



## LX-9171/LX-9371/LX-9771 LX-9181/LX-9381/LX-9781

1/3/7-slot Linux Based PAC with E3827/E3845 CPU

### Features

- Linux Kernel 4.14
- E3827 (1.75 GHz, 64-bit dual core) CPU for LX-9171, LX-9371 and LX-9771
- E3845 (1.91 GHz, 64-bit quad core) CPU for LX-9181, LX-9381 and LX-9781
- 64-bit Hardware Serial Number
- Rich I/O Expansion Ability (RS-232/RS-485)
- VGA and HDMI Port Output
- Redundant Power Input
- Operating Temperature: -25 ~ +60 °C



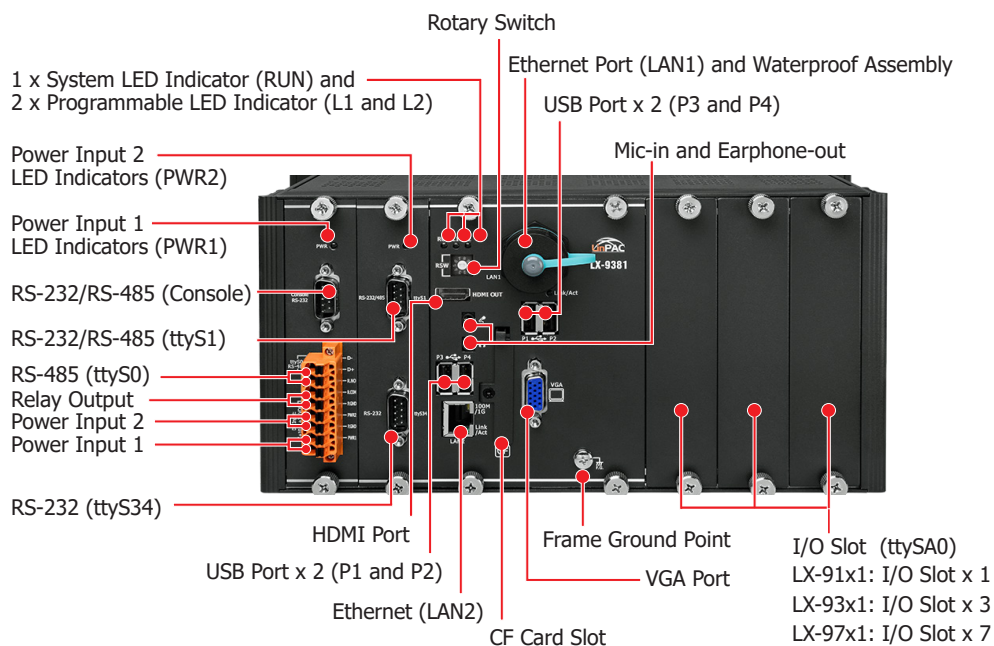
### Introduction

The LX-9000 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 Intel E3827/E3845 CPU, 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-9K and I-97K 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-7k/9k/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 make the LinPAC more powerful and users will be able to operate LinPAC to achieve their own project smoothly.

### Appearances



## Specifications

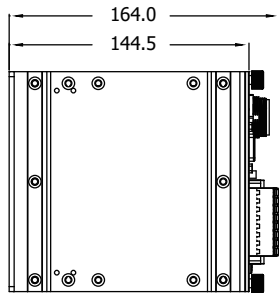
Model	LX-9171	LX-9371	LX-9771
<b>System Software</b>			
OS	Linux OS with kernel 4.14		
Embedded Service	SFTP server, Web server, SSH		
SDK Provided	Standard LinPAC SDK for Linux by GNU C language		
<b>CPU Module</b>			
CPU	E3827 (1.75 GHz, 64-bit quad core)		
SDRAM	2 GB DDR3		
MRAM	128 KB		
Flash (SSD)	mSATA slot with one 32 GB SSD		
EEPROM	16 kB		
CF	CF socket with one 16 GB CF 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	3 (RUN, L1, L2)		
Rotary Switch	Yes (0 ~ 9)		
<b>Communication Ports</b>			
VGA Resolution	640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 : 9)		
HDMI Resolution	640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 : 9)		
Dual Ethernet Ports	RJ-45, 10/100/1000M Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)		
USB 2.0	4		
ttySA0	Internal communication with the I-97K series modules in slots		
Console	RS-232/485 (Rx/D, Tx/D and GND for RS-232; Data+, Data- for RS-485); 3000 VDC isolated		
ttyS0	RS-485 (Data+, Data-); 3000 VDC isolated		
ttyS1	RS-232/485 (Rx/D, Tx/D, CTS, RTS and GND for RS-232; Data+, Data- for RS-485); 3000 VDC isolated		
ttyS34	RS-232 (Rx/D, Tx/D, CTS, RTS, DSR, DTR, CD, RI and GND); 3000 VDC isolated		
Audio	Mic-in and Earphone-out		
I/O Expansion Slot	1	3	7
<b>Mechanical</b>			
Dimensions (W x L x H)	239 mm x 164 mm x 133 mm	300 mm x 164 mm x 133 mm	422 mm x 164 mm x 133 mm
Installation	DIN-Rail Mounting/Wall Mounting		
<b>Environmental</b>			
Operating Temperature	-25 to +60 °C		
Storage Temperature	-30 to +80 °C		
Ambient Relative Humidity	10 to 90% RH (non-condensing)		
<b>Power</b>			
Input Range	+10 to +30 VDC		
Isolation	1 kV		
Redundant Power Input	Yes, with one power relay (1A @ 24 VDC) for alarm		
Capacity	3.7 A, 5 V supply to CPU and backplane, 3.3 A, 5 V supply to I/O expansion slots, 35 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	16.6 W (0.63 A @ 24 VDC)	16.8 W (0.7 A @ 24 VDC)	18 W (0.75 A @ 24 VDC)

## Specifications

Model	LX-9181	LX-9381	LX-9781
<b>System Software</b>			
OS	Linux OS with kernel 4.14		
Embedded Service	SFTP server, Web server, SSH		
SDK Provided	Standard LinPAC SDK for Linux by GNU C language		
<b>CPU Module</b>			
CPU	E3845 (1.91 GHz, 64-bit quad core)		
SDRAM	2 GB DDR3		
MRAM	128 KB		
Flash (SSD)	mSATA slot with one 32 GB SSD		
EEPROM	16 kB		
CF	CF socket with one 16 GB CF 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	3 (RUN, L1, L2)		
Rotary Switch	Yes (0 ~ 9)		
<b>Communication Ports</b>			
VGA Resolution	640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 : 9)		
HDMI Resolution	640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 : 9)		
Dual Ethernet Ports	RJ-45, 10/100/1000M Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)		
USB 2.0	4		
ttySA0	Internal communication with the I-97K series modules in slots		
Console	RS-232/485 (Rx/D, Tx/D and GND for RS-232; Data+, Data- for RS-485); 3000 VDC isolated		
ttyS0	RS-485 (Data+, Data-); 3000 VDC isolated		
ttyS1	RS-232/485 (Rx/D, Tx/D, CTS, RTS and GND for RS-232; Data+, Data- for RS-485); 3000 VDC isolated		
ttyS34	RS-232 (Rx/D, Tx/D, CTS, RTS, DSR, DTR, CD, RI and GND); 3000 VDC isolated		
Audio	Mic-in and Earphone-out		
I/O Expansion Slot	1	3	7
<b>Mechanical</b>			
Dimensions (W x L x H)	239 mm x 164 mm x 133 mm	300 mm x 164 mm x 133 mm	422 mm x 164 mm x 133 mm
Installation	DIN-Rail Mounting/Wall Mounting		
<b>Environmental</b>			
Operating Temperature	-25 to +60 °C		
Storage Temperature	-30 to +80 °C		
Ambient Relative Humidity	10 to 90% RH (non-condensing)		
<b>Power</b>			
Input Range	+10 to +30 VDC		
Isolation	1 kV		
Redundant Power Input	Yes, with one power relay (1A @ 24 VDC) for alarm		
Capacity	4.1 A, 5 V supply to CPU and backplane, 2.5 A, 5 V supply to I/O expansion slots, 33 W in total	4.2 A, 5 V supply to CPU and backplane, 2.4 A, 5 V supply to I/O expansion slots, 33 W in total	4.4 A, 5 V supply to CPU and backplane, 2.2 A, 5 V supply to I/O expansion slots, 33 W in total
Consumption	18.5 W (0.77 A @ 24 VDC)	18.7 W (0.78 A @ 24 VDC)	20.4 W (0.85 A @ 24 VDC)

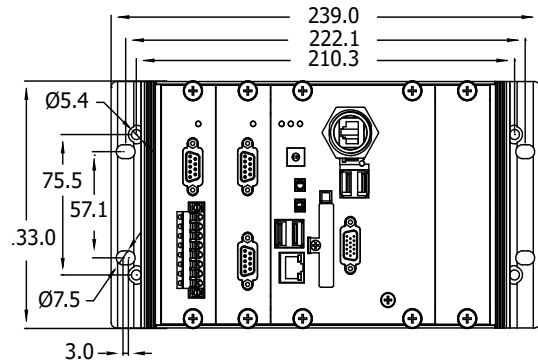
## ■ Dimensions (Units: mm)

LX-9171/LX-9181/LX-9371/LX-9381/LX-9771/LX-9781



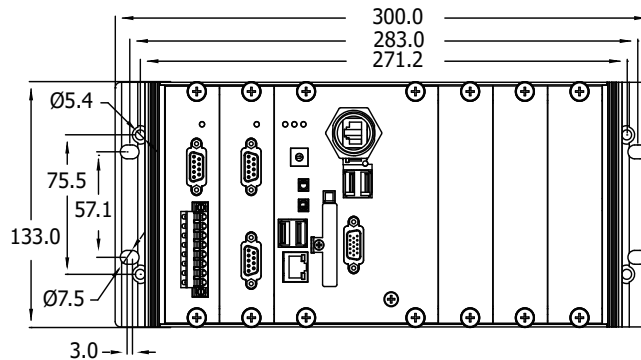
Front View

LX-9171/LX-9181



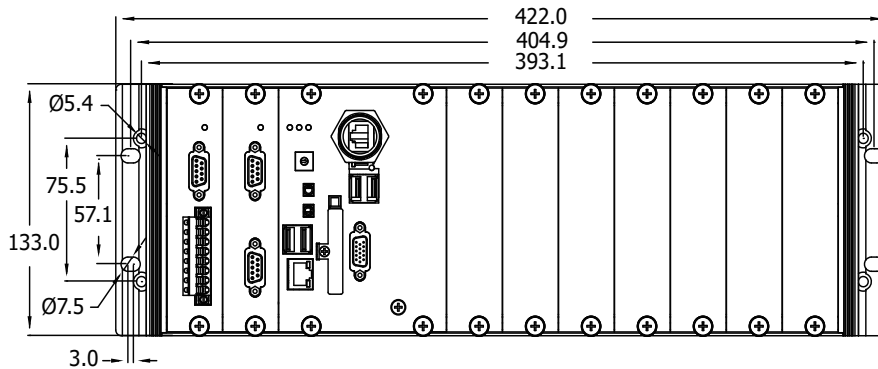
Top View

LX-9371/LX-9381



Top View

LX-9771/LX-9781



Top View

## ■ Ordering Information

<b>LX-9171</b>	1-slot Linux Based PAC with E3827 CPU, Matel Case (RoHS)
<b>LX-9371</b>	3-slot Linux Based PAC with E3827 CPU, Matel Case (RoHS)
<b>LX-9771</b>	7-slot Linux Based PAC with E3827 CPU, Matel Case (RoHS)
<b>LX-9181</b>	1-slot Linux Based PAC with E3845 CPU, Matel Case (RoHS)
<b>LX-9381</b>	3-slot Linux Based PAC with E3845 CPU, Matel Case (RoHS)
<b>LX-9781</b>	7-slot Linux Based PAC with E3845 CPU, Matel Case (RoHS)