

**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

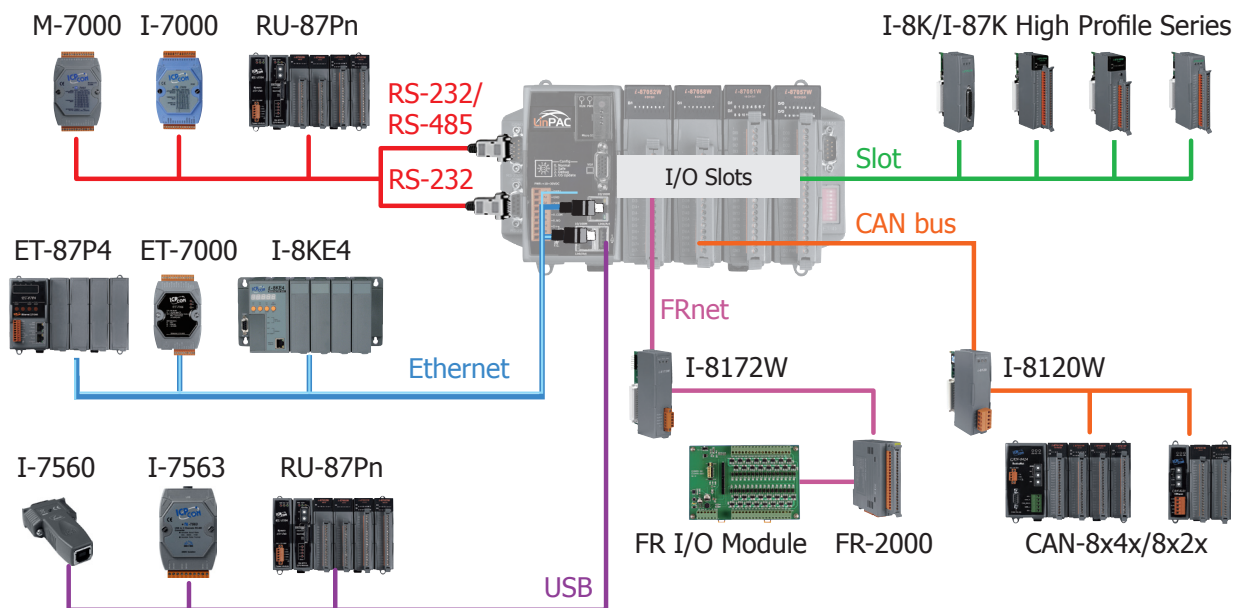
**Introduction**

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**

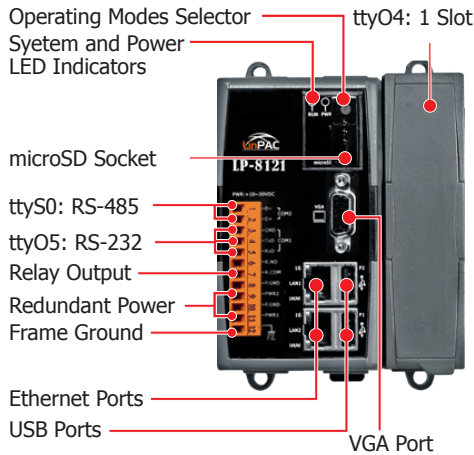


 Specifications

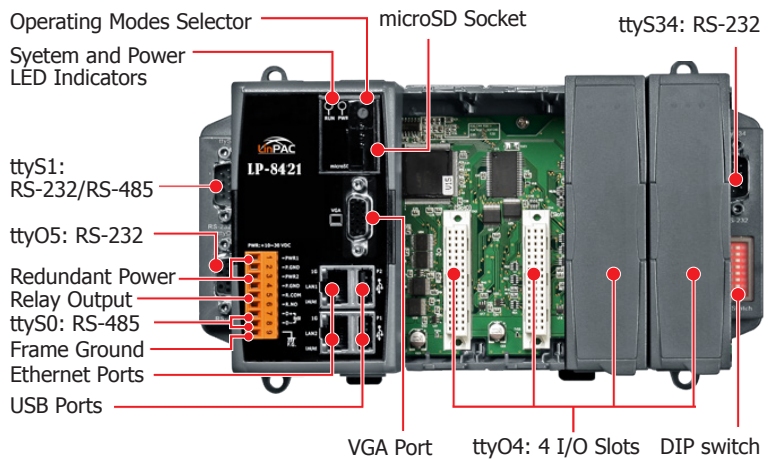
Models	LP-8121	LP-8421	LP-8821
<b>System Software</b>			
OS	Linux kernel 3.2.14 Inside		
Embedded Service	Web Server, FTP Server, Telnet Server, SSH Server		
SDK Provided	Standard LinPAC SDK for Windows and Linux by GNU C language		
<b>CPU Module</b>			
CPU	Cortex-A8 (1.0 GHz)		
SDRAM	512 MB DDR3		
MRAM	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)	
<b>VGA &amp; Communication Ports</b>			
VGA Resolution	800 x 600		
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
<b>Mechanical</b>			
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		
<b>Environmental</b>			
Operating Temperature	-25 ~ +75 °C		
Storage Temperature	-30 ~ +80 °C		
Ambient Relative Humidity	10 ~ 90% RH (non-condensing)		
<b>Power</b>			
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

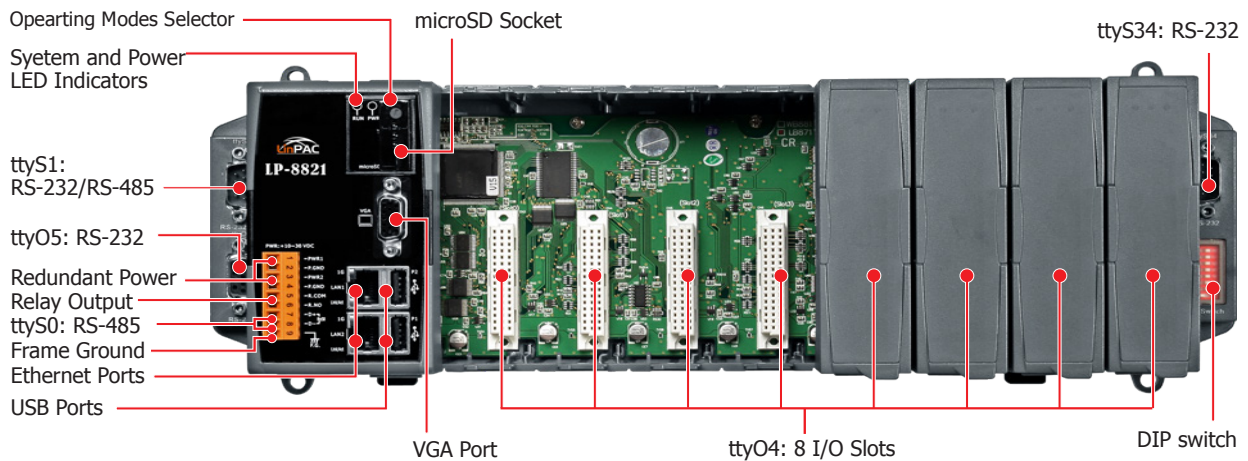
LP-8121



LP-8421



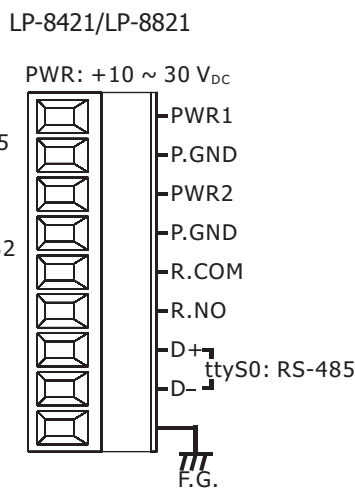
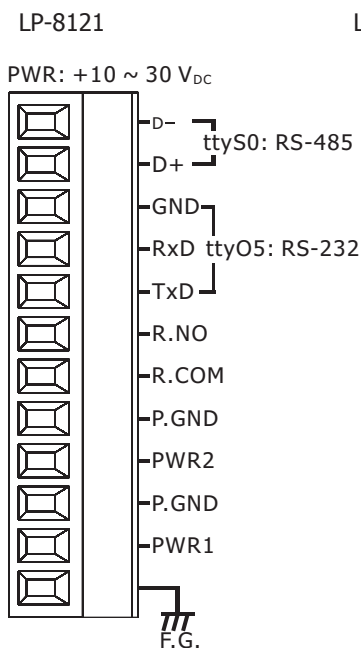
LP-8821



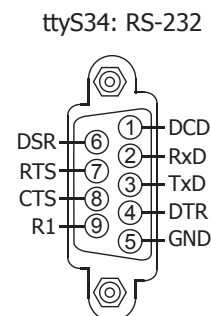
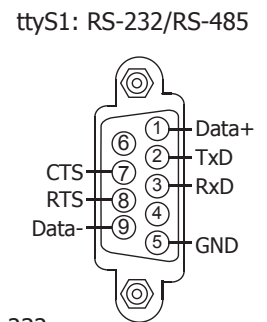
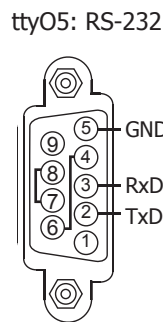
LinPAC-8000 Series

Pin Assignments

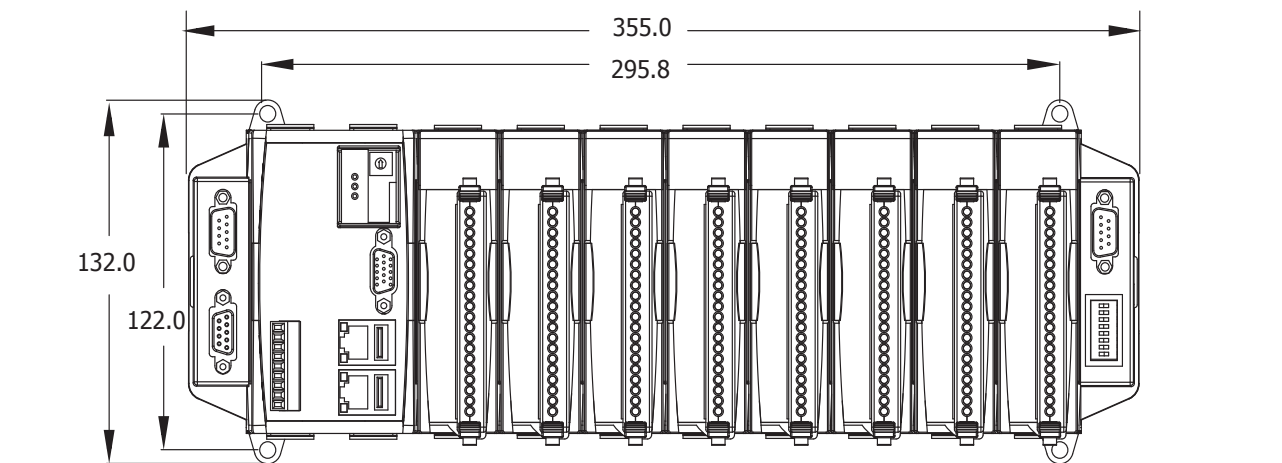
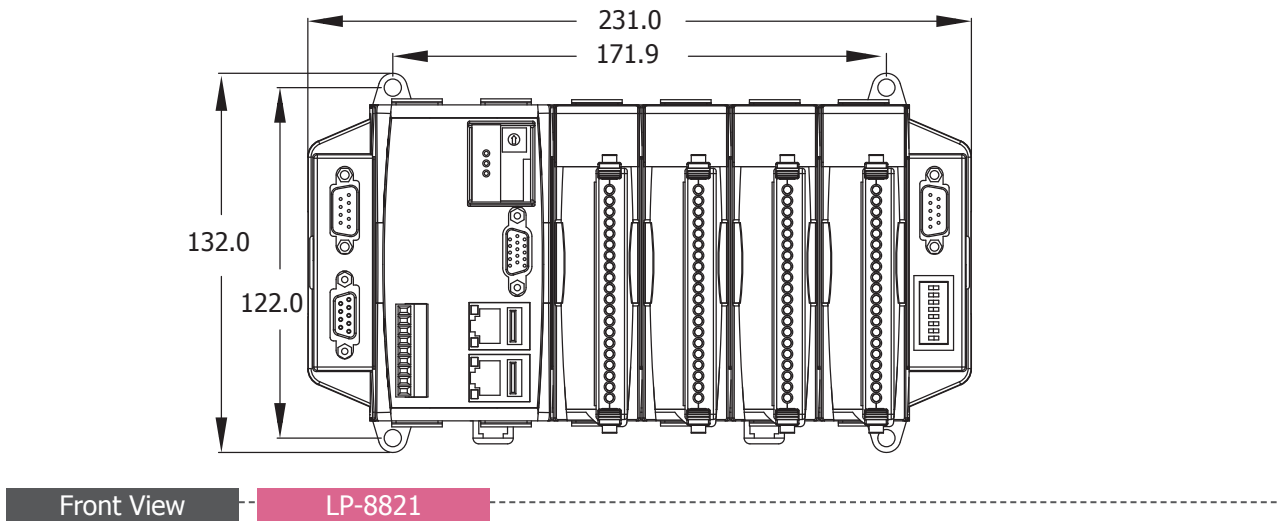
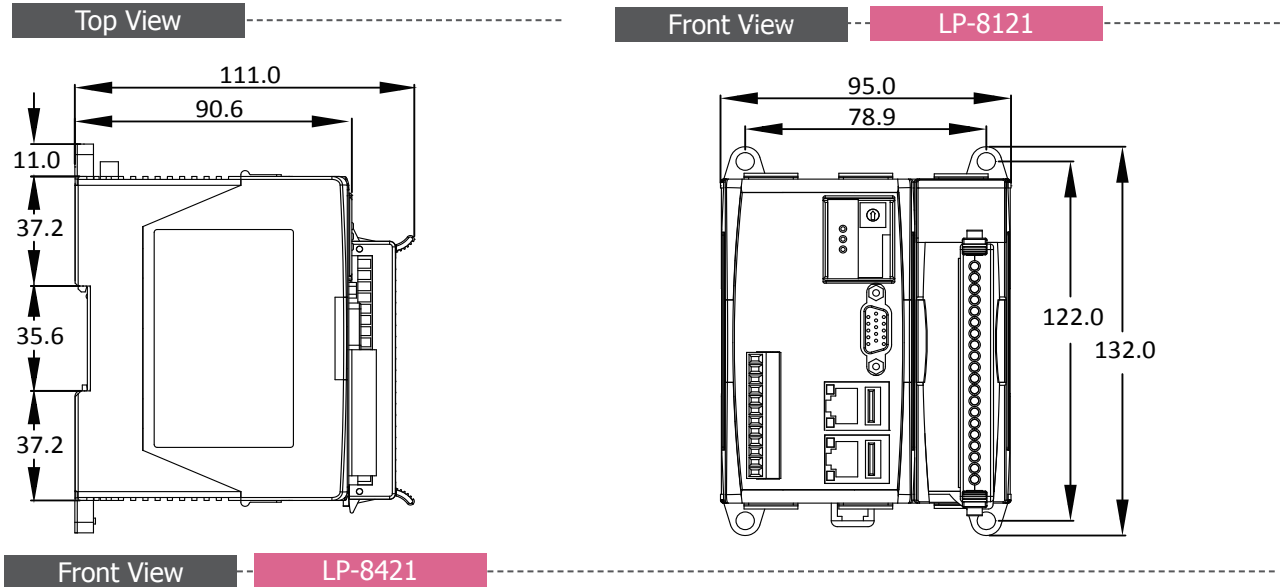
Terminal Block



LP-8421/LP-8821 COM Port



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