


LP-9221/LP-9421/LP-9821

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



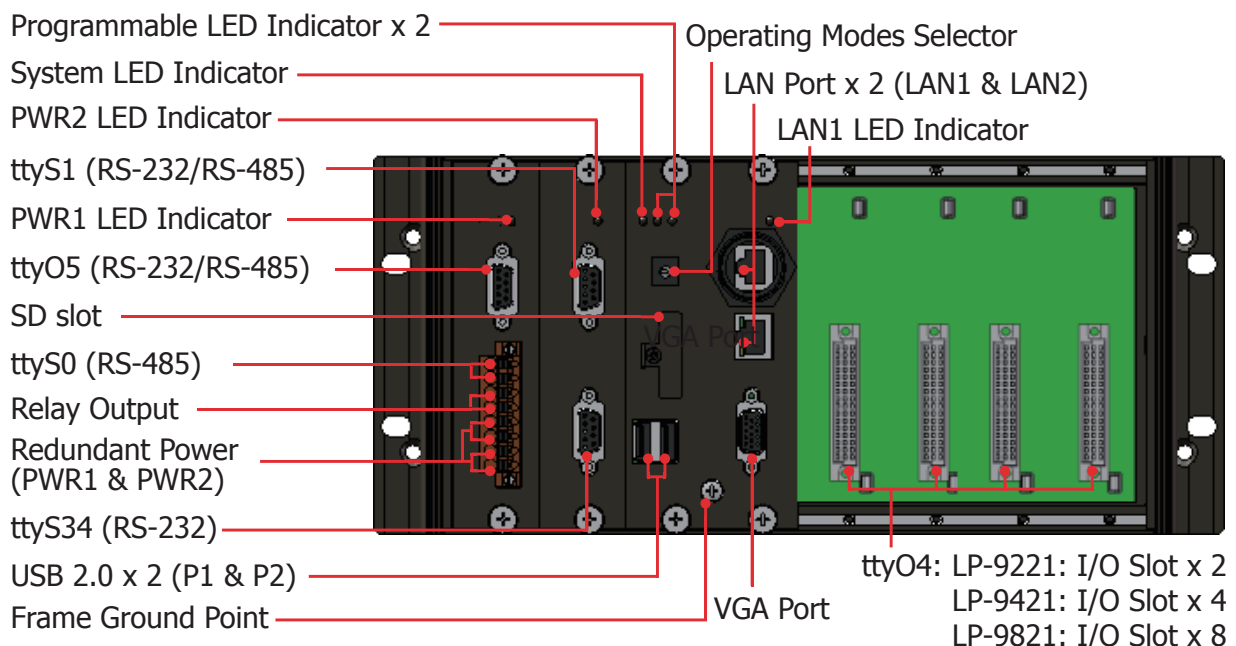
Introduction

The LP-9x21 is the new generation Linux based PAC (Programmable Automation Controller) of ICP DAS. Each LP-9x21 is equipped with a Cortex-A8 (1.0 GHz) CPU running a Linux operating system, a variant of input/output ports (VGA, USB, Ethernet, RS-232/485), and 2/4/8 expansion I/O slots that can be used to integrate high performance I-9K (parallel-type) and I-97K (serial-type) series I/O modules.



User's programs can be saved in external storage device, such as SD Card, USB device or RAM via ethernet. LinPAC SDK is provided for users to develop LinPAC I/O applications rapidly and easily when I-7000/9000/97k series I/O modules are used in the LinPAC. Users can develop LinPAC applications by using GNU C Language. In the meanwhile, all kinds of servers and functions built-in make the LinPAC more powerful and users will be able to operate LinPAC to achieve their own project smoothly.

Appearance

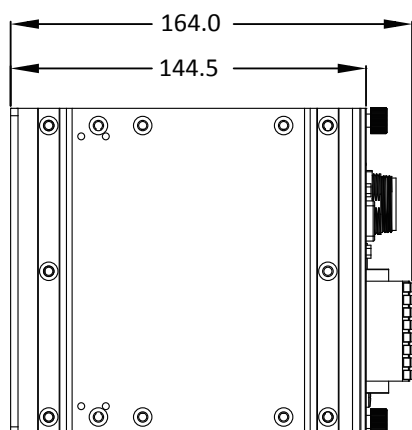


Specifications

Models	LP-9221		LP-9421	LP-9821
System Software				
OS	Linux kernel 3.2.14			
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			
SD	SD slot with one SD 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	2 (L1, L2)			
Rotary Switch	Yes (0 to 9)			
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-97K series modules in slots			
ttyO5	RS-232/485 (Rx/D, Tx/D and GND for RS-232; Data+, Data- for RS-485); 3000 V _{DC} isolated			
ttyS0	RS-485 (Data+, Data-); 3000 V _{DC} isolated			
ttyS1	RS-232/485 (Rx/D, Tx/D, CTS, RTS and GND for RS-232; Data+, Data- for RS-485); 3000 V _{DC} isolated			
ttyS34	RS-232 (Rx/D, Tx/D, CTS, RTS, DSR, DTR, CD, RI and GND); 3000 V _{DC} isolated			
I/O Expansion Slots	2	4	8	
Mechanical				
Dimensions (W x L x H)	239 mm x 133 mm x 164 mm	300 mm x 133 mm x 164 mm	422 mm x 133 mm x 164 mm	
Installation	Wall Mounting			
Environmental				
Operating Temperature	-25 to +75 °C			
Storage Temperature	-30 to +80 °C			
Ambient Relative Humidity	10 to 90% RH (non-condensing)			
Power				
Input Range	+10 to +30 V _{DC}			
Isolation	1 kV			
Redundant Power Inputs	Yes, with one power relay (1 A @ 24 V _{DC}) for alarm			
Capacity	1.5 A, 5 V supply to CPU and backplane; 6.5 A, 5 V supply to I/O expansion slots, total 40 W			
Consumption	10.8 W (0.45 A @ 24 V _{DC})			

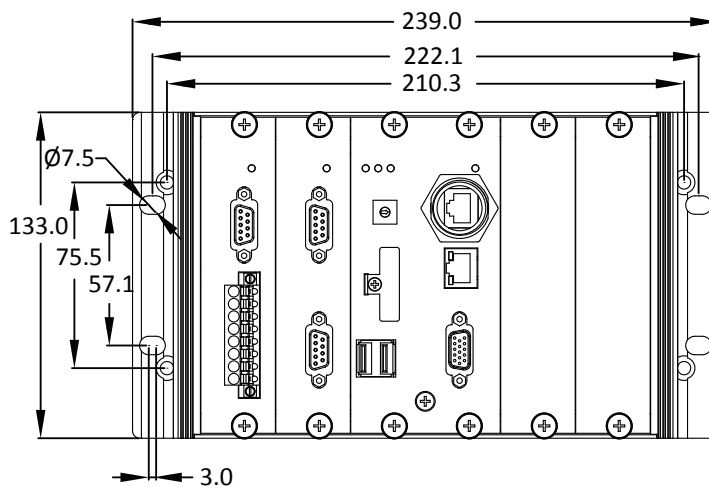
Dimensions

Top View



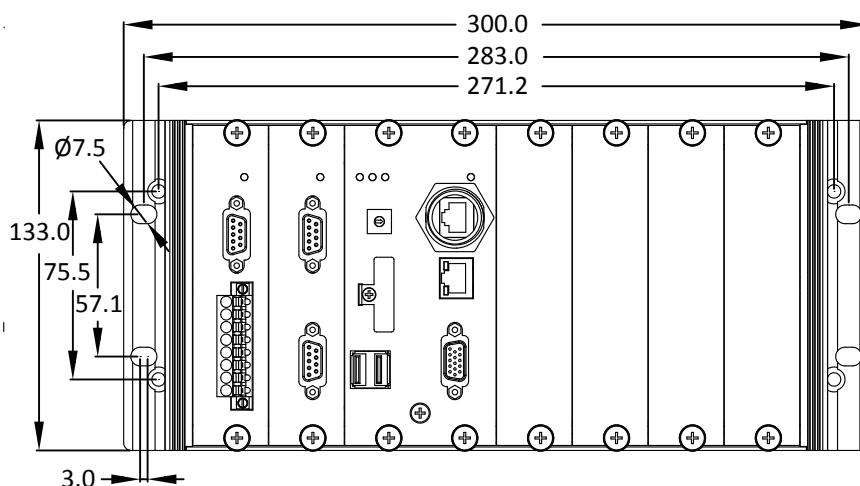
Front View

LP-9221



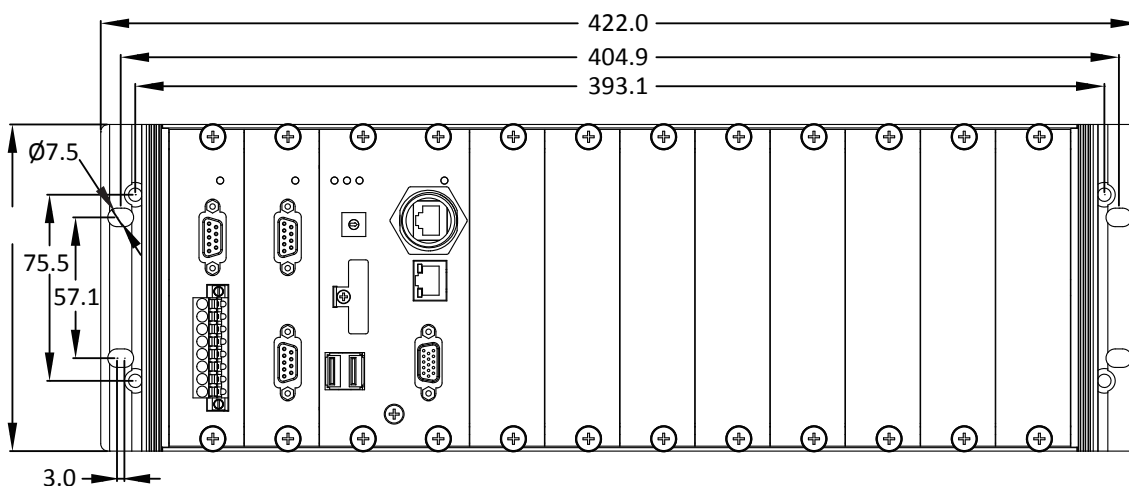
Front View

LP-9421



Front View

LP-9821



Ordering Information

LP-9221	Standard LinPAC-9000 with 2 I/O Slots
LP-9421	Standard LinPAC-9000 with 4 I/O Slots
LP-9821	Standard LinPAC-9000 with 8 I/O Slots