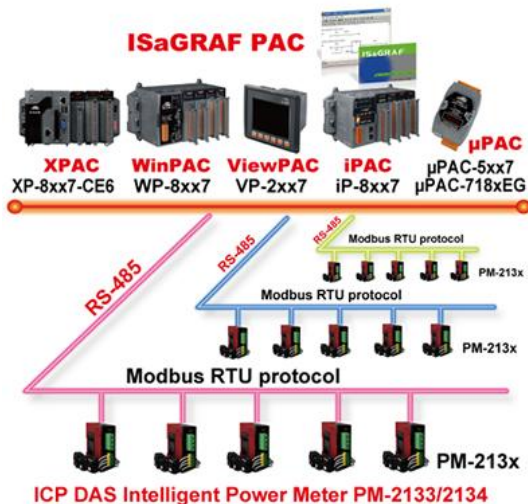


## Connect Intelligent Power Meter PM-2133/2134

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> VP-2117 | <input checked="" type="checkbox"/> iP-8xx7 | <input checked="" type="checkbox"/> I-8xx7 |
|---|---|--|

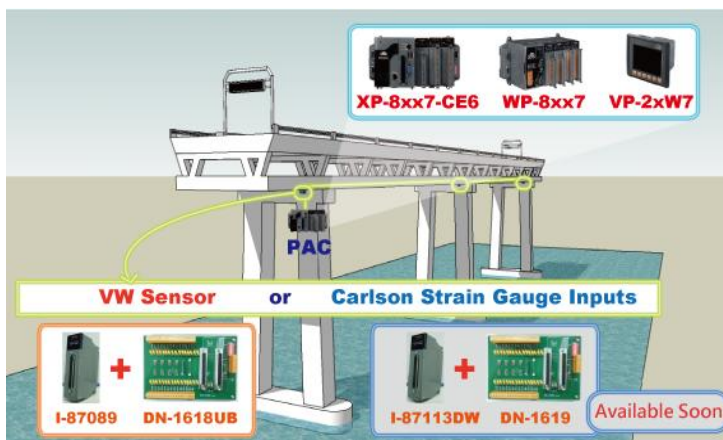
- For various control/monitor systems about intelligent electric power measurement. ([FAQ-129](#))



## Stress Monitoring Application of Constructions

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> VP-2117 | <input checked="" type="checkbox"/> iP-8xx7 | <input checked="" type="checkbox"/> I-8xx7 |
|---|---|--|

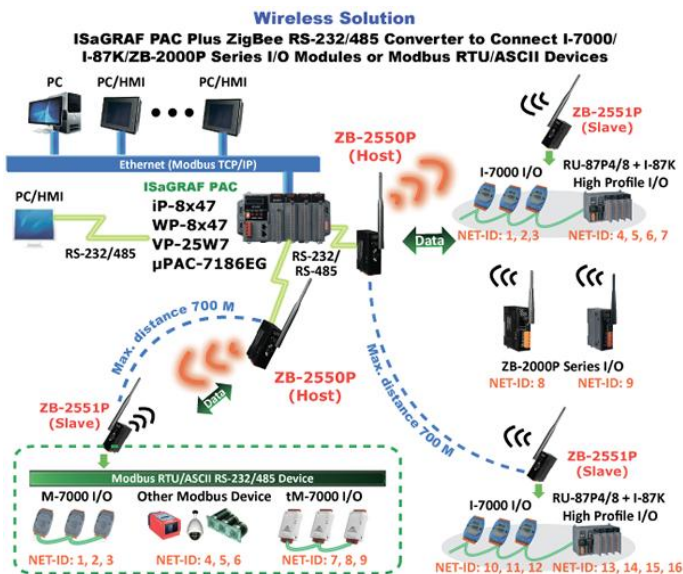
- Both "VW Sensor" (Vibration Wire solution) and "Carlson Strain Gauge Inputs" solutions are useful for measuring the stress of constructions like building, bridge, dam, etc. ([FAQ-091](#), [128](#))



## ZigBee Wireless Solution

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> VP-2117 | <input checked="" type="checkbox"/> iP-8xx7 | <input checked="" type="checkbox"/> I-8xx7 |
|---|---|--|

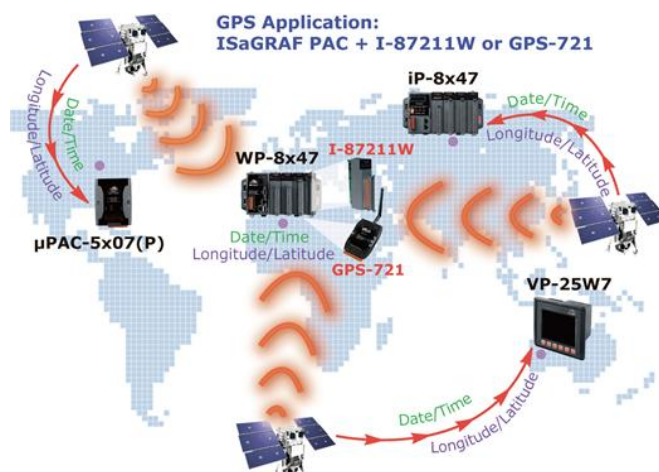
- Reduce the wiring cost, and achieve the mission of remote I/O control and data acquisition. ([FAQ-110](#))



## GPS Applications: With I-87211W or GPS-721

- |                                  |   |                                 |
|----------------------------------|---|---------------------------------|
| <input type="checkbox"/> VP-2117 | <input checked="" type="checkbox"/> iP-8xx7 | <input type="checkbox"/> I-8xx7 |
|----------------------------------|---|---------------------------------|

- For doing auto-time-synchronization and getting local Longitude and Latitude. ([FAQ-107](#))



## Integrate with CAN/CANopen Devices and Sensors

- |   |   |                                 |
|---|---|---------------------------------|
| <input checked="" type="checkbox"/> VP-2117 | <input checked="" type="checkbox"/> iP-8xx7 | <input type="checkbox"/> I-8xx7 |
|---|---|---------------------------------|

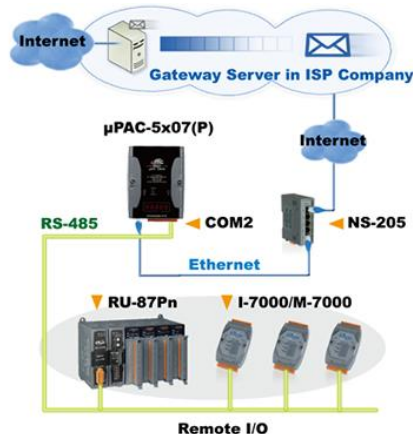
- ([FAQ-086](#))



## Send Email with One Attached File

- |   |   |                                  |                                 |
|---|---|----------------------------------|---------------------------------|
| <input checked="" type="checkbox"/> VP-2117 | <input checked="" type="checkbox"/> iP-8x47 | <input type="checkbox"/> iP-8x17 | <input type="checkbox"/> I-8xx7 |
|---|---|----------------------------------|---------------------------------|

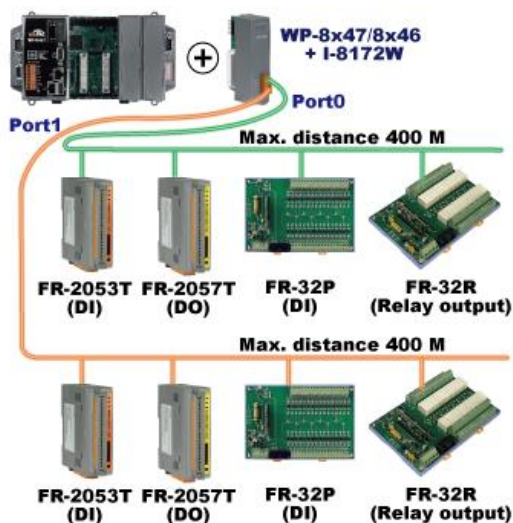
- The maximum file size is about 488K bytes. One Email can send to 10 receivers at one sending. ([FAQ-067](#), [077](#))



## Fast FRnet Remote I/O Modules

☒ VP-2117    ☒ iP-8xx7    ☐ I-8xx7

- ([FAQ-082](#))

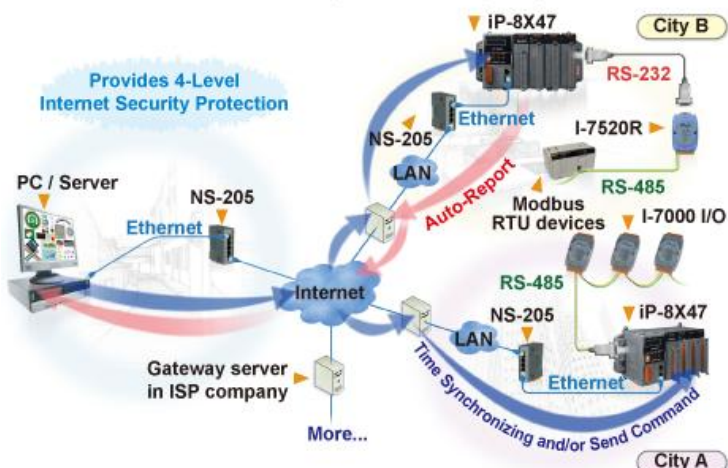


## Data Acquisition Auto-Report System

☒ VP-2117    ☒ iP-8x47    ☐ iP-8x17    ☒ I-8x37    ☐ I-8x17

- Advantage: Each PAC in the different location doesn't require a fixed Internet IP. ([FAQ-065](#))

### Stable and Cost-effective Data Acquisition Auto-Report System

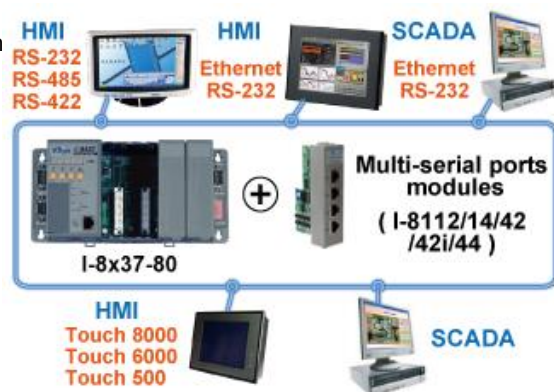


## Modbus RTU/TCP Slave Ports

Port Type	VP-2117	iP-8x47	iP-8x17	I-8x37	I-8x17
TCP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RTU	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- Modbus RTU(RS-232/485/422) : Max. **2** PC/HMI/SCADA connection  
VP-2117, iP-8xx7, I-8x17, I-8x37-80 :  
Max. **2** Modbus RTU Slave ports

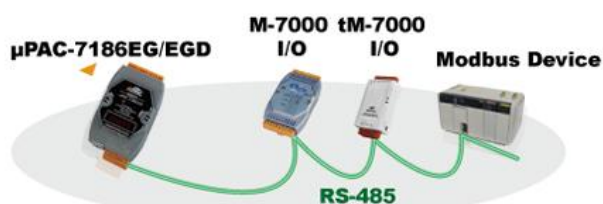
- Modbus TCP/IP : Max. **6** PC/HMI/SCADA connections  
I-8x37-80 : Max. **4** Modbus TCP Slave connections  
VP-2117, iP-8x47: Max. **6** Modbus TCP Slave connections



## Modbus RTU/ASCII Master Ports

☒ VP-2117    ☒ iP-8xx7    ☒ I-8xx7

- Modbus RTU/ASCII (RS-232/485/422):  
Max. **2** Modbus device connections  
VP-2117: Max. **2** Modbus RTU Master ports  
iP-8xx7: Max. **2** Modbus RTU Master ports  
I-8xx7, I-8x37-80: Max. **2** Modbus RTU Master ports



## SMS: Short Message Service

☒ VP-2117    ☒ iP-8xx7    ☒ I-8xx7

- Integrate with a GSM Modem to support SMS: Short Message Service. This allows user to request information or perform control tasks for the ISaGRAF PAC via his personal cellular phone. In addition, the controller can also send information and alarms to user's cellular phone.
- The short message can be sent in multiple language format ([FAQ-111](#))





## Remote I/O Modules and Expansion module/board

☒ VP-2117    ☒ iP-8xx7    ☒ I-8xx7

- VP-2117(add COM5~16), iP-8xx7/I-8xx7(add COM5~20) support RS-232/422/485 expansion module (I-81xxW).



## Motion Control

☒ VP-2117    ☒ iP-8xx7    ☒ I-8xx7

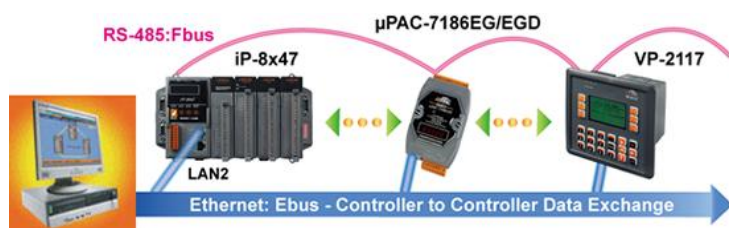
- One I-8091W can control 2-axis: X-Y plane, or 2 independent axes.
- Two I-8091W can control 4-axis: X-Y plane + 2 independent axes or 4 independent axes.
- Encoder Modules:  
I-8093W : 3-axis (FAQ-112)  
I-8084W : 4-axis (FAQ-100), without Z-index  
I-8090W : 3-axis



## Data Exchange: Ebus

☒ VP-2117    ☒ iP-8x47    ☐ iP-8x17    ☒ I-8x37    ☐ I-8x17

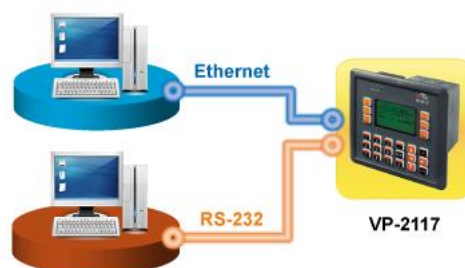
- Fbus (RS-485 Network)**
- Ebus (Ethernet Network)**



## Data Recorder and Data Logger

☒ VP-2117    ☒ iP-8xx7    ☒ I-8xx7

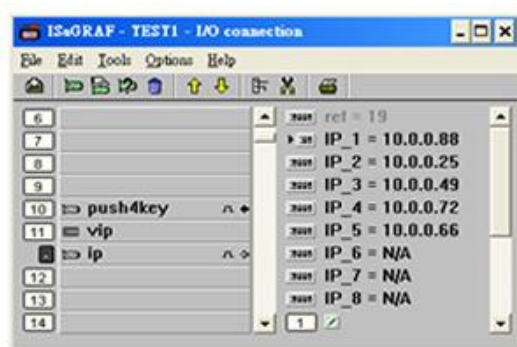
- Data, date & time can be stored (e.g., Battery Backup SRAM, Flash & microSD card, optional X-board, XW-board, etc.) and then PC can load these data via communication interface. (e.g., RS-232, RS-485, Ethernet, etc.)



## VIP Communication Security

☒ VP-2117    ☒ iP-8x47    ☐ iP-8x17    ☒ I-8x37    ☐ I-8x17

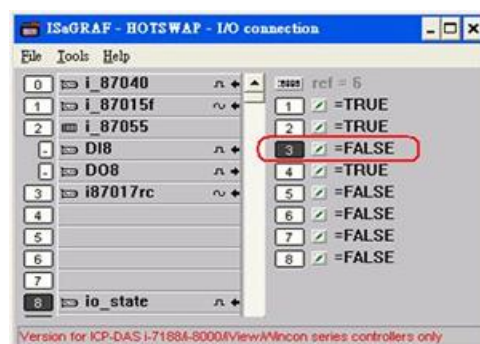
- In ISaGRAF Workbench, set VIP (Very Important IP No.) for Modbus TCP/IP security.



## Detect I-8K / I-87K I/O Status

☒ VP-2117    ☒ iP-8x47    ☐ iP-8x17    ☒ I-8x37    ☐ I-8x17

- In ISaGRAF Workbench, connect the I/O board to the "I/O connection" windows and select the "io\_state" board then observe the I/O status. When hot-swap the I-87K High Profile I/O, the message will show on the front panel of PAC.



# ISaGRAF PAC I/O Modules Selection Guide - MiniOS7 Series

## For VP-2117 / iP-8xx7 / I-8xx7 Series

<b>High Speed Local I/O Modules: Parallel Bus</b> <b>I-8K High Profile Modules:</b> More at <a href="http://www.icpdas.com">www.icpdas.com</a> > Products > PAC - 8K & 87K I/O Modules		VP-2117	iP-8xx7	I-8xx7
<b>I-8K Analog I/O Modules</b>				
I-8014W	16-bit 250K sampling rate 8/16-ch. analog input module (The scan rate cannot reach 250K when using in the ISaGRAF PAC)	○	○	×
I-8017HW	8-ch. Differential or 16-ch. Single-ended, 14-bit, High Speed Analog Input Module. (current input require external 125 Ω resistor) (The scan rate cannot reach 100K when using in the ISaGRAF PAC)	○	○	○
I-8024W	4-ch. Isolated Analog Output Module (+/-10 V, 0 ~ +20 mA)	○	○	○
<b>I-8K Digital I/O Modules</b>				
I-8037W	16-ch. Isolated Open Collector Output Module	○	○	○
I-8040W	32-ch. Isolated Digital Input Module	○	○	○
I-8040PW	32-ch. Isolated Digital Input with Low Pass Filter Module	○	○	○
I-8041W	32-ch. Isolated Open Collector Digital Output Module (Sink)	○	○	○
I-8041AW	32-ch. Isolated Open Collector Digital Output Module (Source)	○	○	○
I-8042W	16-ch. Isolated Digital Input & 16-ch. Isolated Open Collector Digital Output Module	○	○	○
I-8046W	16-ch. Isolated Digital Input Module	○	○	×
I-8050W	16-ch. Universal Digital I/O Module	○	○	○
I-8051W	16-ch. Non-isolated Digital Input Module	○	○	○
I-8052W	8-ch. Differential Isolated Digital Input Module	○	○	○
I-8053W	16-ch. Isolated Digital Input Module	○	○	○
I-8053PW	16-ch. Isolated Digital Input with Low Pass Filter Module	○	○	○
I-8054W	8-ch. Isolated Digital Input Module & 8-ch. Isolated Open Collector Digital Output Module	○	○	○
I-8055W	Non-isolated 8-ch. Digital Logic Input Module & 8-ch. Open Collector Digital Output Module	○	○	○
I-8056W	16-ch. Non-isolated Open Collector Output Module	○	○	○
I-8057W	16-ch. Isolated Open Collector Output Module	○	○	○
I-8058W	8-ch. Differential Isolated Digital Input Module, Max. AC/DC Input : 250V	○	○	○
I-8060W	6-ch. Relay Output Module, AC: 0.6 A @ 125 V , 0.3 A @ 250 V; DC: 2 A @ 30 V	○	○	○
I-8063W	4-ch. Differential Isolated digital input & 4-ch. Relay output module, AC : 0.6 A @ 125 V ; 0.3 A @ 250 V	○	○	○
I-8064W	8-ch. Power Relay Output Module, AC: 5 A @ 250 V, DC: 5 A @ 30 V	○	○	○
I-8068W	4-ch. Form-A, 5 A @ 250 V <sub>AC</sub> /28 V <sub>DC</sub> & 4-ch. Form-C, 5 A (NO) /3 A (NC) @ 277 V <sub>AC</sub> /30 V <sub>DC</sub> Relay Output Module	○	○	○
I-8069W	8-ch. PhotoMOS Relay Output Module, Max. AC/DC: 1 A @ 60 V	○	○	○
<b>I-8K Counter/Frequency Modules</b>				
I-8084W	4-ch. Encoder, can be dir/pulse, or up/down or A/B phase (Quad. mode), Not support Encoder Z-index	○	○	×
I-8088W	8-ch. PWM Output and 8-ch. isolated DI Module, software support 1 Hz ~ 100 kHz (non-continuous).	○	○	×
<b>I-8K Motion Modules</b>				

I-8093W	3-axis Encoder Module, max. 1M Hz for quadrant input mode, max. 4M Hz for pulse/direction and cw/ccw input model	○	○	×
I-8090W	3-axis Encoder Module	○	○	○
I-8091W	2-axis Stepping/Servo Motor Control Card without encoder input	○	○	○
<b>I-8K Communication Modules</b>				
I-8112iW	2-ch. Isolated RS-232 Expansion Module	○	○	○
I-8114W	4-ch. non-isolated RS-232 Expansion Module	○	○	○
I-8114iW	4-ch. Isolated RS-232 Expansion Module	○	○	○
I-8142iW	2-ch. Isolated RS-422/485 Expansion Module	○	○	○
I-8144iW	4-ch. Isolated RS-422/485 Expansion Module	○	○	○
I-8172W	2-port FRnet Module	○	○	○

<b>RS-485 Remote I/O Modules: Serial Interface; HOT-SWAP</b> <b>I-87K High Profile Modules:</b> More at <a href="http://www.icpdas.com">www.icpdas.com</a> > Products > PAC - 8K & 87K I/O Modules		VP-2117	iP-8xx7	I-8xx7
<b>I-87K Analog I/O Modules</b>				
I-87005W	8-ch. Thermistor input and 8-ch. digital output module	○	○	○
I-87013W	4-ch., 16-bit, 10 Hz (Total), 2/3/4 Wire RTD Input Module with Open Wire Detection	○	○	○
I-87015W	7-ch., 16-bit, 12 Hz (Total), RTD Input Module with Open Wire Detection (for short sensor distance)	○	○	○
I-87015PW	7-ch. RTD Input Module with 3-wire RTD lead resistance elimination and with Open Wire Detection (for long sensor distance)	○	○	○
I-87017DW	8-ch. Analog Input Module (Gray Cover) (RoHS)	○	○	×
I-87017RCW	8-ch. Differential , 16/12-bit, 10/60 Hz(Total) Current Input Module	○	○	○
I-87017RW	8-ch. Differential , 16/12-bit, 10/60 Hz (Total) Analog Input Module with 240 Vrms Over Voltage Protection, Range of -20 ~ +20 mA Requires Optional External 125 Ω Resistor	○	○	○
I-87017W	8-ch. Analog Input Module	○	○	○
I-87017W-A5	8-ch. High Voltage Input Module	○	○	○
I-87017ZW	10/20-ch. Analog Input Module with High Voltage Protection (RoHS)	○	○	×
I-87018PW	8-ch. Thermocouple Input Module (Gray Cover) (RoHS)	○	○	○
I-87018RW	8-ch. Thermocouple Input Module. Recommend to use the better I-87018Z.	○	○	○
I-87018W	8-ch. Thermocouple Input Module. Recommend to use the better I-87018Z.	○	○	○
I-87018ZW	10-ch. Differential , 16-bit, 10 Hz (Total), Thermocouple Input Module with 240 Vrms Over Voltage Protection, Open Wire Detection, Range of +/-20 mA, 0~20 mA, 4~20 mA requires Optional External 125 Ω Resistor	○	○	○
I-87019PW	8-ch. Universal Analog Input Module (RoHS) (With a CN-1824 Daughter Board)	○	○	○
I-87019RW	8-ch. Diff. , Universal Analog Input Module with 240 Vrms Over Voltage Protection, Open Wire Detection (V, mA, Thermocouple; Range of -20 ~ +20 mA need to set Jumper on board)	○	○	○
I-87019ZW	10-ch. Universal Analog Input Module (Gray Cover) (RoHS), Includes the I-87019ZW Module and a DB-1820 Daughter Board	○	○	×
I-87024CW	4-ch. 12-bit channel to channel isolated current output module with open-wire detection	○	○	○
I-87024DW	4-ch. 14-bit analog output module	○	○	○

I-87024RW	4-ch. 14-bit analog output module	○	○	○
I-87024W	4-ch. 14-bit analog output module (0 ~ +5 V, +/-5 V, 0 ~ +10 V, +/-10 V, 0 ~ +20 mA, +4 ~ +20 mA)	○	○	○
I-87028CW	8-ch. 12-bit current output module	○	○	○
<b>I-87K Multifunction I/O Modules</b>				
I-87026PW	6-ch. Analog Input, 2-ch. Analog Output, 2-ch. Digital Input and 2-ch. Digital Output Module (RoHS)	○	○	×
<b>I-87K Digital I/O Modules</b>				
I-87037W	16-ch. source type Isolated Digital Output Module(RoHS)	○	○	×
I-87040PW	32-ch. Isolated Digital Input Module with 16-bit Counters (RoHS)	○	○	○
I-87040W	32-ch. Isolated Digital Input Module	○	○	○
I-87041W	32-ch. Sink Type Open Collector Isolated Digital Output Module	○	○	○
I-87046W	16-ch. Non-Isolated Digital Input Module for Long Distance Measurement	○	○	×
I-87051W	16-ch. Non-Isolated Digital Input Module	○	○	○
I-87052W	8-ch. Differential , Isolated Digital Input Module	○	○	○
I-87053PW	16-ch. Isolated Digital Input Module with 16-bit Counters	○	○	○
I-87053W	16-ch. Isolated Digital Input Module	○	○	○
I-87053W-A5	16-ch. 68 ~ 150 V <sub>DC</sub> Isolated Digital Input Module	○	○	○
I-87053W-AC1	16-ch. AC Isolated Digital Input Module with 16-bit Counters	○	○	○
I-87053W-E5	16-channel 68-150 VDC solated Digital Input Module with 16-bit Counters	○	○	○
I-87054W	Isolated 8-ch. DI and 8-ch. Open Collector DO Module	○	○	○
I-87055W	Non-Isolated 8-ch. DI and 8-ch. Open Collector DO Module	○	○	○
I-87057PW	16-ch. Open Collector Isolated Digital Output Module	○	○	○
I-87057W	16-ch. Open Collector Isolated Digital Output Module	○	○	○
I-87058W	8-ch. 80~250 V <sub>AC</sub> Isolated Digital Input Module	○	○	○
I-87059W	8-ch. Differential 10-80 VAC Isolated Digital Input Module	○	○	○
I-87061W	16-ch. Relay Output Module (RoHS)	○	○	○
I-87063W	4-ch. Differential Isolated Digital Input and 4-ch. Relay Output Module 5 A (NO) / 3 A(NC) @ 5 ~ 24 V <sub>DC</sub> ; 5 A(NO) / 3 A(NC) @ 0 ~ 250 V <sub>AC</sub>	○	○	○
I-87064W	8-ch. Relay Output Module, 5 A (47~63 Hz) @ 0~ 250 V <sub>AC</sub> ; 5 A @ 0~ 30 V <sub>DC</sub>	○	○	○
I-87065W	8-ch. AC SSR Output Module, AC: 1.0 A <sub>rms</sub> @ 24 ~ 265 V <sub>rms</sub>	○	○	○
I-87066W	8-ch. DC SSR Output Module , DC: 1.0 A <sub>rms</sub> @ 3 ~ 30 V <sub>DC</sub>	○	○	○
I-87068W	4-ch. Form-A Relay Output and 4-ch. Form-C Relay Output Module ; Form-A: 8 A @ 250 V <sub>AC</sub> ; 8 A @ 28 V <sub>DC</sub> ; Form-C: 5 A (NO) / 3 A (NC) @ 277 V <sub>AC</sub> ; 5 A(NO) / 3 A(NC) @ 30 V <sub>AC</sub>	○	○	○
I-87069W	8-ch. PhotoMOS Relay Output Module, Max. AC/DC: 0.13 A @ 350 V	○	○	○
<b>I-87K Counter/Frequency Modules</b>				
I-87082W	2-ch. Counter/Frequency Module, Isolated or Non-isolated Inputs	○	○	○
<b>I-87K PWMS Module</b>				
I-87088W	8-ch. PWM outputs, software support 1 Hz~100 kHz, (non-continuous), duty: 0.1 ~ 99.9%	○	○	×

## I-87K GPS Module

I-87211W	Time-Synchronization and GPS module for getting UTC/local time and local Longitude/Latitude	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
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## Other Remote I/O Modules

### RS-485 Remote I/O Modules

I-7000	<a href="http://www.icpdas.com &gt; Products &gt; Remote I/O Modules/Units &gt; I-7000 Modules &gt; Selection Guide">www.icpdas.com &gt; Products &gt; Remote I/O Modules/Units &gt; I-7000 Modules &gt; Selection Guide</a>
M-7000	<a href="http://www.icpdas.com &gt; Products &gt; Remote I/O Modules/Units &gt; M-7000 Modules &gt; Selection Guide">www.icpdas.com &gt; Products &gt; Remote I/O Modules/Units &gt; M-7000 Modules &gt; Selection Guide</a>

### RS-485 Remote Hot-Swap Expansion Unit

RU-87P1/2/4/8	<a href="http://www.icpdas.com &gt; Products &gt; Remote I/O Modules/Units &gt; Remote I/O Expansion Unit &gt; Selection Guide">www.icpdas.com &gt; Products &gt; Remote I/O Modules/Units &gt; Remote I/O Expansion Unit &gt; Selection Guide</a>
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### RS-485 Remote Expansion Unit

I-87K1/4/5/8/9	<a href="http://www.icpdas.com &gt; Products &gt; Remote I/O Modules/Units &gt; Remote I/O Expansion Unit &gt; Selection Guide">www.icpdas.com &gt; Products &gt; Remote I/O Modules/Units &gt; Remote I/O Expansion Unit &gt; Selection Guide</a>
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