

LP-8121/LP-8421/LP-8821

Highlight Information

- Linux kernel 3.2.14 Inside
- Cortex-A8 (1.0 GHz)
- Embedded Service: Web Server, FTP Server, Telnet Server, SSH Server
- 64-bit Hardware Serial Number
- Rich I/O Expansion Ability: RS-232/RS-485, USB, FRnet, CAN
- Redundant Power Inputs
- Operating Temperature: -25 ~ +75 °C



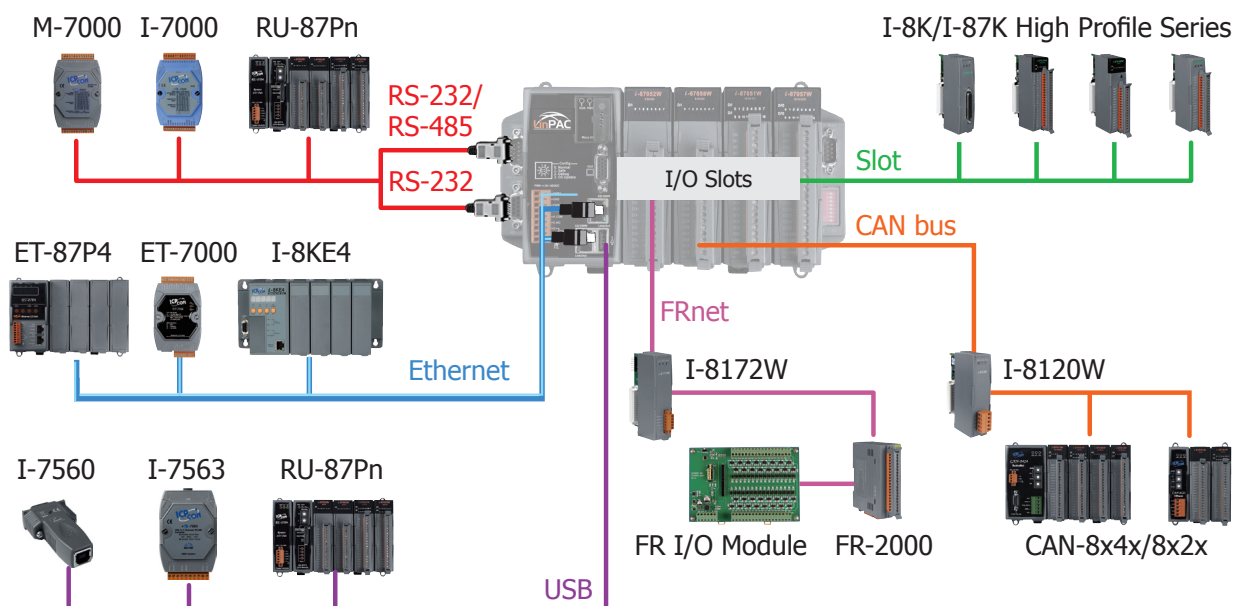
Introduction

LP-8x21 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 3.2.14 operation system, multiple communication interfaces (VGA, USB, Ethernet and RS-232/485) and 1/4/8 slot(s) 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-8x21 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, GUI software. The main purpose of LP-8x21 is to allow the numerous enthusiastic Linux users to control their own embedded system easily within the Linux environment.

Application

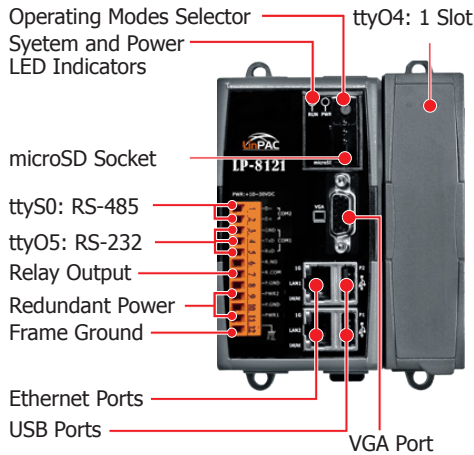


Specifications

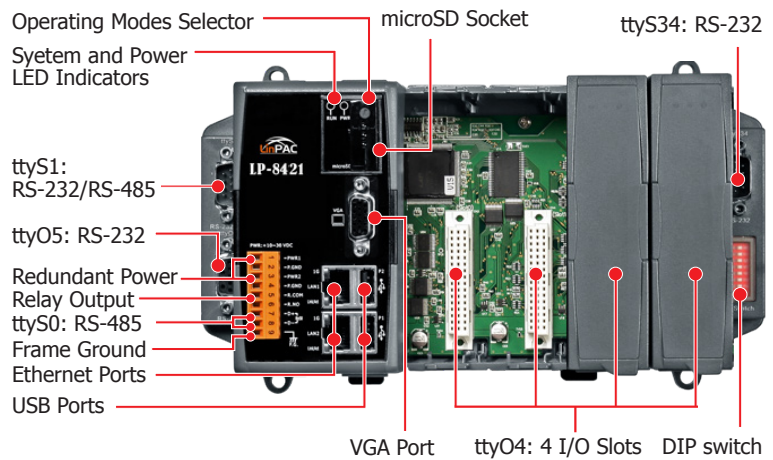
Models	LP-8121		LP-8421	LP-8821
System Software				
OS	Linux kernel 3.2.14 Inside			
Embedded Service	Web Server, FTP Server, Telnet Server, SSH Server			
SDK Provided	Standard LinPAC SDK for Windows and Linux by GNU C language			
CPU Module				
CPU	Cortex-A8 (1.0 GHz)			
SDRAM	512 MB DDR3			
MRAM	128 KB			
Flash	512 MB			
EEPROM	16 kB			
microSD	microSD slot with one microSD card (support up to 32 GB)			
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 Resolution	VGA x 1 (max. resolution up to 1280 x 1024)			
Ethernet Port	RJ-45 x 2, 10/100/1000M Base-T			
USB 2.0	2			
ttyO4	Internal communication with the high profile I-87K series modules in slots			
ttyO5	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		
I/O Expansion Slots	1	4	8	
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 Vdc			
Isolation	1 kV			
Redundant Power Inputs	Yes, with one power relay (1 A @ 24 Vdc) for alarm			
Capacity	1.0A, 5V supply to CPU and backplane, 0.6A, 5V supply to I/O expansion slots, total 8 W	1.1A, 5V supply to CPU and backplane, 4.9A, 5V supply to I/O expansion slots, total 30 W	1.2A, 5V supply to CPU and backplane, 4.8A, 5V supply to I/O expansion slots, total 30 W	
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

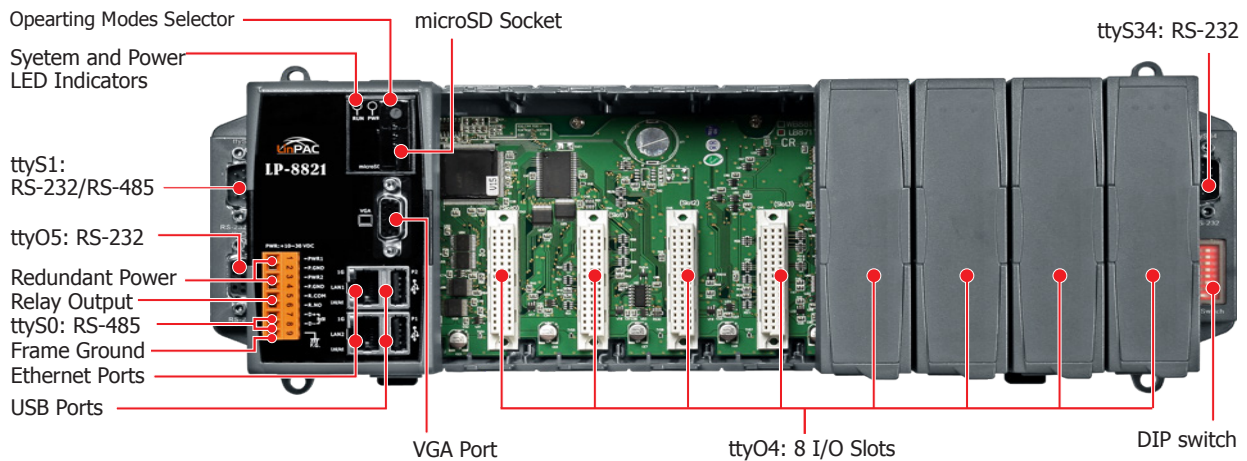
LP-8121



LP-8421



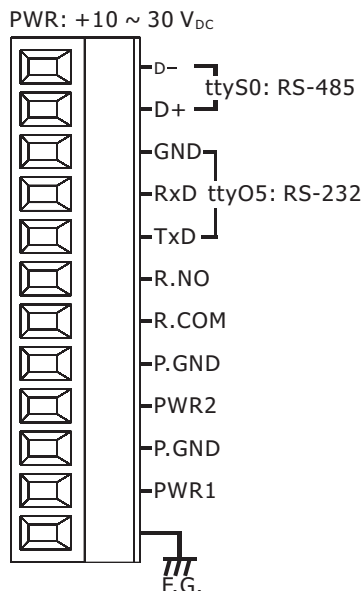
LP-8821



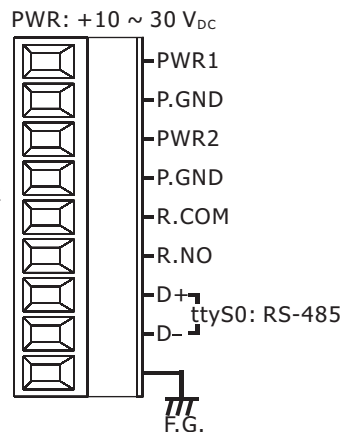
Pin Assignments

Terminal Block

LP-8121

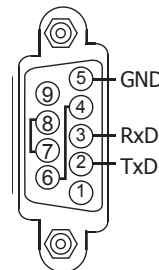


LP-8421/LP-8821

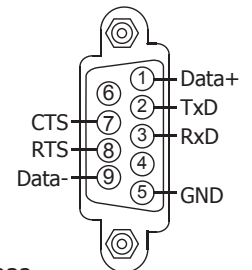


LP-8421/LP-8821 COM Port

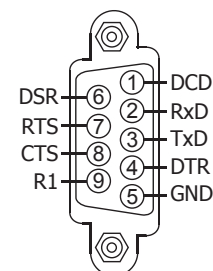
ttyO5: RS-232



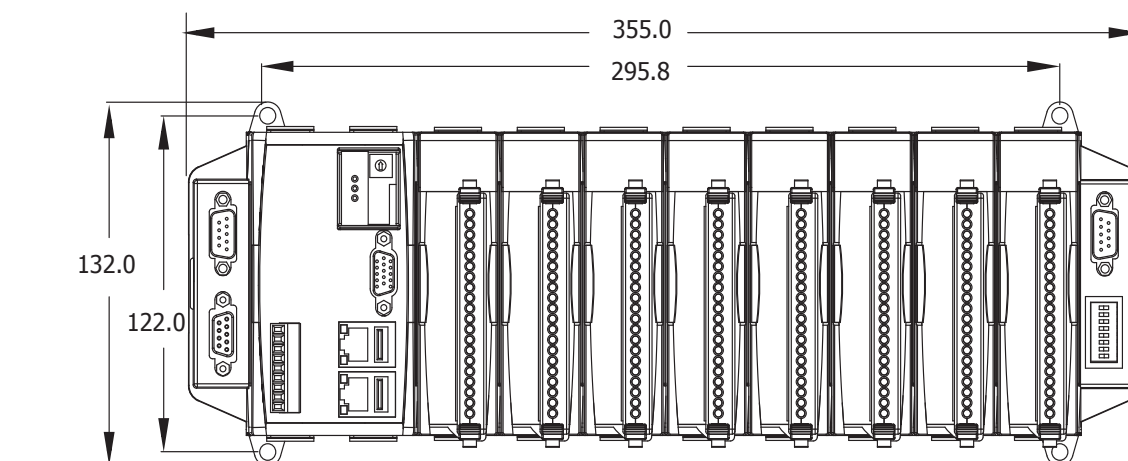
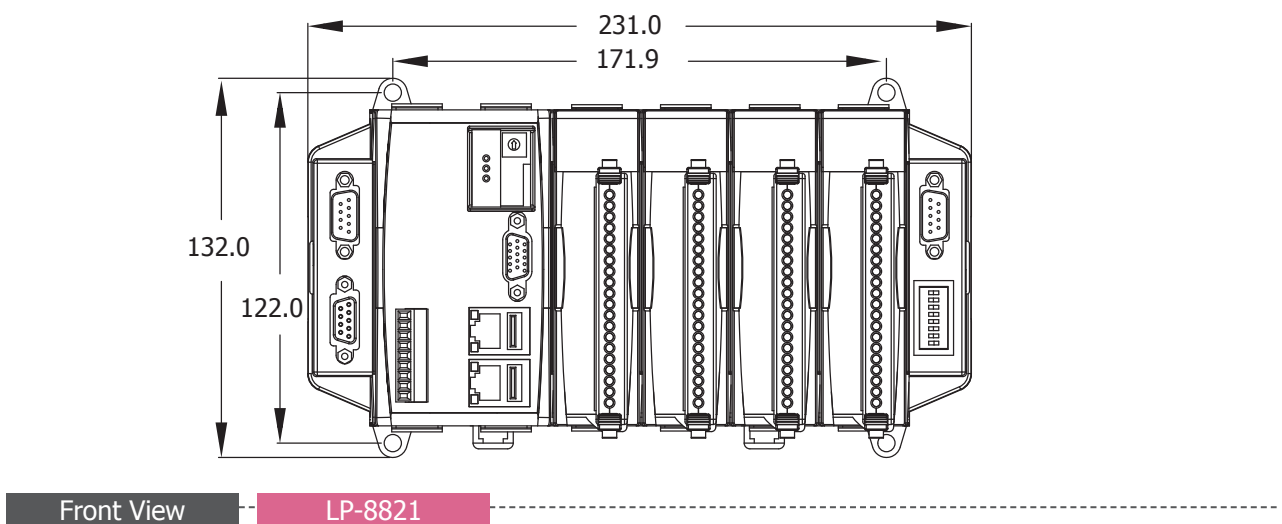
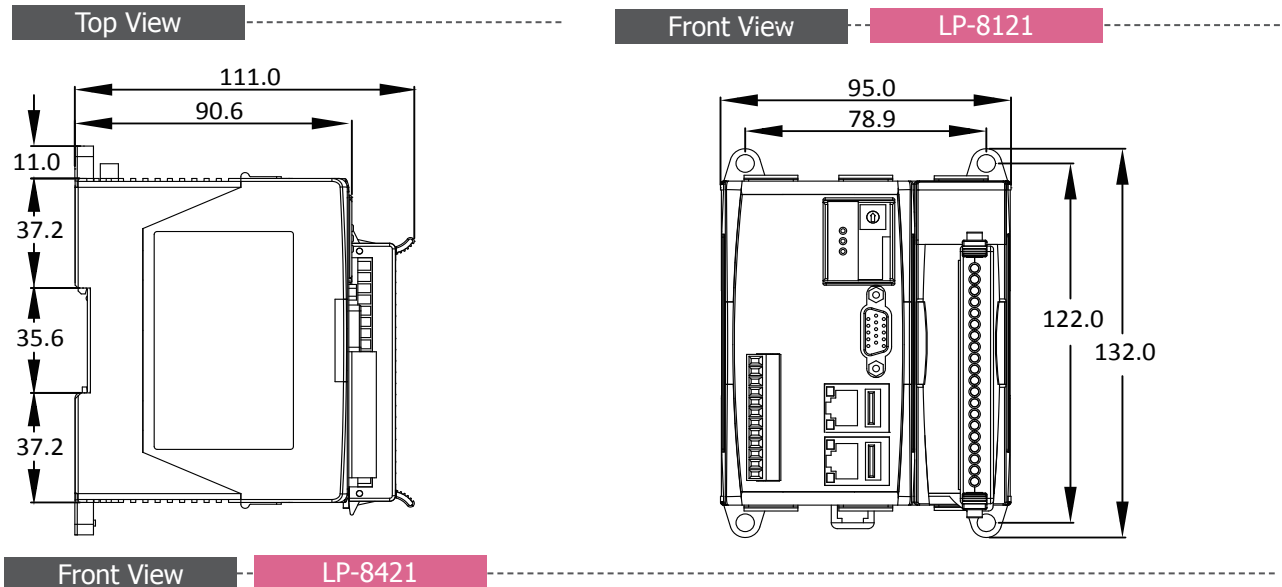
ttyS1: RS-232/RS-485



ttyS34: RS-232



Dimensions



Ordering Information

LP-8121	Standard LinPAC-8000 with 1 I/O Slot
LP-8421	Standard LinPAC-8000 with 4 I/O Slots
LP-8821	Standard LinPAC-8000 with 8 I/O Slots