



## LX-8031/LX-8131/LX-8331/LX-8731

0/1/3/7-slot Linux Based PAC with x86 CPU

### Features

- Linux kernel 3.2 Inside
- x86 CPU, 1 GHz, dual-core
- 2 GB DDR3 SDRAM and 32 GB SSD
- 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)
- Redundant Power Input
- Operating Temperature: -25 ~ +75 °C



### Introduction

The LX-8x3x are Linux based PACs that combine computing, I/O, and operator interface into a single unit, and provide the perfect solution for integrating HMI, data acquisition and control in an individual PAC. It is equipped with an x86 dual-core CPU, 0/1/3/7 I/O expansion slots and a variety of connectives including dual Gigabit Ethernet, VGA, USB port, RS-232 and RS-485 interface. Local I/O slots are available to use our I-8K and I-87K series I/O modules and remote I/O expansions are available to use our Ethernet I/O modules and RS-485 I/O modules. User's programs can be saved in external storage device, such as CF Card or USB mass storage device.

LinPAC SDK is provided for users to develop LinPAC I/O applications rapidly and easily when I-7000/8000/87k 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.

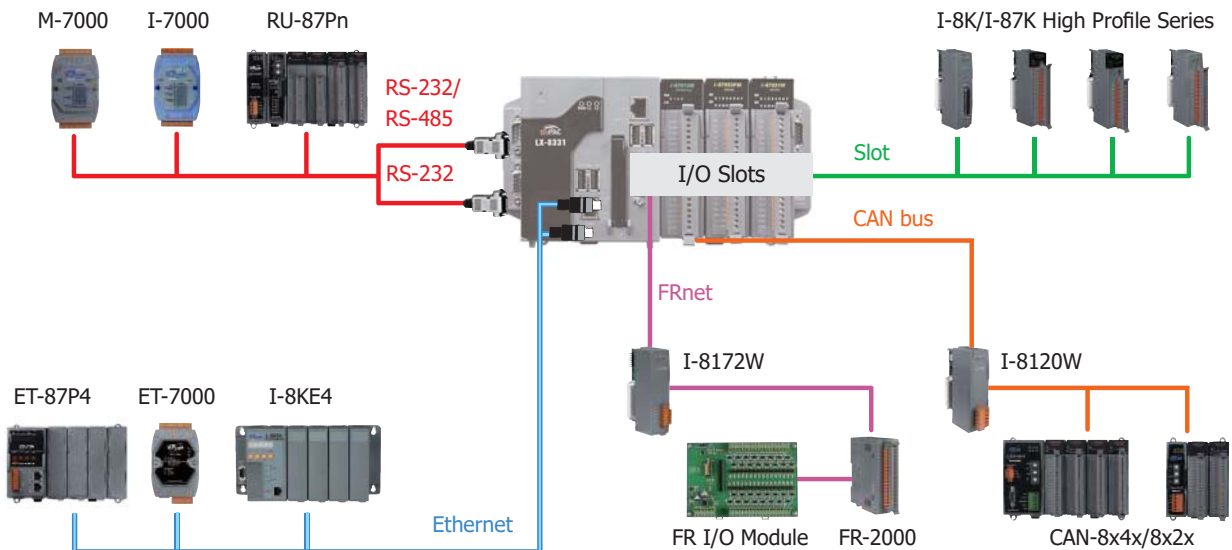
### Linux Kernel OS



Main advantage of the LX-8x3x 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 LX-8x3x is to allow the numerous enthusiastic Linux users to control their own embedded system easily within the Linux environment.

- 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

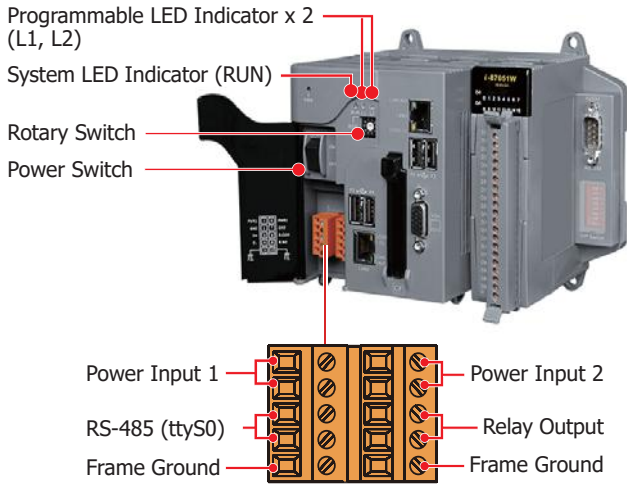


## Specifications

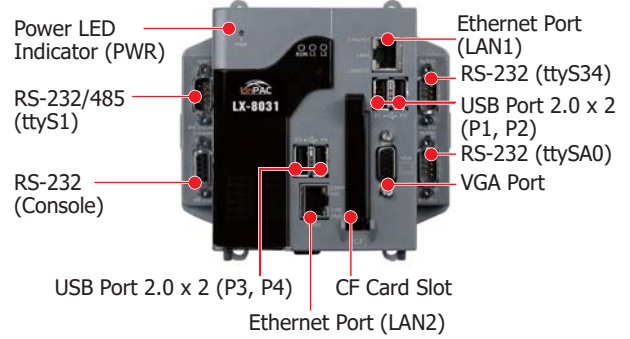
Model	LX-8031	LX-8131	LX-8331	LX-8731
<b>Software</b>				
OS	Linux kernel 3.2			
Service	SFTP server, Web server, SSH			
SDK	LinPAC SDK (GCC based toolchain and LinPAC Libraries)			
<b>Main Unit</b>				
CPU	x86 CPU, 1 GHz, dual-core			
SDRAM	2 GB DDR3 SDRAM			
MRAM	512 KB			
Flash	mSATA slot with one 32 GB SSD			
EEPROM	16 KB			
Storage	16 GB CF card (up to 32 GB)			
64-bit Hardware Serial Number	Yes, for software copy protection			
Watchdog Timer	Dual Watchdog Timer			
Real Time Clock	Provide seconds, minutes, hours, dates, day of week, month, year			
Rotary Switch	1 x 10 Position (0 ~ 9)			
DIP Switch	8-bit for address			
<b>Display</b>				
VGA Resolution	1280 × 1024 to 1920 × 1080 for 16:9 display; 640 × 480 to 1024 × 768 for 4:3 display			
LED Indicator	1 x Power, 1 x Run/Programmable, 2 x Programmable			
<b>Communication Port</b>				
Ethernet	2 x RJ-45 10/100/1000M Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)			
USB 2.0 (host)	4			
Console	RS-232 (RxD, TxD, CTS, RTS and GND); 3000 VDC isolated			
ttySA0	RS-232 (RxD, TxD and GND); non-isolated	Internal communication with the I-87K series modules in slots		
ttyS0	RS-485 (Data+, Data-) with internal self-tuner ASIC; 3000 VDC isolated			
ttyS1	RS-232/RS-485 (RxD, TxD, CTS, RTS, GND for RS-232, Data+, Data- for RS-485); 3000 VDC isolated			
ttyS34	RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI and GND); 3000 VDC isolated			
<b>I/O Expansion</b>				
I/O Expansion Slot	-	1	3	7
<b>Mechanical</b>				
Dimension (W x L x H), unit: mm	137 x 132 x 125	169 x 132 x 125	231 x 132 x 125	355 x 132 x 125
Installation	DIN-Rail, Wall mounting			
<b>Environmental</b>				
Operating Temperature	-25 ~ +75 °C			
Storage Temperature	-30 ~ +80 °C			
Humidity	10 ~ 90 % RH, Non-condensing			
<b>Power</b>				
Input Range	+10 ~ +30 VDC			
Isolation	1 kV			
Redundant Power Input	Yes, with one power relay (1 A @ 24 VDC) for alarm			
Capacity	20 W	25 W	30 W	35 W
Consumption	12 W (0.5 A @ 24 VDC)	16.6 W (0.69 A @ 24 VDC)	16.8 W (0.7 A @ 24 VDC)	18 W (0.75 A @ 24 VDC)

## Appearance

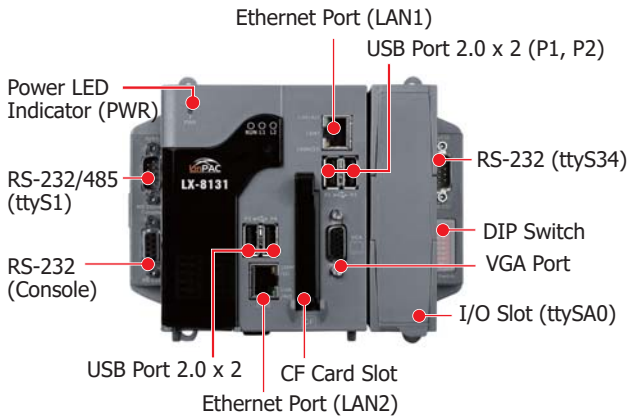
LX-8031/LX-8131/LX-8331/LX-8731



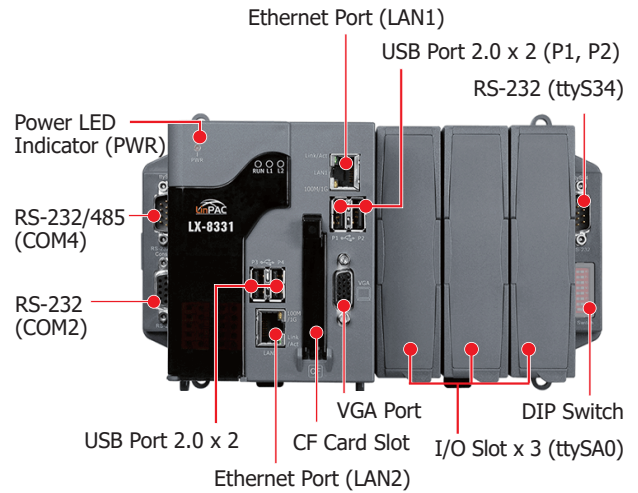
LX-8031



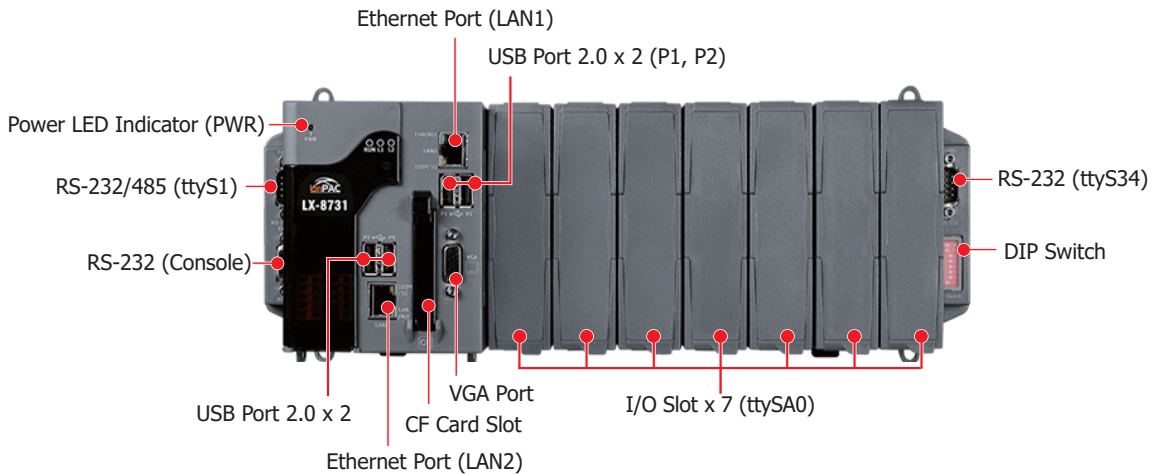
LX-8131



LX-8331

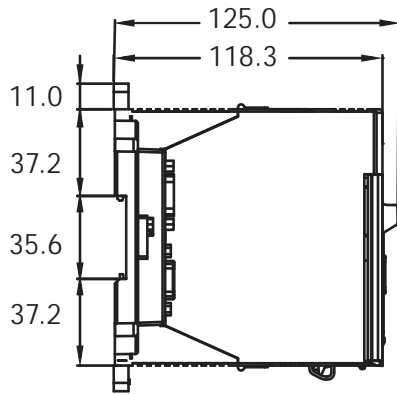


LX-8731



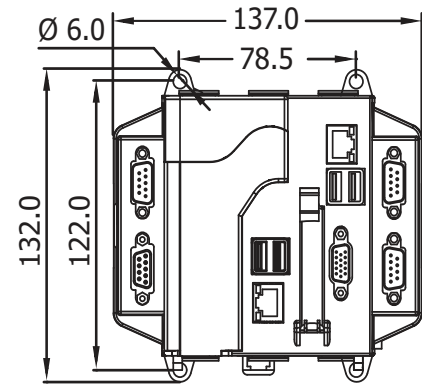
## ■ Dimensions (Units: mm)

LX-8031/LX-8131/LX-8331/LX-8731



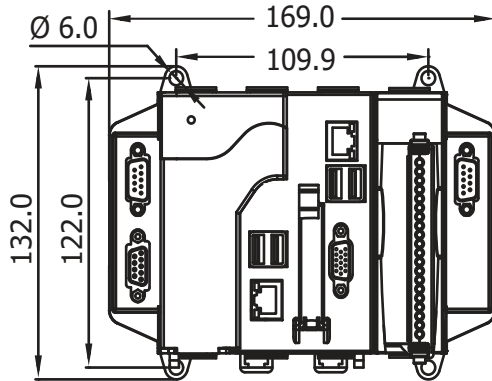
Left Side View

LX-8031



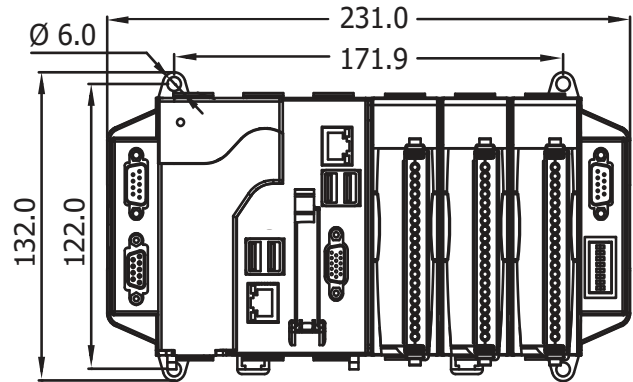
Front View

LX-8131



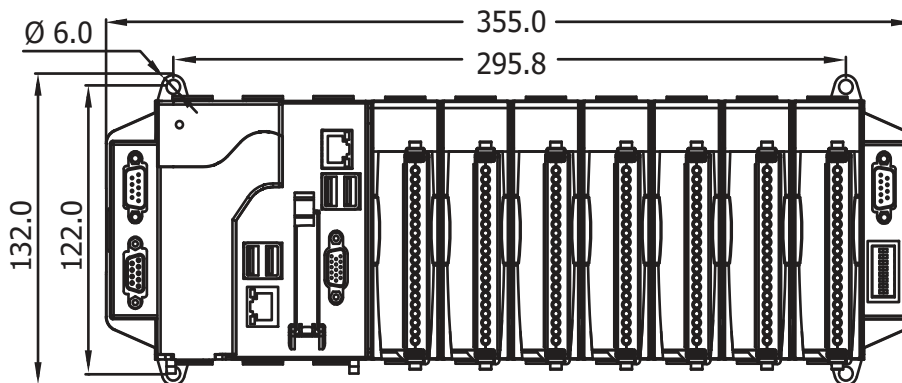
Front View

LX-8331



Front View

LX-8731



Front View

## ■ Ordering Information

<b>LX-8031 CR</b>	0-slot Linux Based PAC with x86 CPU (RoHS)
<b>LX-8131 CR</b>	1-slot Linux Based PAC with x86 CPU (RoHS)
<b>LX-8331 CR</b>	3-slot Linux Based PAC with x86 CPU (RoHS)
<b>LX-8731 CR</b>	7-slot Linux Based PAC with x86 CPU (RoHS)