



Highlight Information

- Linux Kernel 4.4
- E3845 (1.91 GHz, 64-bit quad core) CPU for LX-9181, LX-9381 and LX-9781
- E3827 (1.75 GHz, 64-bit dual core) CPU for LX-9171, LX-9371 and LX-9771
- 64-bit Hardware Serial Number
- Rich I/O Expansion Ability (RS-232/RS-485)
- Redundant Power Input

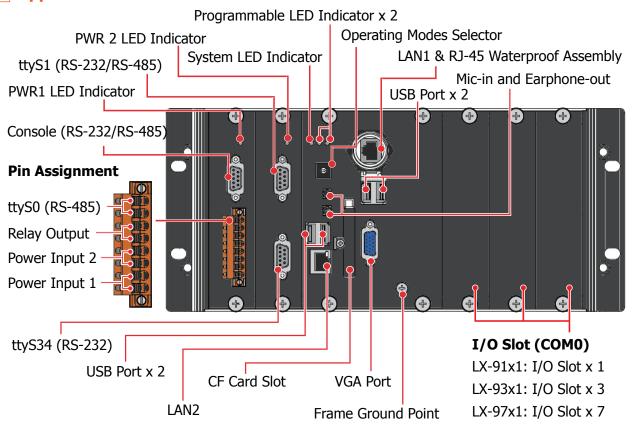


Introduction _

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.

Appearance .



☑ Specifications _____

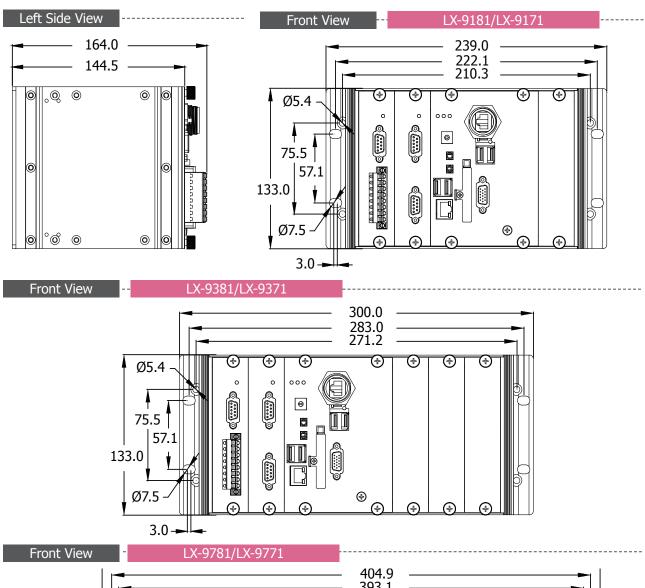
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Embedded Service SFTP server, Web server, SSH SDK Provided Standard LinPAC SDK for Linux by GNU C language CPU Module CPU E3845 (1.91 GHz, 64-bit quad core) SDRAM 2 GB DDR3 MRAM 128 KB Flash (SSD) mSATA slot with one 32 GB SSD EEPROM 16 kB CF CF socket 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) VGA & Communication Ports VGA Resolution 640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 :				
SDK Provided CPU Module 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) VGA & Communication Ports VGA Resolution 640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 :	Linux OS with kernel 4.4			
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SDRAM MRAM 128 KB Flash (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 Programmable LED Indicator Rotary Switch Yes Yes Yes VGA & Communication Ports VGA Resolution 2 GB DDR3 MRAM 128 KB MSATA slot with one 32 GB SSD EEPROM 16 kB CF card (support up to 32 GB) Provide second, minute, hour, date, day of week, month, year Yes, for Software Copy Protection 3 (RUN, L1, L2) Rotary Switch Yes (0 ~ 9) VGA & Communication Ports VGA Resolution 640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 :				
MRAM Flash (SSD) EEPROM 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 Pual Watchdog Timers Programmable LED Indicator Rotary Switch Yes Yes Yes Yes Yes O ~ 9) VGA & Communication Ports VGA Resolution 128 KB MSATA slot with one 32 GB SSD EEPROM 16 kB CF card (support up to 32 GB) Provide second, minute, hour, date, day of week, month, year Yes, for Software Copy Protection 3 (RUN, L1, L2) Yes Yes O ~ 9)	E3845 (1.91 GHz, 64-bit quad core)			
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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 $(0 \sim 9)$ VGA & Communication Ports VGA Resolution 640 x 480 to 1024 x 768 $(4:3)$, 1280 x 1024 $(5:4)$ and 1920 x 1080 $(16:4)$	mSATA slot with one 32 GB SSD			
RTC (Real Time Clock) Provide second, minute, hour, date, day of week, month, year 64-bit Hardware Serial Number Yes, for Software Copy Protection Yes Programmable LED Indicator Rotary Switch Yes $(0 \sim 9)$ VGA & Communication Ports VGA Resolution 640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 :	16 kB			
64-bit Hardware Serial Number Yes, for Software Copy Protection Dual Watchdog Timers Yes Programmable LED Indicator $3 (RUN, L1, L2)$ Rotary Switch Yes $(0 \sim 9)$ VGA & Communication Ports VGA Resolution $640 \times 480 \text{ to } 1024 \times 768 \text{ (4 : 3), } 1280 \times 1024 \text{ (5 : 4) } \text{ and } 1920 \times 1080 \text{ (16 : 4)}$				
Dual Watchdog Timers Yes Programmable LED Indicator 3 (RUN, L1, L2) Rotary Switch Yes $(0 \sim 9)$ VGA & Communication Ports VGA Resolution 640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 :	, ,, , ,			
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Dual Ethernet Ports RJ-45, 10/100/1000M Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indica	640 x 480 to 1024 x 768 (4 : 3), 1280 x 1024 (5 : 4) and 1920 x 1080 (16 : 9)			
	RJ-45, 10/100/1000M Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)			
USB 2.0 4	4			
ttySA0 Internal communication with the I-97K series modules in slots	Internal communication with the I-97K series modules in slots			
Console RS-232/485 (RxD, TxD and GND for RS-232; Data+, Data- for RS-485); 3000 VDC	RS-232/485 (RxD, TxD 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 (RxD, TxD, CTS, RTS and GND for RS-232; Data+, Data- for RS-48 3000 VDc isolated	RS-232/485 (RxD, TxD, CTS, RTS and 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 isolate	RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI and GND); 3000 Vpc isolated			
Audio Mic-in and Earphone-out				
I/O Expansion Slot 1 3 7				
Mechanical				
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	239 mm x 164 mm x 133 mm 300 mm x 164 mm x 133 mm 422 mm x 164 mm x 133 mn			
Installation DIN-Rail Mounting/Wall Mounting				
Environmental				
Operating Temperature -25 to +60 °C	-25 to +60 °C			
Storage Temperature -30 to +80 °C	-30 to +80 °C			
Ambient Relative Humidity 10 to 90% RH (non-condensing)	10 to 90% RH (non-condensing)			
Power				
Input Range +10 to +30 VDC	+10 to +30 VDC			
Isolation 1 kV	1 kV			
Redundant Power Inputs Yes, with one power relay (1 A @ 24 VDC) for alarm	Yes, with one power relay (1 A @ 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 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 @ 2	ts, 33 W			

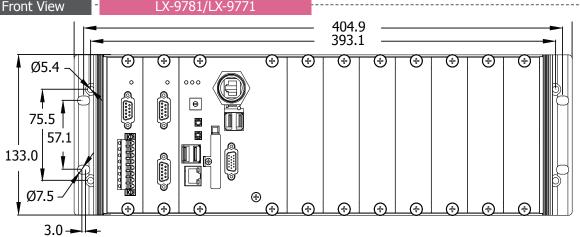


☑ Specifications _______

Models	LX-9171	LX-9371	LX-9771	
System Software				
OS	Linux OS with kernel 4.4			
Embedded Service	SFTP server, Web server, SSH			
SDK Provided	Standard LinPAC SDK for Linux by GNU C language			
CPU Module				
CPU	E3827 (1.75 GHz, 64-bit dual 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 (0.8 second)			
Programmable LED Indicator	3 (RUN, L1, L2)			
Rotary Switch	Yes (0 ~ 9)			
VGA & Communication Ports	5			
VGA 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 (RxD, TxD 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 (RxD, TxD, CTS, RTS and GND for RS-232; Data+, Data- for RS-485);			
ttyS34	RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI and GND); 3000 Vpc isolated			
Audio	Mic-in and Earphone-out			
I/O Expansion Slot	1	3	7	
Mechanical				
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			
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 Vpc) 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 (0.69 A @ 24 VDC)	16.8 W (0.7 A @ 24 VDC)	18 W (0.75 A @ 24 VDC)	

Dimensions





Ordering Information _

LX-9181	Standard LX-9000 with E3845 CPU, Linux OS and 1 I/O Slot
LX-9381	Standard LX-9000 with E3845 CPU, Linux OS and 3 I/O Slots
LX-9781	Standard LX-9000 with E3845 CPU, Linux OS and 7 I/O Slots
LX-9171	Standard LX-9000 with E3827 CPU, Linux OS and 1 I/O Slot
LX-9371	Standard LX-9000 with E3827 CPU, Linux OS and 3 I/O Slot
LX-9771	Standard LX-9000 with E3827 CPU, Linux OS and 7 I/O Slot