

## Features

- LX-8x31 Series (x86 1 GHz, dual core CPU and Linux Kernel 3.2)
- Hard Real-Time Capability
- Embedded Service: Web Server, SFTP server, Web server, SSH
- Rich I/O Expansion Ability (RS-232/RS-485)
- VGA Port Output
- Redundant Power Inputs

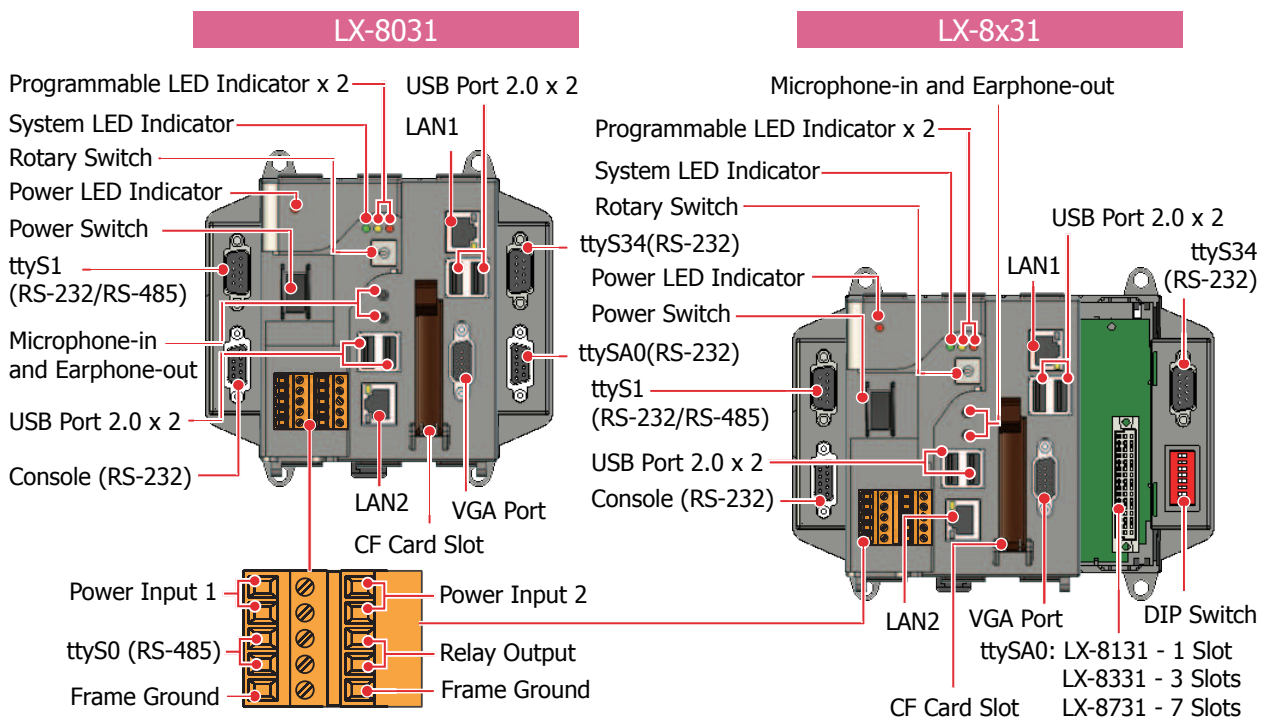


## Introduction

The LX-8000 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 x86 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.

## Appearance

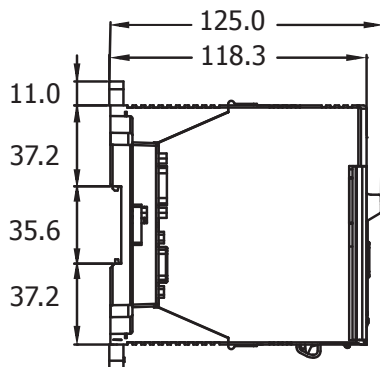


## Specifications

Models	LX-8031	LX-8131	LX-8331	LX-8731
System Software				
OS	Linux kernel 3.2			
Embedded Service	SFTP server, Web server, SSH			
SDK Provided	LinPAC SDK (GCC based toolchain and LinPAC Libraries)			
CPU Module				
CPU	x86 CPU, 1 GHz, dual-core			
System Memory	2 GB DDR3			
MRAM	512 KB; data valid up to 5 years			
Flash	mSATA slot with one 32 GB SSD			
EEPROM	16 KB; Data Retention: 40 years; 1,000,000 erase/write cycles			
CF Card	CF slot with one CF card (support up to 32 GB)			
RTC (Real Time Clock)	Provide second, minute, hour, date, day of week, month, year			
Hardware Serial Number	Yes, 64-bits for Software Copy Protection			
Dual Watchdog Timers	Yes (0.8 second)			
LED Indicators	3 Programmable LED indicators (RUN, L1 and L2)			
Rotary Switch	Yes (0 to 9)			
DIP Switch	Yes (8 bits)			
Audio	Microphone-In and Earphone-Out			
VGA & Communication Ports				
VGA	1280 x 1024 to 1920 x 1080 for 16:9 display; 640 x 480 to 1024 x 768 for 4:3 display			
Ethernet (Giga bit)	RJ-45 x 2, 10/100/1000 Base-T (Auto-negotiating, Auto MDI/MDI-X, LED indicators)			
USB 2.0	4			
ttySA0	RS-232 (RxD, TxD, GND); non-isolated	Internal communication with the high profile I-87K series modules in slots		
ttyS0	RS-485 (Data+, Data-); 3000 VDC isolated			
ttyS1	RS-232/485 (RxD, TxD, GND for RS-232; Data+, Data- for RS-485); 3000 VDC isolated			
Console	RS-232 (RxD, TxD, CTS, RTS and GND); 3000 VDC isolated			
ttyS34	RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI and GND); 3000 VDC isolated			
I/O Expansion Slots				
Slot Number	0	1	3	7
Mechanical				
Dimensions (W x L x H)	137 x 132 x 125 mm	169 x 132 x 125 mm	231 x 132 x 125 mm	355 x 132 x 125 mm
Installation	DIN-Rail or 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 VDC			
Isolation	1 kV			
Redundant Power Inputs	Yes, with one power relay (1 A @ 24 VDC) for alarm			
Capacity	2.2 A, 5 V supply to CPU and backplane, 20W in total	3.7 A, 5 V supply to CPU and backplane, 1.3 A, 5 V supply to I/O expansion slots, 20 W in total	3.8 A, 5 V supply to CPU and backplane, 3.2 A, 5 V supply to I/O expansion slots, 35 W in total	4.0 A, 5 V supply to CPU and backplane, 3.0 A, 5 V supply to I/O expansion slots, 35 W in total
Consumption	12W (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)

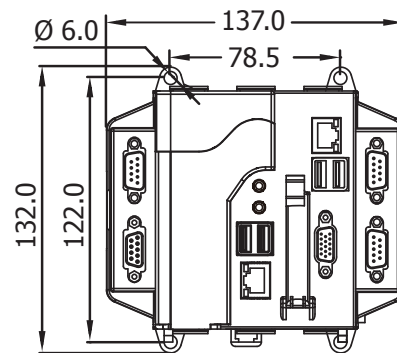
## ■ Dimensions

Side View



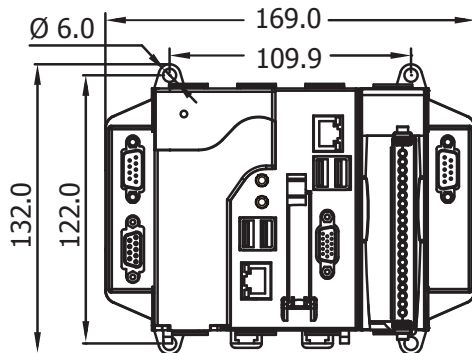
Front View

LX-8031



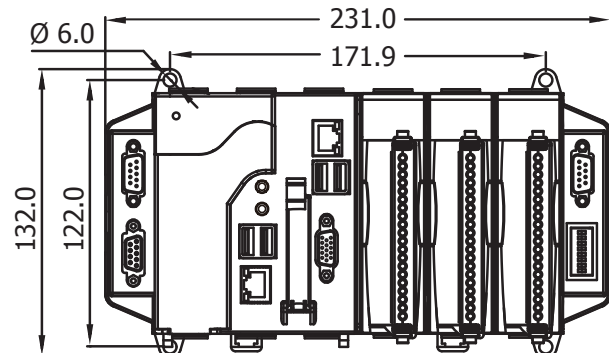
Front View

LX-8131



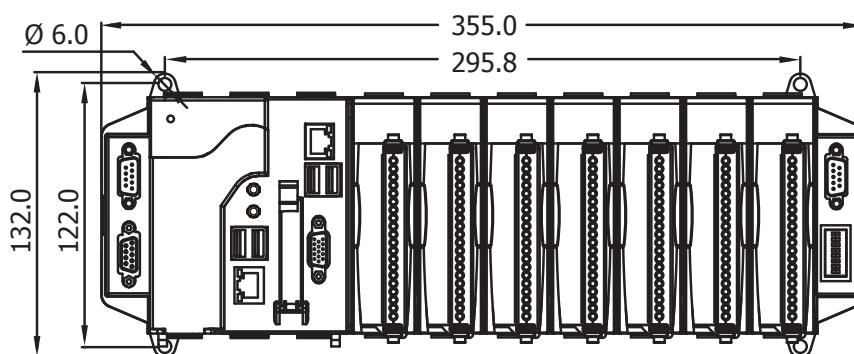
Front View

LX-8331



Front View

LX-8731



## ■ Ordering Information

<b>LX-8031</b>	Standard PAC with x86 CPU, Linux OS without I/O Slot
<b>LX-8131</b>	Standard PAC with x86 CPU, Linux OS and 1 I/O Slot
<b>LX-8331</b>	Standard PAC with x86 CPU, Linux OS and 3 I/O Slots
<b>LX-8731</b>	Standard PAC with x86 CPU, Linux OS and 7 I/O Slots