

LP-5231PM-4GE

4G Linux Based Metal PAC
with Cortex-A8 CPU, 1 LAN Port, GPS

Features

- 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)
- Industrial Tri-band 4G module
- 4G modem
- Operating Temperature: -25 ~ +75 ° C

Introduction

The LP-5231PM-4GE is equipped with a Cortex-A8 CPU (1 GHz) and running a Linux operating system (Linux Kernel 3.2.14) that is a compact and real-time OS used to quickly create time critical and high performance applications.

The optional I/O expansion board, XV-board, provides high-protection I/O. Using the built-in Flash and microSD, the LinPAC can save application program, image file and data.

The 4G module of LP-5231PM-4GE work on frequencies of WCDMA 2100/900/850 MHz, FDD LTE: B1/B3/B5/B7/B8/B20 and GSM 850/900/1800/1900 MHz. These modules utilize the 3G/4G network for convenient and inexpensive data transfer from remote instruments, meters, computers or control systems in either live data or packet data. These modules has the integrated TCP/IP stack so that even simple controllers with serial communications ports can be connected to the modem without the need for special driver implementation. With the features of theirs, the systems can be SMS and GPRS/3G/4G connection applications with our PAC.

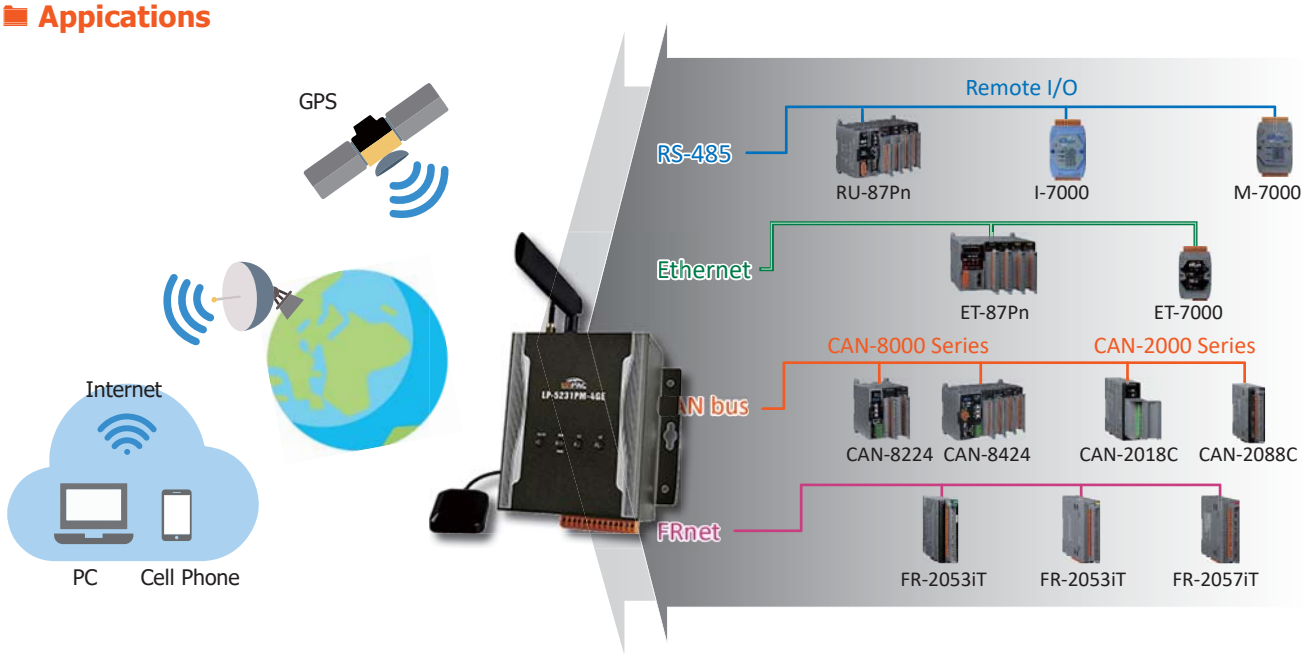
Linux Kernel OS



Main advantage of the LP-5231PM-4GE 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-5231PM-4GE 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



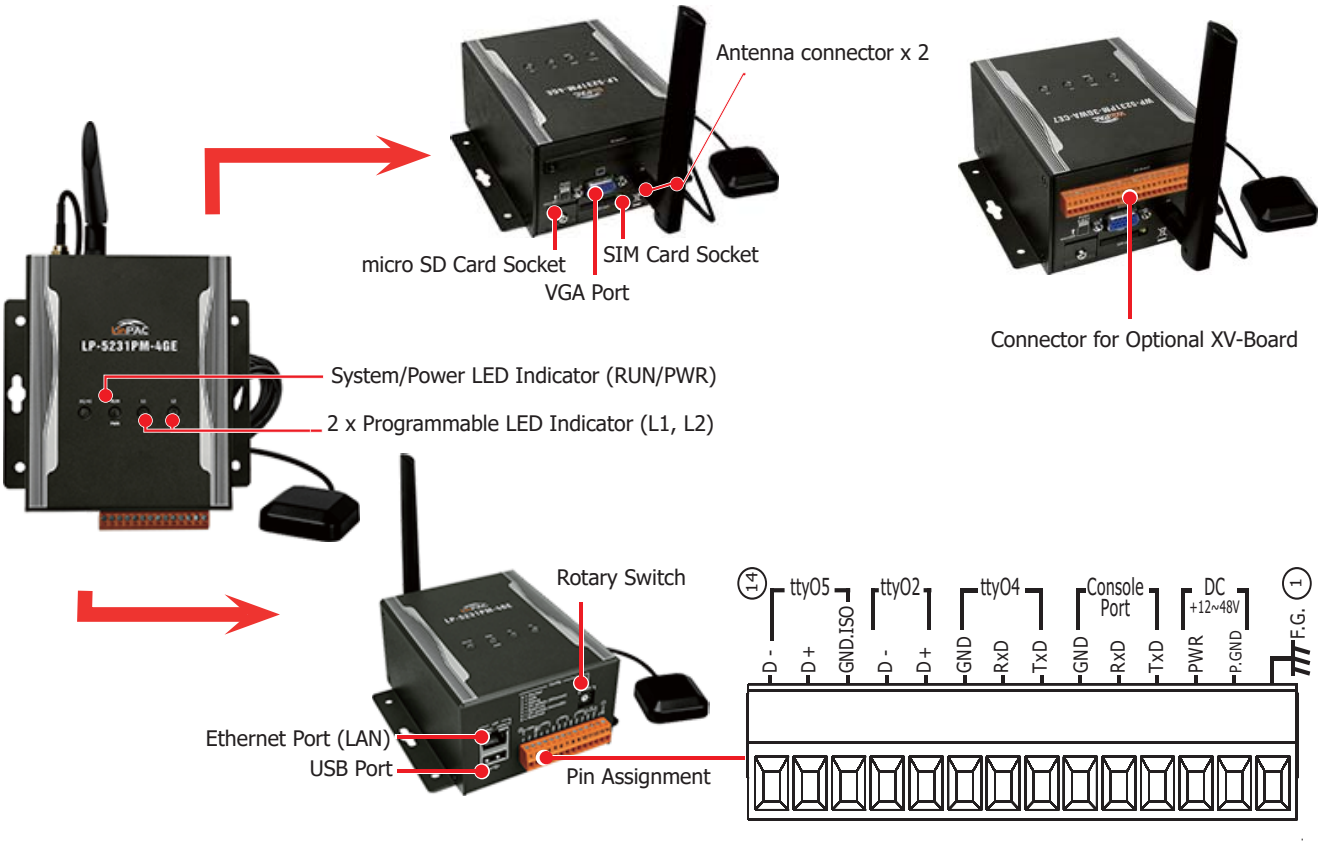
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Specifications

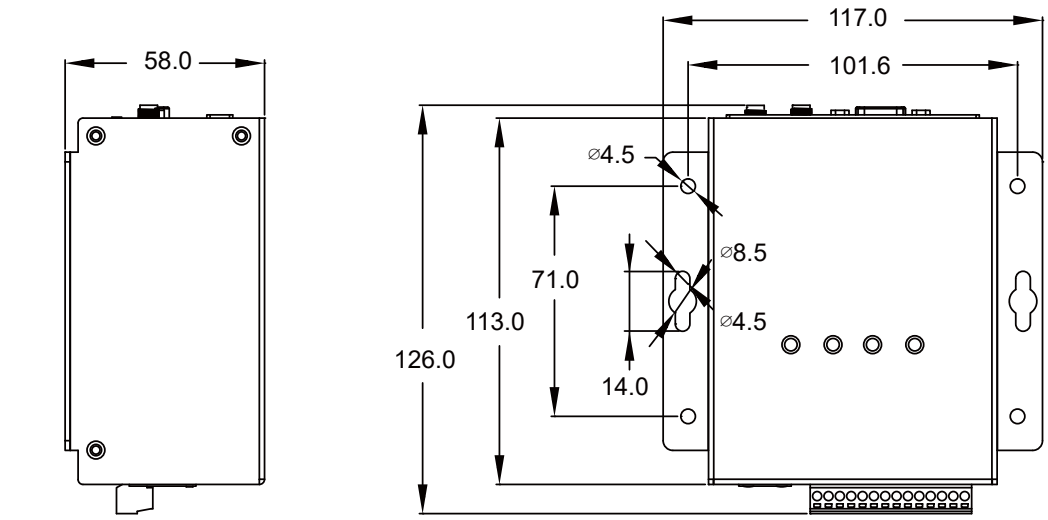
System Software	
OS	Linux Kernel 3.2.14
Service	SFTP server, Web server, SSH
SDK	LinPAC SDK (GCC based toolchain and LinPAC Libraries)
Main Unit	
CPU	Cortex-A8, 1.0 GHz
SDRAM	512 MB DDR3
Flash	512 MB
FRAM	64 KB
Storage	4 GB microSD card (up to 32 GB)
RTC (Real Time Clock)	Provide seconds, minutes, hours, 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)
LED Indicator	1 x Power, 1 x Run, 2 x Programmable
Buzzer	Yes
Display	
VGA	Analog RGB, Resolution: Up to 1280 x 1024
I/O Expansion	
I/O Type	One optional XV-board
Communication Ports	
Ethernet	1 x RJ-45, 10/100/1000M Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED Indicators)
USB	1 x USB 2.0 (host)
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
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 ~ 95 % RH (Non-condensing)
Power	
Input Range	+12 ~ 48 VDC
Consumption	6.5 W
4G System	
Frequency Band	GSM: 850/900/1800/1900 MHz
Data Transmission	Download Max. 100 Mbps; Upload Max. 50 Mbps
3G System	
Frequency Band	WCDMA 850/900/2100 MHz
Data Transmission	DC-HSPA+ Download: Max. 42 Mbps; Upload: Max. 5.76 Mbps TD-SCDMA Download: Max. 4.2 Mbps; Upload: Max. 2.2 Mbps CDMA2000 EVDO Download: Max. 14.7 Mbps; Upload: Max. 5.4 Mbps
GPS System	
Channels	32
Protocol	NMEA 0183

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Appearances



Dimensions (Units: mm)



Left Side View

Front View

Ordering Information

LP-5231PM-4GE CR	4G Linux Based Metal PAC with Cortex-A8 CPU, 1 LAN Port, GPS. Metal Case (RoHS)

Accessories

XV-Board	Add-on I/O Expansion Board

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