



# LP-5231M

Linux Based Metal PAC with Cortex-A8 CPU 1 LAN Port

# ■ Cortex-A8, 1 GHz CPU ■ Linux kernel 3.2.14 Inside ■ 512 MB SDRAM and 512 MB Flash ■ 64-bit Hardware Serial Number ■ Hard Real-Time Capability (RTC) ■ I/O Expansion Bus ■ 10/100/1000M Ethernet Port ■ 4 Serial Ports (RS-232/485) ■ Operating Temperature: -25 to +75 ° C

### **■** Introduction

The LP-5231M is equipped with a Cortex-A8 CPU (1 GHz) running a Linux operating system (Linux Kernel 3.2.14), a variant of input/output ports (VGA, USB, Ethernet, RS-232/485), and powerful software including development tools. Linux Kernel 3.2.14 is a compact and real-time OS used to quickly create time critical and high performance applications.

Main advantage of the LP-5231M is its high quality control system, including its stability, small core size, optional I/O expansion board, support for Web services (Web/SFTP/SSH server). Using the built-in Flash and microSD, the LinPAC can save application program, image file and data.

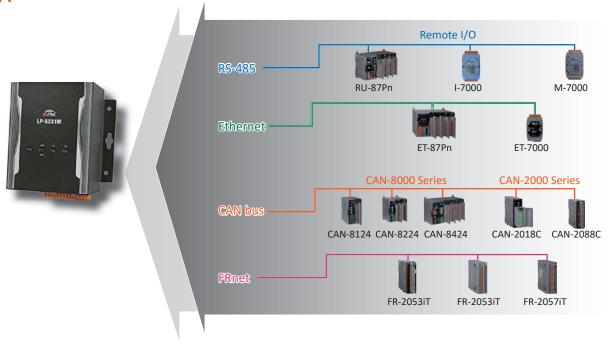
### **Linux Kernel OS**



Main advantage of the LP-5231M 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 LP-5231M 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

## Appications



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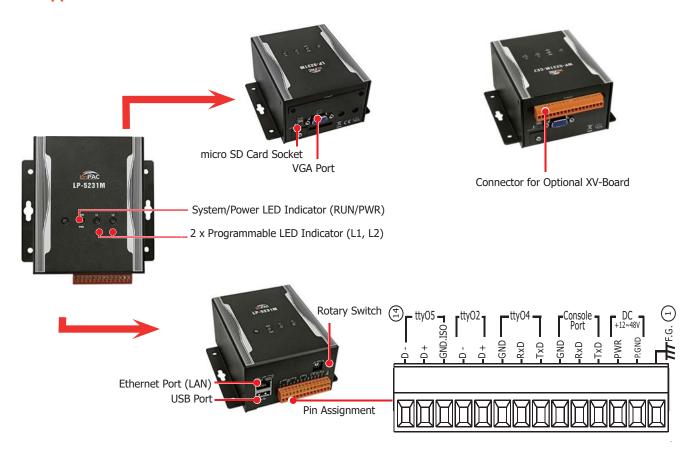
# **■ Specifications**

Model	LP-5231M	
System Software		
OS	Linux Kernel 3.2.14	
Service	SFTP server, Web server, SSH	
SDK	LinPAC SDK (GCC based toolchain and LinPAC Libraries)	
CPU Module		
CPU	Cortex-A8, 1.0 GHz	
System Memory	512 MB DDR3 SDRAM	
Flash	512 MB	
FRAM	64 KB	
Storage	4 GB microSD card (up to 32 GB)	
RTC (Real Time Clock)	Provide seconds, minutes, hours, dates, day of week, month, year	
64-bit Hardware Serial Number	Yes, for software copy protection	
Watchdog Timer	Dual Watchdog Timer	
Rotary Switch	1 x 10 Position (0 ~ 9)	
Buzzer	Yes	
Display		
VGA	1 (max. resolution up to 1280 x 1024)	
LED Indicator	4 (Power, Running and 2 user defined LEDs)	
Communication Ports		
Ethernet	1 x RJ-45, 10/100/1000 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)	
USB 2.0 (host)	1	
Console Port	RS-232 (RxD, TxD and GND); Non-isolated	
ttyO2	RS-485 (Data+, Data-); Non-isolated	
ttyO4	RS-232 (RxD, TxD and GND); Non-isolated	
ttyO5	RS-485 (Data+, Data-); 2500 VDC isolated	
I/O Expansion		
I/O Expansion Bus	One optional XV-board	
Mechanical		
Casing	Metal	
Dimensions (W x L x H)	117 mm x 126 mm x 58 mm	
Ingress Protection Rating	IP30 (Aluminum)	
Installation	DIN-Rail, Wall mounting	
Environmental		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ∼ +80 °C	
Humidity	10 ~ 90 % RH, Non-condensing	
Power		
Input Range	+12 ~ 48 VDC	
Consumption	4.8 W	

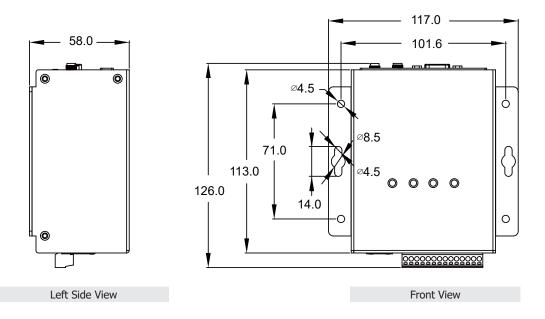
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# **Appearances**



# **■** Dimensions (Units: mm)



# **■** Ordering Information

LP-5231M CR	Linux Based Metal PAC with Cortex-A8 CPU 1 LAN Port. Metal Case (RoHS)	

# Accessories

XV-Board	Add-on I/O Expansion Board		
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