



LP-8121/LP-8421/LP-8821

1/4/8-slot Linux Based PAC with Cortex-A8 CPU

Features

- Cortex-A8 (1.0 GHz) CPU
- Linux kernel 3.2.14 Inside
- 512 MB RAM and 512 MB Flash
- 64-bit Hardware Serial Number
- Hard Real-Time Capability (RTC)
- Rich I/O Expansion Ability (RS-232/RS-485, FRnet, CAN)
- Redundant Power Input
- Operating Temperature: -25 ~ +75 °C



Introduction

The LP-8x2x is the new generation Linux-based PAC (Programmable Automation Controller) from ICP DAS and is equipped with a Cortex-A8 CPU (1.0 GHz) running a Linux kernel 3.x operation system, multiple communication interfaces (VGA, USB, Ethernet and RS-232/485) and 1/4/8 slots for high performance parallel I/O modules (high profile I-8K series) and serial I/O modules (high profile I-87K series).

Main advantage of the LinPAC-8x2x is its high quality control system, including its stably properties, open source and the standard LinPAC SDK for Windows and Linux using the GNU C language, JAVA and GUI software. The main purpose of LinPAC-8x2x is to allow the numerous enthusiastic Linux users to control their own embedded system easily within the Linux environment.

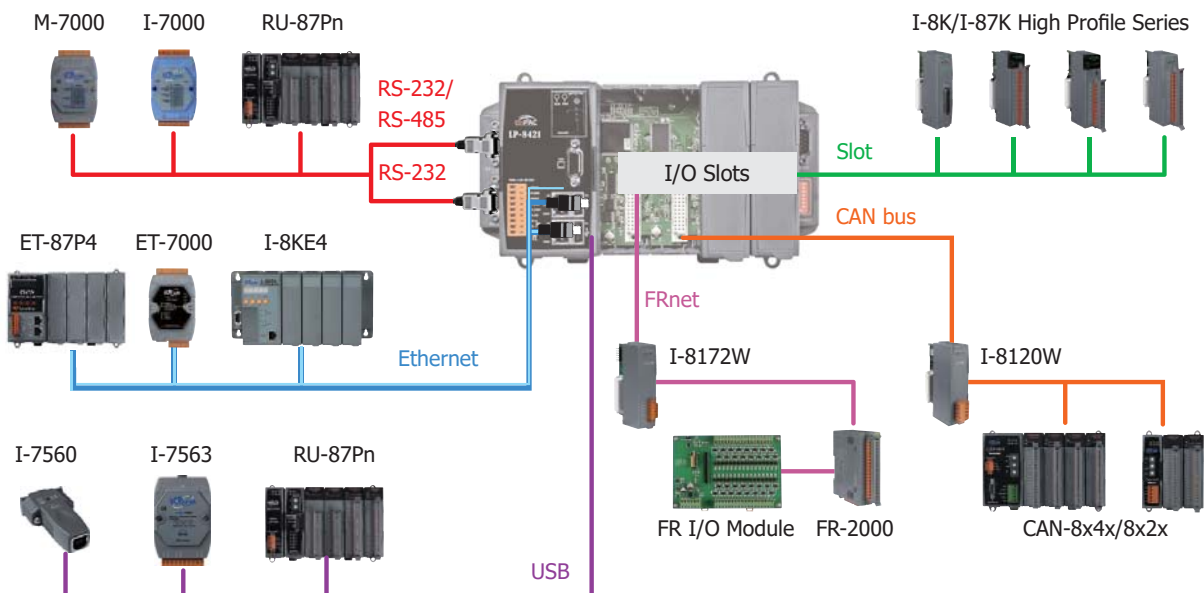
Linux Kernel OS



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- LinPAC SDK for Windows and Linux
- Support for GNU C Language
- Support for GUI: Using GTK + Library
- Support for USB to Serial Converter
- Support for DCON, Modbus and SNMP Protocols

Applications

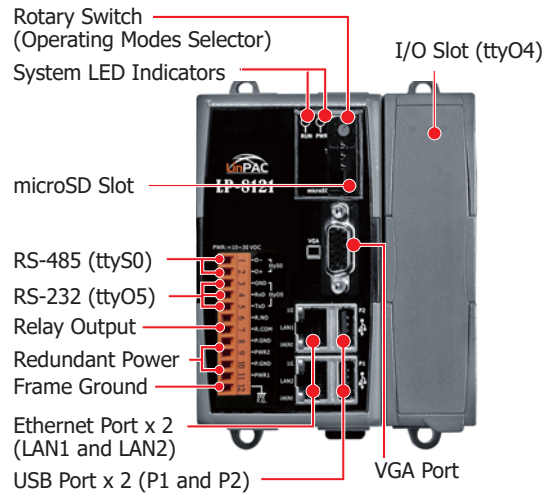


Specifications

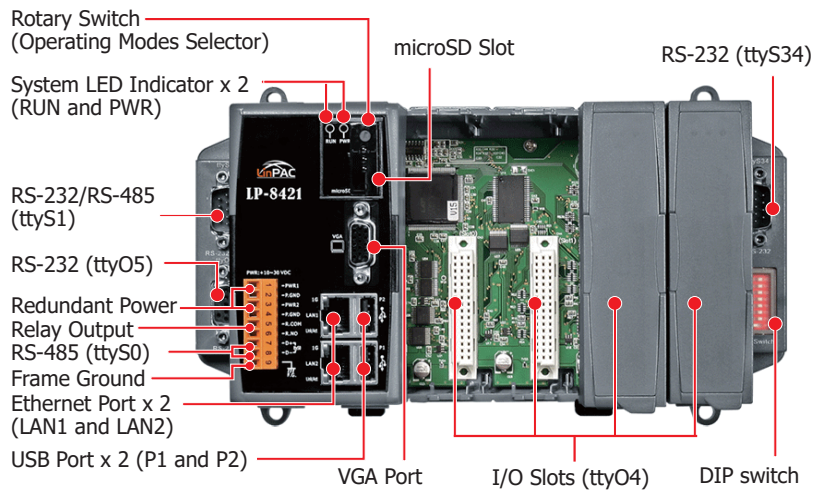
| Model | LP-8121 | LP-8421 | LP-8821 |
|-------------------------------|--|--|--------------------------|
| Software | | | |
| OS | Linux Kernel 3.2.14 | | |
| Service | Web Server, FTP Server, Telnet Server, SSH Server | | |
| SDK | Standard LinPAC SDK for Windows and Linux by GNU C language | | |
| Main Unit | | | |
| CPU | Cortex-A8, 1.0 GHz | | |
| SDRAM | 512 MB DDR3 | | |
| MRAM | 128 KB | | |
| Flash | 512 MB | | |
| EEPROM | 16 KB | | |
| Storage | 4 GB microSD card (up to 32 GB) | | |
| RTC (Real Time Clock) | Provide seconds, minutes, hours, dates, day of week, month, year | | |
| 64-bit Hardware Serial Number | Yes, for software copy protection | | |
| Watchdog Timer | Dual Watchdog Timer | | |
| Rotary Switch | 1 x 10 Position (0 ~ 9) | | |
| DIP Switch | - | Yes (8-bits) | |
| Buzzer | Yes | | |
| Display | | | |
| VGA Resolution | Up to 1280 x 1024 | | |
| LED Indicator | 1x Power, 1 x System/Programmable | | |
| Communication Port | | | |
| Ethernet | 2 x RJ-45, 10/100/1000 Based-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators) | | |
| USB 2.0 (host) | 2 | | |
| ttyO4 | Internal communication with the high profile I-87K series modules in slots | | |
| ttyO5 (Console Port) | RS-232 (Rx/D, Tx/D and GND); Non-isolation | | |
| ttyS0 | RS-485 (Data+, Data-);self-tuner ASIC inside; 3000 VDC isolated | | |
| ttyS1 | - | RS-232/485 (Rx/D, Tx/D, CTS, RTS and GND for RS-232; Data+, Data- for RS-485); Non-isolation | |
| ttyS34 | - | RS-232 (RX/D, TX/D, CTS, RTS, DSR, DTR, CD, RI and GND); Non-isolation | |
| I/O Expansion | | | |
| I/O Type | I-8K, I-87K series | | |
| Slots | 1 | 4 | 8 |
| Mechanical | | | |
| Dimension (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 |
| Ingress Protection Rating | IP30 (Aluminum) | | |
| Installation | DIN-Rail, Wall mounting | | |
| Environmental | | | |
| Operating Temperature | -25 ~ +75 °C | | |
| Storage Temperature | -30 ~ +80 °C | | |
| Humidity | 10 ~ 90 % RH, Non-condensing | | |
| Power | | | |
| Input Range | +10 ~ +30 VDC (1 kV Isolated) | | |
| Redundant Power Inputs | Yes, with one power relay (1 A @ 24 VDC) for alarm | | |
| Consumption | 7.3 W (0.3 A @ 24 VDC) | 9.1 W (0.38 A @ 24 VDC) | 9.6 W (0.4 A @ 24 VDC) |

Appearance

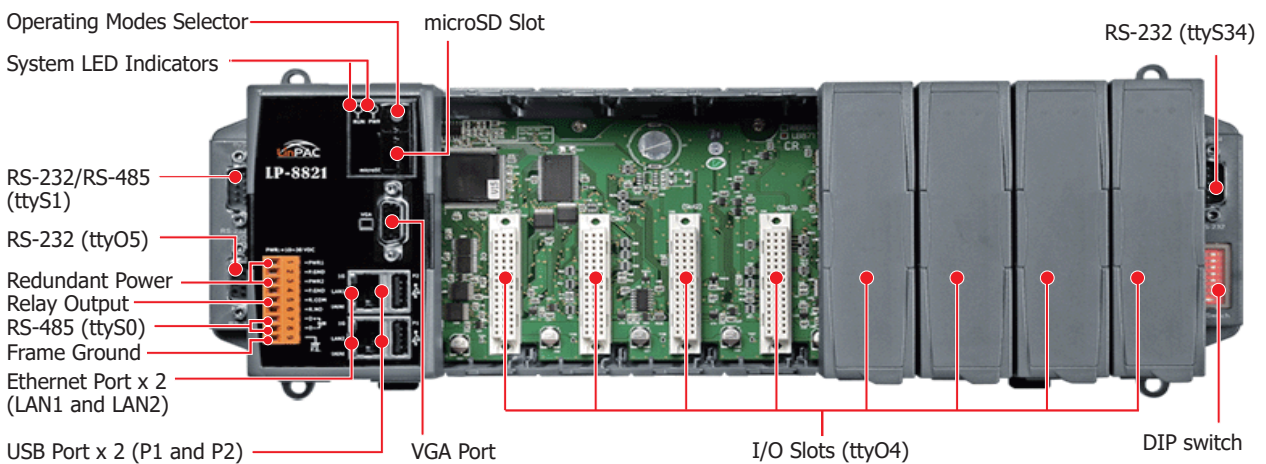
LP-8121



LP-8421

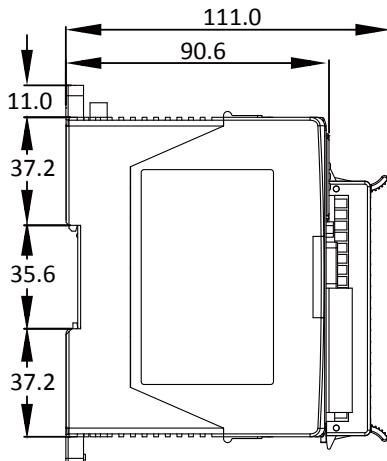


LP-8821



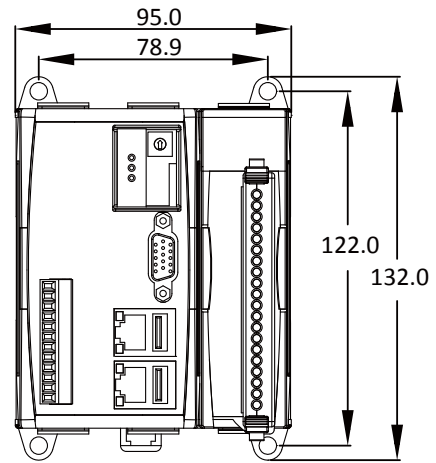
■ Dimensions (Units: mm)

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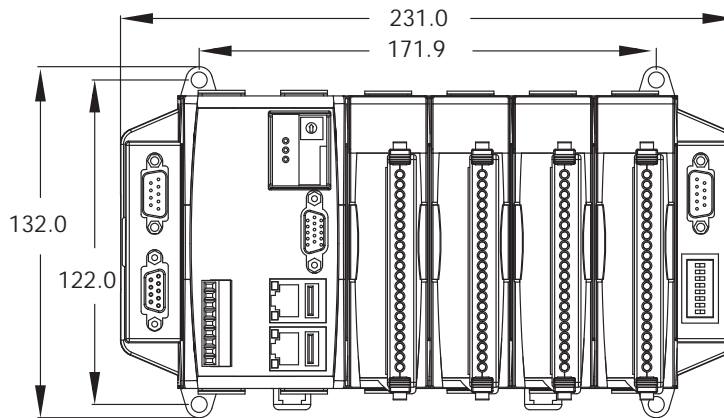
Left Side View

LP-8121



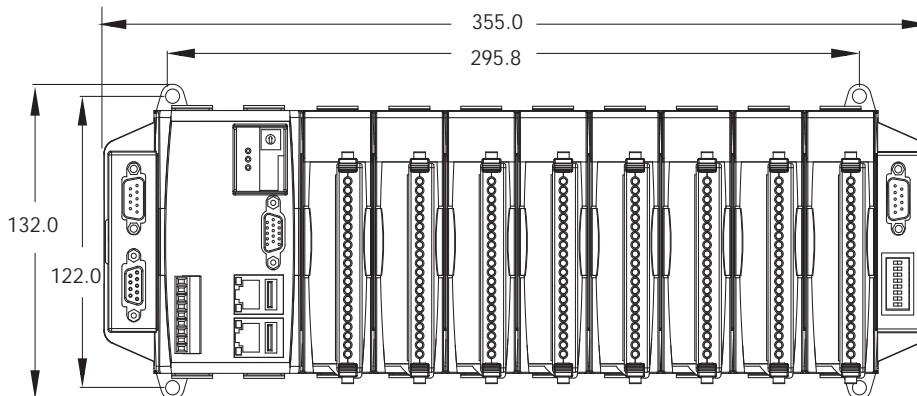
Front View

LP-8421



Front View

LP-8821



Front View

■ Ordering Information

| | |
|-------------------|--|
| LP-8121 CR | 1-slot Linux Based PAC with Cortex-A8 CPU (RoHS) |
| LP-8421 CR | 4-slot Linux Based PAC with Cortex-A8 CPU (RoHS) |
| LP-8821 CR | 8-slot Linux Based PAC with Cortex-A8 CPU (RoHS) |