

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
- Hard Real-Time Capability (RTC)
- 64-bit Hardware Serial Number
- 2 10/100/1000M Ethernet Ports
- Rich I/O Expansion Ability (RS-232, RS-485, USB, CAN)
- Redundant Power Input
- Operating Temperature: -25 ~ +75 °C

Introduction

The LP-8000 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 LP-8000 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 LP-8000 is to allow the numerous enthusiastic Linux users to control their own embedded system easily within the Linux environment.

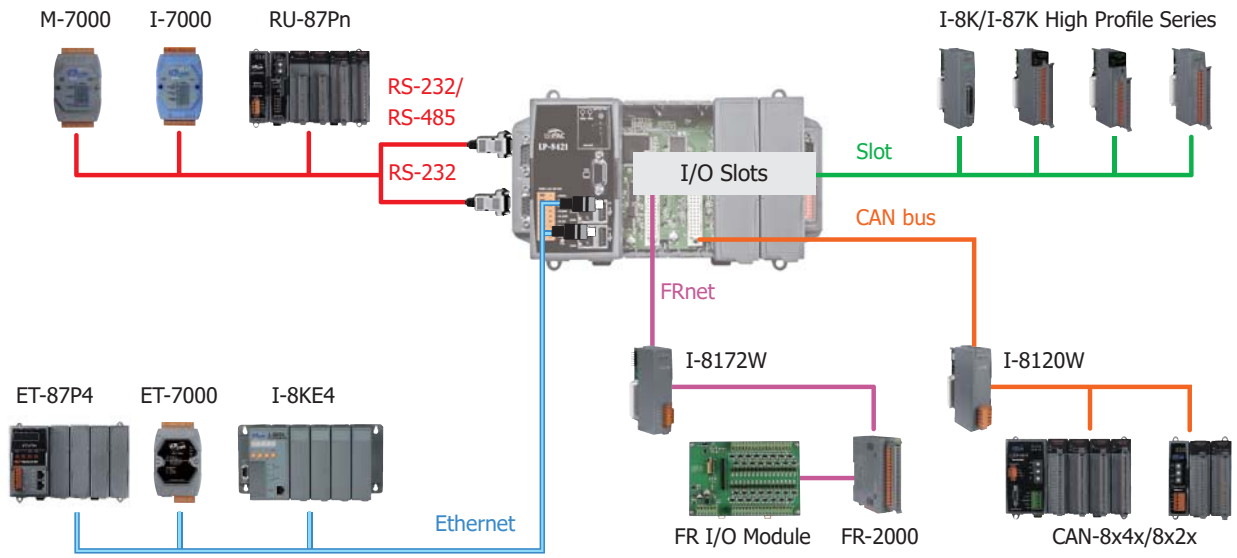
Linux Kernel OS



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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

Appications



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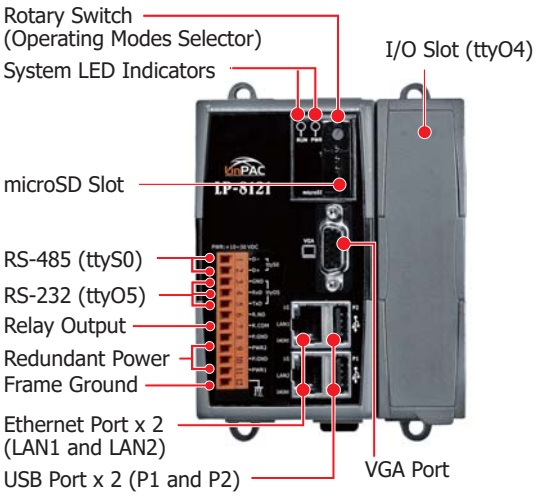
Specifications

Model	LP-8121	LP-8421	LP-8821
System Software			
OS	Linux kernel 3.2.14 Inside		
Embedded Service	FTP server, Web server (supports VB script, JAVA script), Embedded SQL server		
SDK	Standard LinPAC SDK for Windows and Linux by GNU C language		
Main Unit			
CPU	Cortex-A8 (1.0 GHz) CPU		
SDRAM	512 MB DDR3		
MRAM	512 KB		
EEPROM	16 KB (Data Retention: 40 years; 1,000,000 erase/write cycles)		
Flash	512 MB		
Storage	microSD socket with a 4 GB microSD card (support up to 32 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		
Watchdog Timer	Dual Watchdog Timers		
HMI			
Rotary Switch	Yes (0 ~ 9)		
DIP Switch	Yes (8 bits)		
LED Indicator	1 x Power, 1 x Run (Programmable)		
Display			
VGA	1 (Analog RGB), Resolution: Up to 1280 x 1024		
I/O Expansion			
I/O Type	I-8K, I-87K series		
Slots	1	4	8
Communication Ports			
Ethernet	2 x RJ-45, 10/100/1000M Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)		
USB	2 x USB 2.0		
ttyO4	Internal communication with the I-87K series modules in slots		
ttyO5 (Console Port)	RS-232 (RxD, TxD and GND); Non-isolation		
ttyS0	RS-485 (Data+, Data-);self-tuner ASIC inside; 3000 VDC isolated		
ttyS1	-	RS-232/485 (RxD, TxD, CTS, RTS and GND for RS-232; Data+, Data- for RS-485); Non-isolation	
ttyS34	-	RS-232 (RXD, TXD, CTS, RTS, DSR, DTR, CD, RI and GND); Non-isolation	
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 Mounting/Wall Mounting		
Environmental			
Operating Temperature	-25 ~ +75 °C		
Storage Temperature	-30 ~ +80 °C		
Ambient Relative Humidity	10 ~ 95 % RH (non-condensing)		
Power			
Input Range	+10 ~ 30 VDC (1 kV Isolated)		
Redundant Power Input	Yes, with one power relay (1A @ 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)

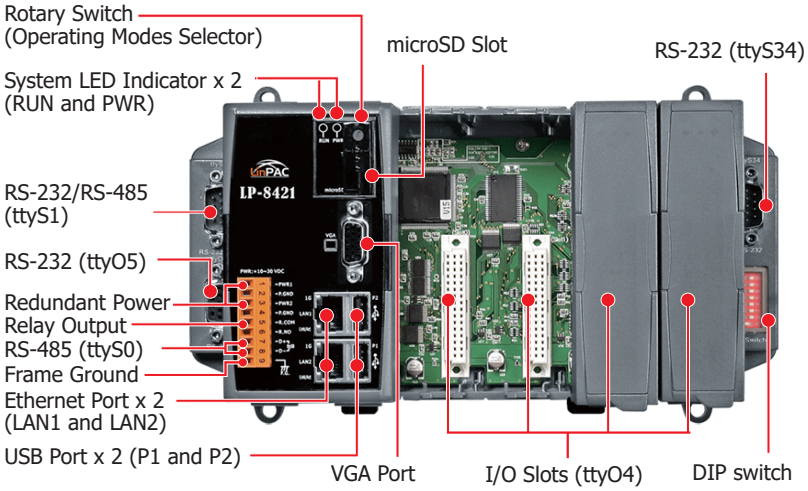
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Appearance

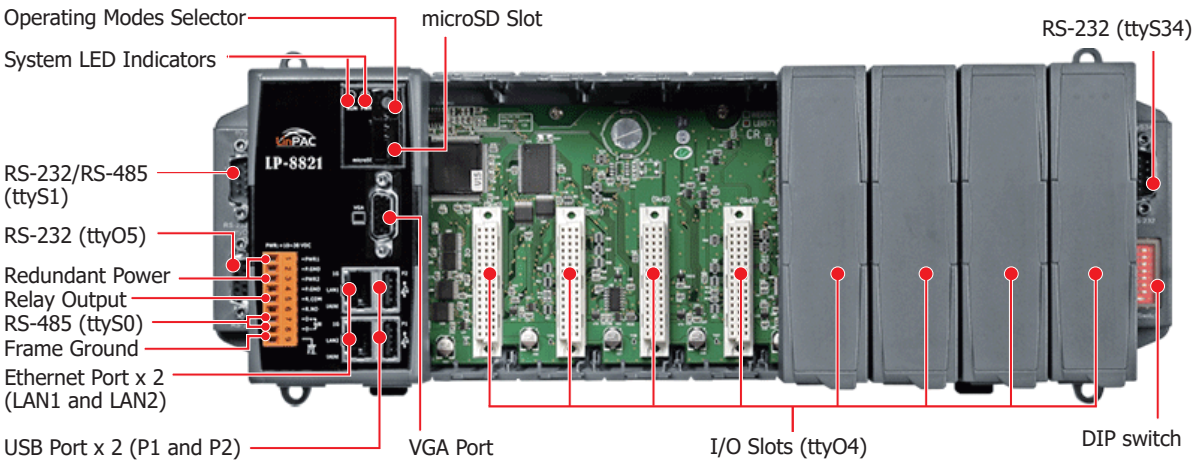
LP-8121



LP-8421



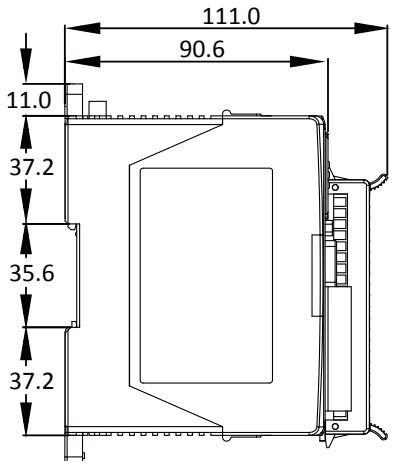
LP-8821



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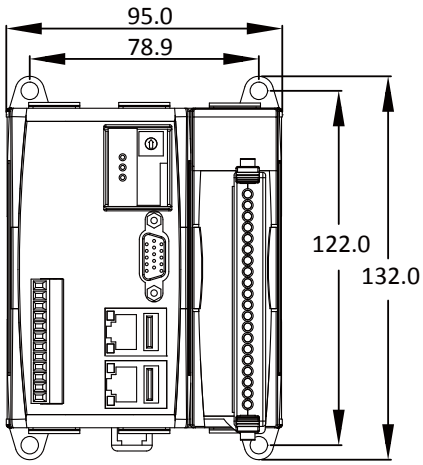
Dimensions (Units: mm)

LP-8121/LP-8421/LP-8821



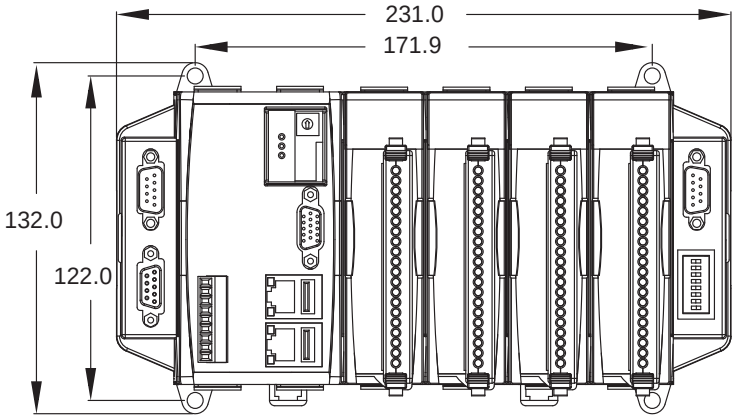
Left Side View

LP-8121



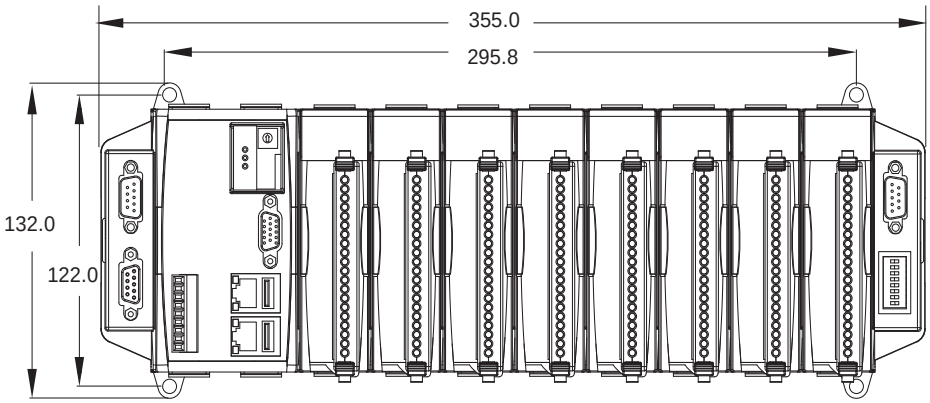
Front View

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)

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