
- Redundant Power Input
- Operating Temperature: -25 ~ +75 °C



### Features

#### Software

- Windows CE.NET 5.0 Operating System
- Development Software: ISaGRAF Ver.3
  - Windows 95/98/NT/2000/XP/Vista/7
  - All-in-one design environment
  - Easy to integrating with HMI/SCADA/MMI
- Support Modbus Master & Slave Protocols
  - Modbus TCP Master (Max. 100 devices)
  - Modbus RTU, ASCII, RS-232/485/422 Master (Max. 10 ports)
  - Modbus RTU (RS-232/485/422) Slave (Max. 5 ports)
  - Modbus TCP/IP Slave (Max. 32 connections)
- Support GPS/ZigBee/Radio Wireless & SMS
- Support Ebus/Fbus Data Exchange
- Support CAN/CANopen
- Support FRnet I/O (Via I-8172W)
- Support Data-Recorder & Data-Logger
- Support Motion Control & VV Solutions
- Support Soft-GRAF HMI
- Support Microsoft SQL Server communication

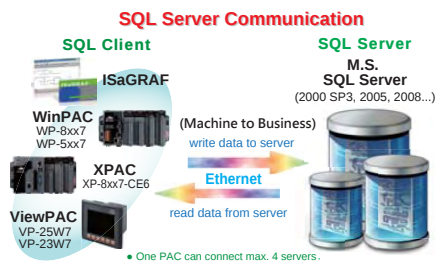
#### Hardware

- Powerful CPU Module
- VGA Port: 640 x 480 ~ 1024 x 768 (for WP-8x37)
- VGA Port: 640 x 480 ~ 800 x 600 (for WP-8x47)
- Rich I/O Expansion Ability
- High Profile I-87K I/O Modules Hot Swap Ability
- Built-in 2 USB Ports (for WP-8x37)
- Built-in 1 USB Ports (for WP-8x47)
- Built-in 128 MB Flash (for WP-8x37)
- Built-in 96 MB Flash (for WP-8x47)
- 64-bit Hardware Serial Number
- Dual Watchdog Timers
- Dual Battery-Backup SRAM (512 KB)
- Dual Ethernet Ports
- Redundant Power Input
- DIN-Rail or Wall Mounting
- Operating Temperature: -25 ~ +75 °C

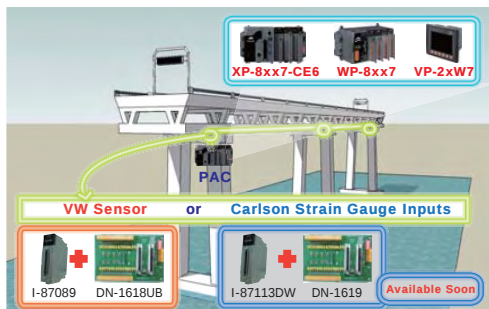
### Soft-GRAF: Create A Colorful HMI in the ISaGRAF PAC



### Database Application



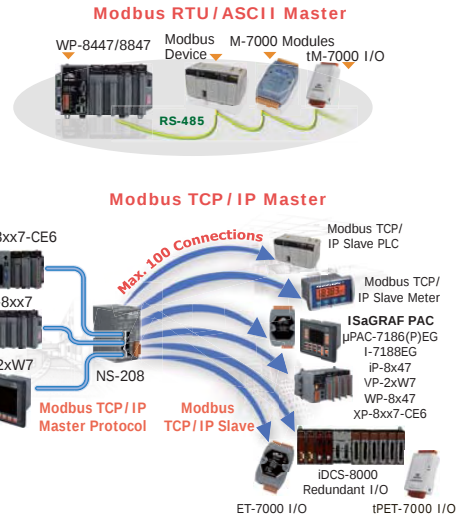
### Stress Monitoring of Constructions



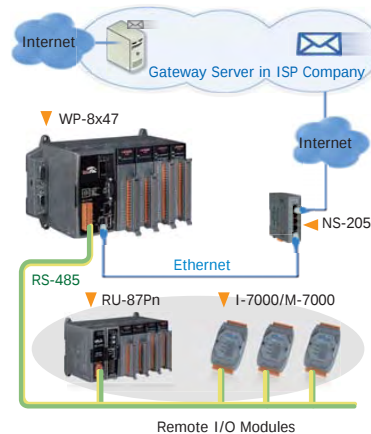
### Modbus RTU/TCP Slave Ports



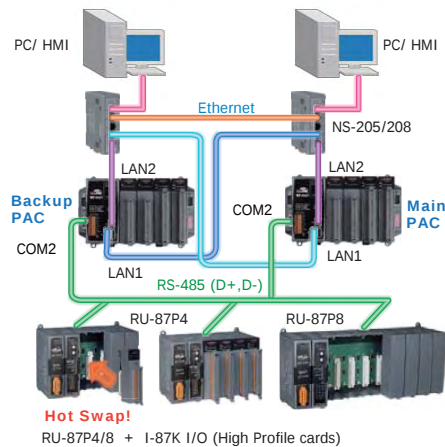
### Modbus Master Ports



### Send Email with one Attached File



### New Hot-Swap Redundant System

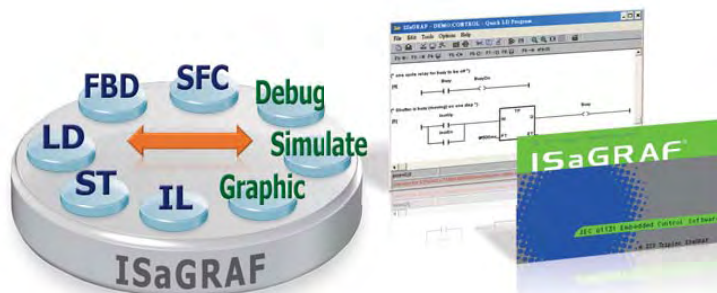




### PAC Specifications

| Models                        | WP-8137                                                                                                                                                                           | WP-8147                                                                 | WP-8437                                                                                                                                | WP-8447                          | WP-8837                                                                                                                                | WP-8847                          |                      |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------|
| System Software               |                                                                                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| OS                            | Windows CE 5.0                                                                                                                                                                    |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| .Net Compact Framework        | 2.0                                                                                                                                                                               |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Embedded Service              | FTP server, Web server                                                                                                                                                            |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Multilanguage Support         | English, German, French, Spanish, Russian, Italian, Simplified Chinese, Traditional Chinese<br>(OS version: WP-8x3x v1.2.0.1 or later version; WP-8x4x v1.5.0.2 or later version) |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Development Software          |                                                                                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| ISaGRAF Software              | ISaGRAF Ver.3                                                                                                                                                                     | IEC 61131-3 standard.                                                   |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
|                               | Languages                                                                                                                                                                         | LD, ST, FBD, SFC, IL & FC; support Soft-GRAF HMI.                       |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
|                               | Max. Code Size                                                                                                                                                                    | 1 MB                                                                    |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
|                               | Scan Time                                                                                                                                                                         | 3 ~ 15 ms for normal program<br>15 ~ 50 ms 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 levels username and password protection. (high/middle/low)                                                                                                          |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| CPU Module                    |                                                                                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| CPU                           | PXA270 or compatible (32-bit and 520 MHz)                                                                                                                                         |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| SDRAM                         | 128 MB                                                                                                                                                                            |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Dual Battery Backup SRAM      | 512 KB (for 5 years data retain while power off)                                                                                                                                  |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Flash                         | Total size                                                                                                                                                                        | 128 MB                                                                  | 96 MB                                                                                                                                  | 128 MB                           | 96 MB                                                                                                                                  | 128 MB                           | 96 MB                |
|                               | OS image                                                                                                                                                                          | 64 MB                                                                   |                                                                                                                                        | 64 MB                            |                                                                                                                                        | 64 MB                            |                      |
|                               | Built-in Flash disk                                                                                                                                                               | 63 MB                                                                   | 31 MB                                                                                                                                  | 63 MB                            | 31 MB                                                                                                                                  | 63 MB                            | 31 MB                |
|                               | Registry                                                                                                                                                                          | 1 MB                                                                    |                                                                                                                                        | 1 MB                             |                                                                                                                                        | 1 MB                             |                      |
| EEPROM                        | 16 KB<br>Data Retention: 40 years; 1,000,000 erase/write cycles                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| microSD                       | microSD socket with one 2 GB microSD card (support up to 16 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                                                                                                                                                                               |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Programmable LED Indicator    | 1                                                                                                                                                                                 |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Rotary Switch                 | Yes (0 ~ 9)                                                                                                                                                                       |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| DIP Switch                    | -                                                                                                                                                                                 |                                                                         |                                                                                                                                        | Yes (8 bits)                     |                                                                                                                                        |                                  |                      |
| VGA & Communication Ports     |                                                                                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| VGA                           | Extra GPU                                                                                                                                                                         | Yes                                                                     | -                                                                                                                                      | Yes                              | -                                                                                                                                      | Yes                              | -                    |
|                               | Resolution                                                                                                                                                                        | 1024 x 768, 800 x 600, 640 x 480                                        | 800 x 600, 640 x 480                                                                                                                   | 1024 x 768, 800 x 600, 640 x 480 | 800 x 600, 640 x 480                                                                                                                   | 1024 x 768, 800 x 600, 640 x 480 | 800 x 600, 640 x 480 |
| Ethernet                      | RJ-45 x 2, 10/100 Base-TX (Auto-negotiating, LED indicators)                                                                                                                      |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| USB 1.1 (host)                | 2                                                                                                                                                                                 | 1                                                                       | 2                                                                                                                                      | 1                                | 2                                                                                                                                      | 1                                |                      |
| COM 0                         | Internal communication with the high profile I-87K series modules in slots                                                                                                        |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| COM 1                         | RS-232 (to update firmware) (Rx/D, Tx/D and GND); non-isolated                                                                                                                    |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| COM 2                         | RS-485                                                                                                                                                                            | D2+, D2-; self-tuner ASIC inside                                        |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
|                               | Isolation                                                                                                                                                                         | 2500 V <sub>oc</sub>                                                    |                                                                                                                                        | 3000 V <sub>oc</sub>             |                                                                                                                                        |                                  |                      |
| 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                                      |                                  |                                                                                                                                        |                                  |                      |
| COM 4                         | -                                                                                                                                                                                 |                                                                         | RS-232 (Rx/D, Tx/D, CTS, RTS, DSR, DTR, CD, RI and GND); non-isolated                                                                  |                                  |                                                                                                                                        |                                  |                      |
| I/O Expansion Slots           |                                                                                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Slot Number                   | 1                                                                                                                                                                                 |                                                                         | 4                                                                                                                                      |                                  | 8                                                                                                                                      |                                  |                      |
|                               | (For High Profile I-8K and I-87K Modules Only)                                                                                                                                    |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Hot Swap * Will be available  | For High Profile I-87K Modules Only                                                                                                                                               |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Mechanical                    |                                                                                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Dimensions (W x L x H)        | 95 mm x 132 mm x 111 mm                                                                                                                                                           |                                                                         | 231 mm x 132 mm x 111 mm                                                                                                               |                                  | 355 mm x 132 mm x 111 mm                                                                                                               |                                  |                      |
| Installation                  | DIN-Rail or Wall Mounting                                                                                                                                                         |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Environmental                 |                                                                                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Operating Temperature         | -25 ~ +75 °C                                                                                                                                                                      |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Storage Temperature           | -30 ~ +80 °C                                                                                                                                                                      |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Ambient Relative Humidity     | 10 ~ 90% RH (non-condensing)                                                                                                                                                      |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Power                         |                                                                                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Input Range                   | +10 ~ +30 V <sub>oc</sub>                                                                                                                                                         |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Isolation                     | 1 kV                                                                                                                                                                              |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Redundant Power Inputs        | Yes, with one power relay (1 A @ 24 V <sub>oc</sub> ) for alarm                                                                                                                   |                                                                         |                                                                                                                                        |                                  |                                                                                                                                        |                                  |                      |
| Capacity                      | 1.0 A, 5 V supply to CPU and backplane, 0.6 A, 5 V supply to I/O expansion slots, 8 W in total                                                                                    |                                                                         | 1.1 A, 5 V supply to CPU and backplane, 4.9 A, 5 V supply to I/O expansion slots, 30 W in total for WP-8447, 25 W in total for WP-8437 |                                  | 1.2 A, 5 V supply to CPU and backplane, 4.8 A, 5 V supply to I/O expansion slots, 30 W in total for WP-8847, 25 W in total for WP-8837 |                                  |                      |
| Consumption                   | 7.3 W (0.3 A @ 24 V <sub>oc</sub> )                                                                                                                                               |                                                                         | 9.1 W (0.38 A @ 24 V <sub>oc</sub> )                                                                                                   |                                  | 9.6 W (0.4 A @ 24 V <sub>oc</sub> )                                                                                                    |                                  |                      |

### ISaGRAF Specifications

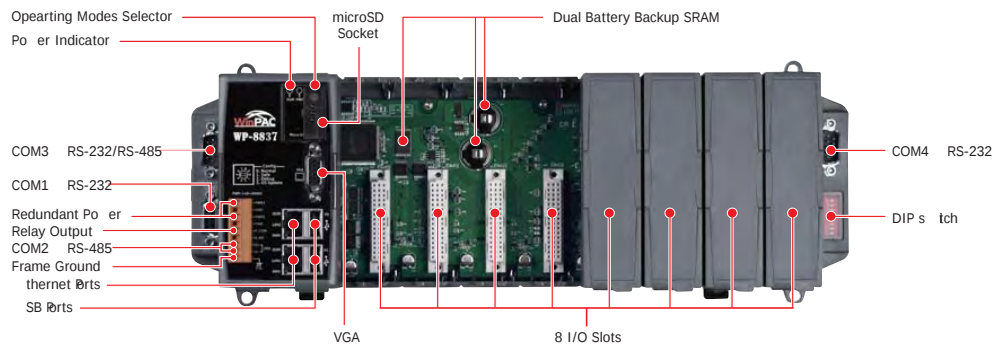


| Protocols (some protocols need optional devices)                                                                                       |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Modbus RTU/ASCII Master                                                                                                                |                       | Max. 10 ports: COM1 ~ 14 (To connect to other Modbus Slave devices). Support Multi-ports. (*)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Modbus RTU Slave                                                                                                                       |                       | Max. 5 ports: COM1, one of COM2/3, COM4 ~ 8 (For connecting ISaGRAF, PC/HMI/OPC Server & HMI panels). (*)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Modbus TCP/IP Slave                                                                                                                    |                       | Ethernet LAN1 & LAN2 support total up to 32 connections. When one 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, 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 (COM1 ~ 14) can support M-7000 I/O. Each port can connect up to 32 M-7000 Modules.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Modbus TCP/IP I/O                                                                                                                      |                       | LAN2 supports ICP DAS Ethernet I/O: I-8KE4-MTCP and I-8KE8-MTCP. If LAN2 is broken, it will switch to LAN1 automatically to continuously work. (LAN1 & LAN2's IP are requested set in the same IP domain)                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| FRnet I/O                                                                                                                              |                       | Max. 8 pcs. I-8172W boards in slot 0 ~ 7 to connect to FRnet I/O modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Send Email                                                                                                                             |                       | Supports functions to send email with one attached file via Ethernet port.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Ebus                                                                                                                                   |                       | LAN2 to exchange data between ISaGRAF Ethernet PAC via Ethernet port.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| SMS: Short Message Service                                                                                                             |                       | WP-84x7/88x7's COM4/5 and WP-81x7's COM1/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. (*)                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| User-Defined Protocol                                                                                                                  |                       | COM1 ~ COM14 by Serial communication function blocks (*)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| MMICON/LCD                                                                                                                             |                       | COM4 or COM5 and supports ICP DAS's MMICON. (*)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| UDP Server & UDP Client :<br>Exchange Message & Auto-Report                                                                            |                       | LAN1 or LAN2 (To send/receive message to/from PC/HMI or other devices.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TCP Client :<br>Exchange Message & Auto-Report                                                                                         |                       | LAN1 or LAN2 (To send/receive message to/from PC/HMI or other devices which support TCP server protocol.)<br>Ex: automatically report data to InduSoft'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).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| New Hot-Swap and Redundant System                                                                                                      |                       | This redundant system has setup two "Active IP" address point to the active LAN1 and LAN2 ports always. One 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 WP-8xx7 is currently active.<br>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 model number to hot-swap the damaged one without stopping this redundant system. |
| CAN/CANopen                                                                                                                            |                       | COM1, COM3 ~ COM14 can connect one I-7530 (converter: RS-232 to CAN) to support CAN/CANopen devices and sensors. One WP-8xx7 supports max.10 RS-232 ports to connect max.10 I-7530. (*)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| HART Solutions                                                                                                                         |                       | Support I-87H17W modules in slot 0 to 7 to communicate with other HART devices.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 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 1Hz~100KHz (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 wave: Off: 2~32766 ms, On: 2 ~ 32766 ms.<br>Optional DO Boards: I-8037W, 8041W, 8041AW, 8042W, 8050W... (Relay Output boards can not 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.<br>Optional DI Boards: I-8040W, 8040PW, 8042W, 8046W, 8048W, 8050W, 8051W, 8052W, 8053W, 8053PW, 8054W, 8055W...                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                        | Serial DI Counter     | Counter input: 100 Hz max. Counter value: 0 ~ 65535 (16 bit)<br>Optional Serial I-87K DI Boards: I-87040W, 87046W, 87051W, 87052W, 87053W, 87053W-A5, 87054W, 87055W, 87058W...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                        | 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.<br>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.                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                        | Frequency             | I-87082W: 2-ch, 1 Hz ~ 100 kHz; I-8084W: 8-ch, 1 Hz ~ 250 kHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Motion                                                                                                                                 | Motion Control        | With one I-8091W (2-axis) or two I-8091W (4-axis)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| *Note: COM5 ~ COM14 are resided at the expansion boards if they are plugged on slot0~7 of WP-8xx7.<br>WP-8137/8147 has no COM3 & COM4. |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

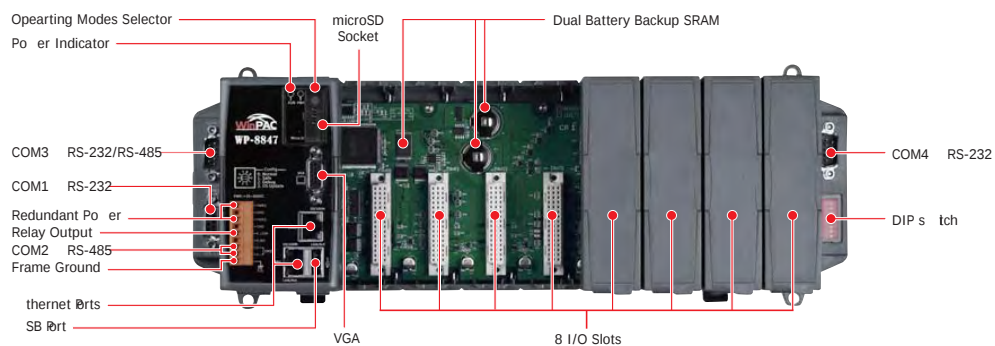


### Appearance

WP-8837

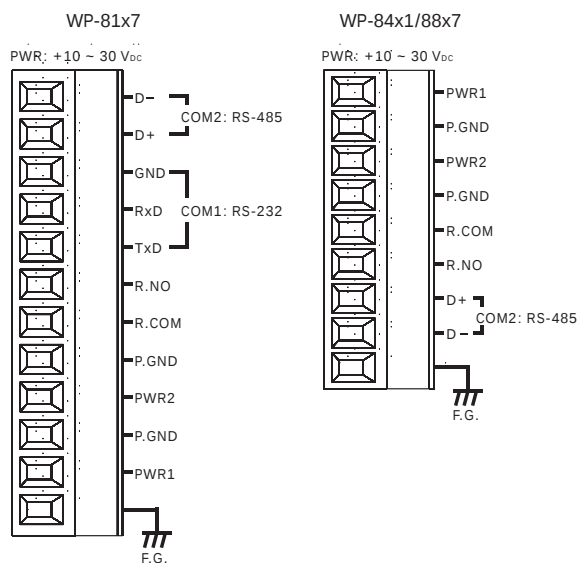


WP-8847

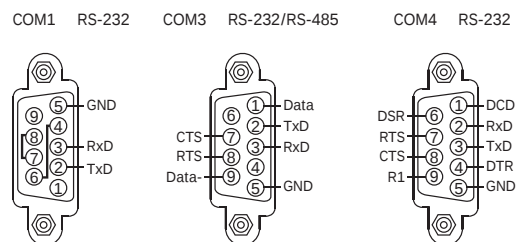


### Pin Assignments

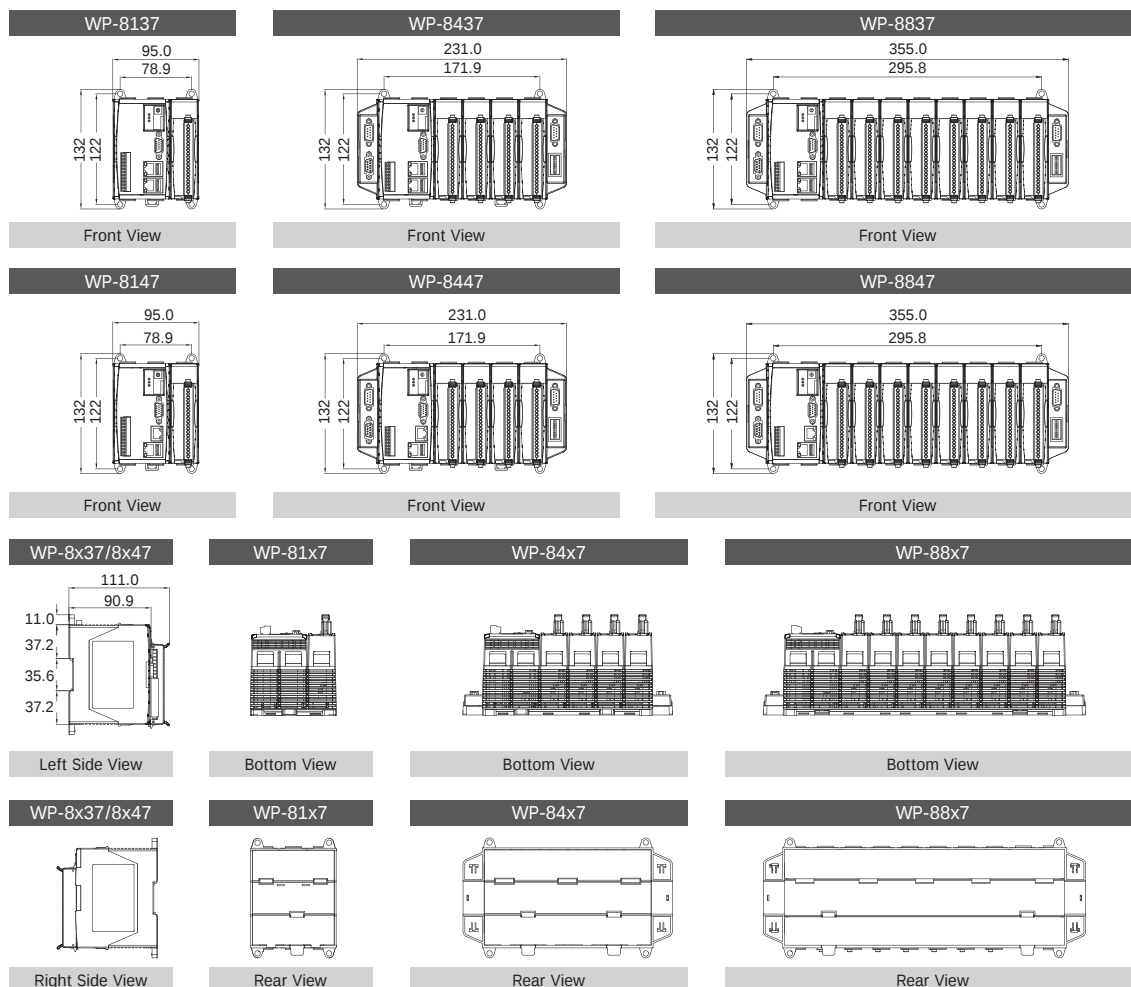
Terminal Block



WP-84x7/88x7 COM Port



### Dimensions (Unit: mm)



### Ordering Information

|            |            |                                                                                |
|------------|------------|--------------------------------------------------------------------------------|
| 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)  |

### 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)<br>Note: No upgrade service from ISaGRAF-32 to ISaGRAF-256.<br>(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)<br>Note: No upgrade service from ISaGRAF-32 to ISaGRAF-256.<br>(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                                                                                                                                                                                 |  |
| DP-1200 CR                   | 24 Vdc/5.0 A, 120 W Power Supply with DIN-Rail Mounting (RoHS)                                                                                                                                                                                                |  |
| MDR-60-24 CR                 | 24 Vdc/2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)                                                                                                                                                                                                 |  |