

Highlight Information

- Compact and Rugged PAC
- 80186, 80 MHz CPU (16 bits)
- C Language Based and MiniOS7 Inside
- 64-bit Hardware Serial Number for Software Protection
- 4/8 Slots for High Profile I/O Modules
- Dual 10/100M Ethernet Ports
- 4 Serial Ports (RS-232/485)
- Operating Temperature: -25 ~ +75 °C



Introduction

The iPAC-8000 is the compact size PAC(Programmable Automation Controller). It supports various connectivity including Dual 10/100 Base-TX Ethernet ports, one RS-232/485 port, one RS-485 port and two RS-232 ports , and 4/8 slots for high performance Parallel-type I/O modules (High profile I-8K series) and Serial-type I/O modules (High profile I-87K series), etc.

The iPAC-8000 is designed for industrial monitoring, measurement and controlling. It has redundant power inputs with 1 kV isolation from noise and surges, and a wide range of operating temperature (-25 ~ +75 °C). It can work in the harsh and rough environment.

Features

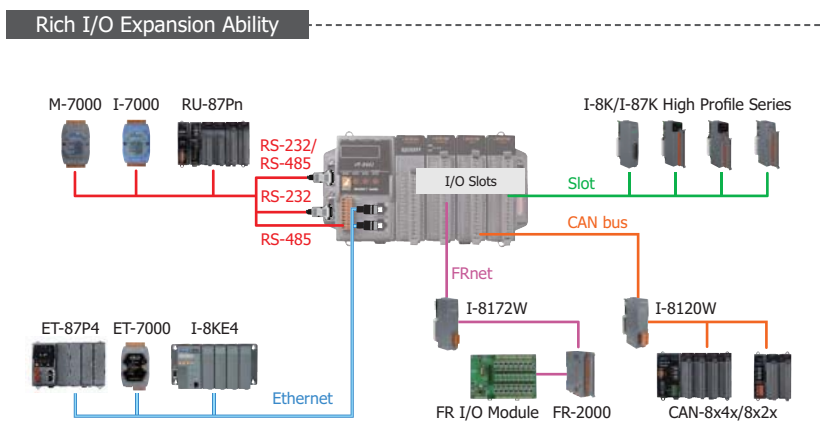
Software

- MiniOS7 Embedded Operating System (DOS-like)
- Support VxComm Technique
- Redundant Ethernet Communication
- Xserver Development Template to Simplify TCP/IP Application
- Slave I/O Firmware Options (DCON or Modbus/TCP)
- Hardware Diagnostic Functions
- Load Files Via RS-232 or Ethernet
- SNMP slave library

Hardware

- 80186, 80 MHz CPU
- 64-bit Hardware Serial Number for Software Protection
- Dual Battery Backup SRAM (512 KB)
- Support I/O Module Hot Swap
- Rich I/O Expansion Ability
- Dual Ethernet Ports
- Redundant Power Inputs
- DIN-Rail or Wall Mounting
- Operating Temperature: -25 ~ +75 °C

Applications

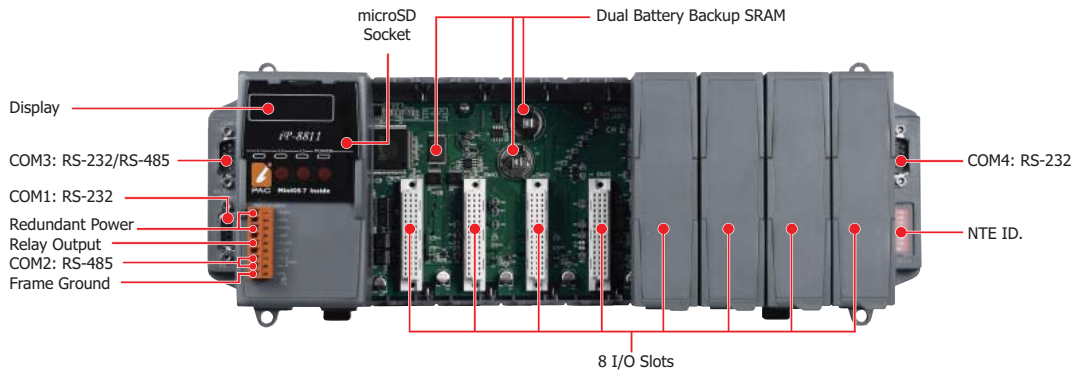


Specifications

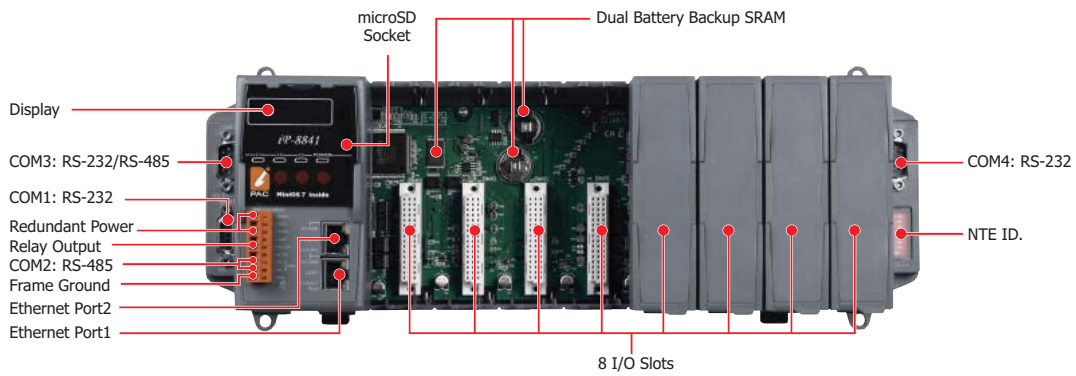
| Models | iP-8411 | iP-8441 | iP-8441-FD | iP-8811 | iP-8841 | iP-8841-FD |
|-------------------------------|--|--|------------|---|--|------------|
| System Software | | | | | | |
| OS | MiniOS7 (DOS-like embedded operating system) | | | | | |
| Program Download Interface | RS-232 (COM1) or Ethernet | | | | | |
| Programming Language | C language | | | | | |
| Compilers to create.exe Files | TC++ 1.01 (Freeware) TC 2.01 (Freeware) BC++3.1 ~ 5.2x MSC 6.0 MSVC++ (before version 1.5.2) | | | | | |
| CPU Module | | | | | | |
| CPU | 80186 or compatible (16-bit and 80 MHz) | | | | | |
| SRAM | 512 KB | 768 KB | | 512 KB | 768 KB | |
| Flash | 512 KB (100,000 erase/write cycles) with Flash protection switch | | | | | |
| Expansion Flash Memory | microSD socket (can support 1/2 GB microSD) | | | | | |
| 64 MB NAND Flash Disk | - | - | Yes | - | - | Yes |
| Dual Battery Backup SRAM | 512 KB (for 5 years data retention) | | | | | |
| EEPROM | 16 KB Data Retention: 40 years; 1,000,000 erase/write cycles | | | | | |
| NVRAM | 31 bytes (battery backup, data valid up to 5 year) | | | | | |
| RTC (Real Time Clock) | Provide second, minute, hour, date, day of week, month, year | | | | | |
| 64-bit Hardware Serial Number | Yes | | | | | |
| Watchdog Timers | Yes (0.8 second) | | | | | |
| NET ID | 8-pin DIP switch to assign NET ID as 1 ~ 255 | | | | | |
| Communication Ports | | | | | | |
| Ethernet | - | RJ-45 x 2, 10/100 Base-TX (Auto negotiating, Auto MDI/MDI-X, LED indicators) | | - | RJ-45 x 2, 10/100 Base-TX (Auto negotiating, Auto MDI/MDI-X, LED indicators) | |
| 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 | 3000 Vdc | | | | |
| 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 | | | | | |
| SMMI | | | | | | |
| 5-Digit LED Display | Yes | | | | | |
| 3-Programmable LED Indicators | Yes | | | | | |
| 4-Push Buttons | Yes | | | | | |
| Buzzer | - | Yes | Yes | - | Yes | Yes |
| I/O Expansion Slots | | | | | | |
| Slot Number | 4 | | | 8 | | |
| | (For High Profile I-8K and I-87K Modules Only) | | | | | |
| Hot Swap * Will be available | For High Profile I-87K Modules Only | | | | | |
| Data Bus | 8/16 bits | | | | | |
| Address Bus Range | 2 K for each slot | | | | | |
| Mechanical | | | | | | |
| Dimensions (W x L x H) | 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 Vdc | | | | | |
| Isolation | 1 kV | | | | | |
| Redundant Power Inputs | Yes, with one power relay (1 A @ 24 Vdc) for alarm | | | | | |
| Capacity | 0.85 A, 5 V supply to CPU and backplane, 5.51 A, 5 V supply to I/O expansion slots, 30 W in total | | | 0.9 A, 5 V supply to CPU and backplane, 5.1 A, 5 V supply to I/O expansion slots, 30 W in total | | |
| Consumption | 6.7 W (0.28 A @ 24 Vdc) | | | 7.2 W (0.3 A @ 24 Vdc) | | |

Appearance

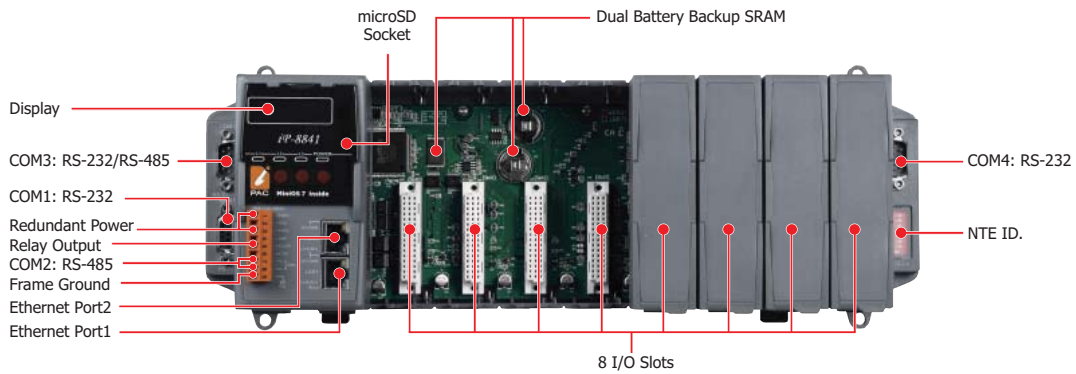
iP-8811



iP-8841

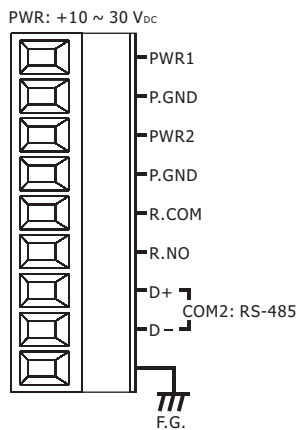


iP-8841-FD



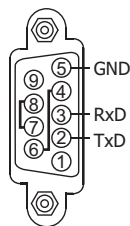
Pin Assignments

Terminal Block

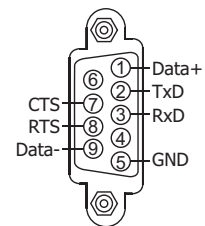


COM Port

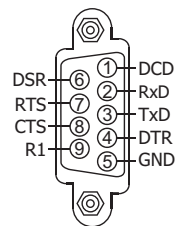
COM1: RS-232



COM3: RS-232/RS-485

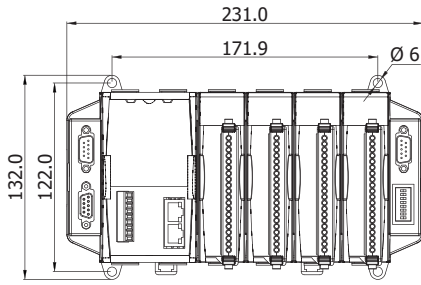


COM4: RS-232

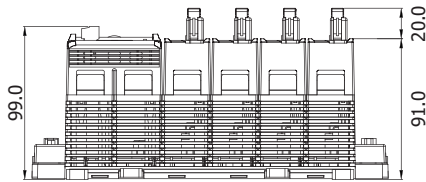


Dimensions (Unit: mm)

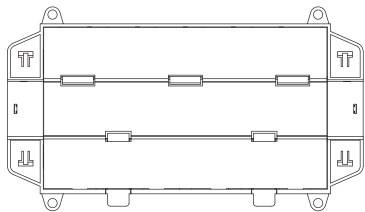
iP-8411/8441/8441-FD



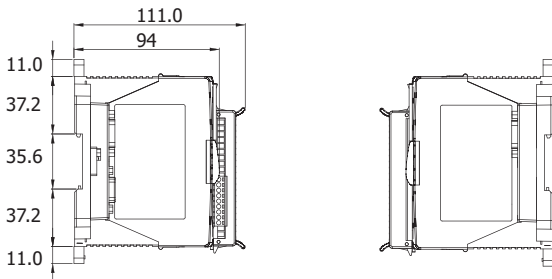
Front View



Bottom View



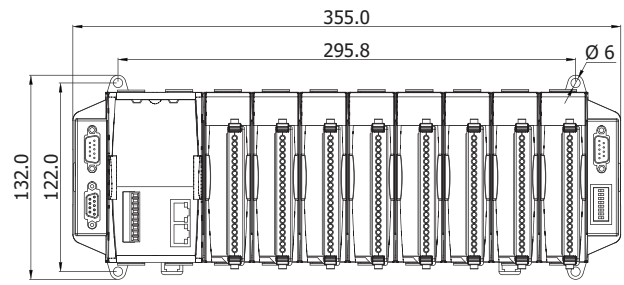
Back View



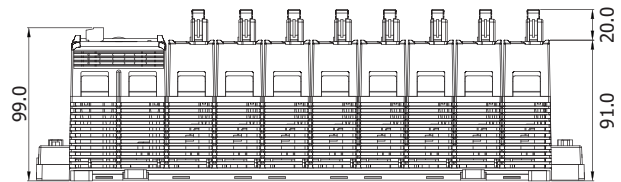
Left Side View

Right Side View

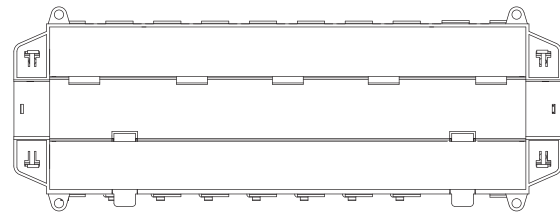
iP-8811/8841/8841-FD



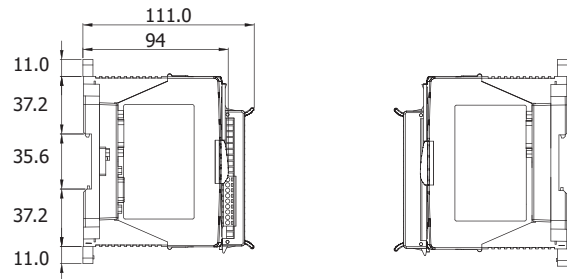
Front View



Bottom View



Back View



Left Side View

Right Side View

Ordering Information

| | |
|---------------|--|
| iP-8411 CR | Standard iPAC-8000 without Ethernet ports (RoHS) |
| iP-8811 CR | Standard iPAC-8000 without Ethernet ports (RoHS) |
| iP-8441 CR | Standard iPAC-8000 with 4 I/O Slots (RoHS) |
| iP-8841 CR | Standard iPAC-8000 with 8 I/O Slots (RoHS) |
| iP-8441-FD CR | Standard iPAC-8000 with 64 MB Flash (RoHS) |
| iP-8841-FD CR | Standard iPAC-8000 with 64 MB Flash (RoHS) |

Accessories

| | |
|------------|---|
| DP-660 | 24 V _{DC} /2.5 A, 60 W and 5 V _{DC} /0.5 A, 2.5 W Power Supply with DIN-Rail Mounting |
| DP-665 | 24 V _{DC} /2.7 A, 65 W Power Supply with DIN-Rail Mounting |
| DP-1200 | 24 V _{DC} /5.0 A, 120 W Power Supply with DIN-Rail Mounting |
| MDR-20-24 | 24 V _{DC} /1.0 A, 24 W Power Supply with DIN-Rail Mounting |
| I-7560 CR | USB to RS-232 Converter (RoHS) |
| 3LMSD-2000 | 2 GB microSD card |