Features

- Cortex-A8, 1GHz CPU
- Linux kernel 3.2.1.4
- 512 MB DDR3 and 512 MB Flash
- 64-bit Hardware Serial Number
- Real-Time Capability
- I/O Expansion Bus
- 10/100/1000M Ethernet Ports
- 3 Serial Ports (RS-232/485)
- Operating Temperature: -25 ~ +75°C
- Industrial Tri-band 3G module
- 3G modem

LP-5231PM-3GWA

📁 Introduction

The LP-5231-3GWA is equipped a Cortex-A8 CPU (1 GHz) and using Linux operating system(Linux Kernel 3.2.14). 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-5231-3GWA 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).

The 3G module work on frequencies of WCDMA 2100/1900/900/850 MHz and GSM 850/900/1800/1900 MHz. These modules utilize the 3G 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 or 3G connection applications with our PAC.

📁 Linux Kernel OS

Main advantage of the LP-5231PM-3GWA 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-3GWA is to allow the numerous enthusiastic Linux users to control their own embedded system easily within the Linux environment.
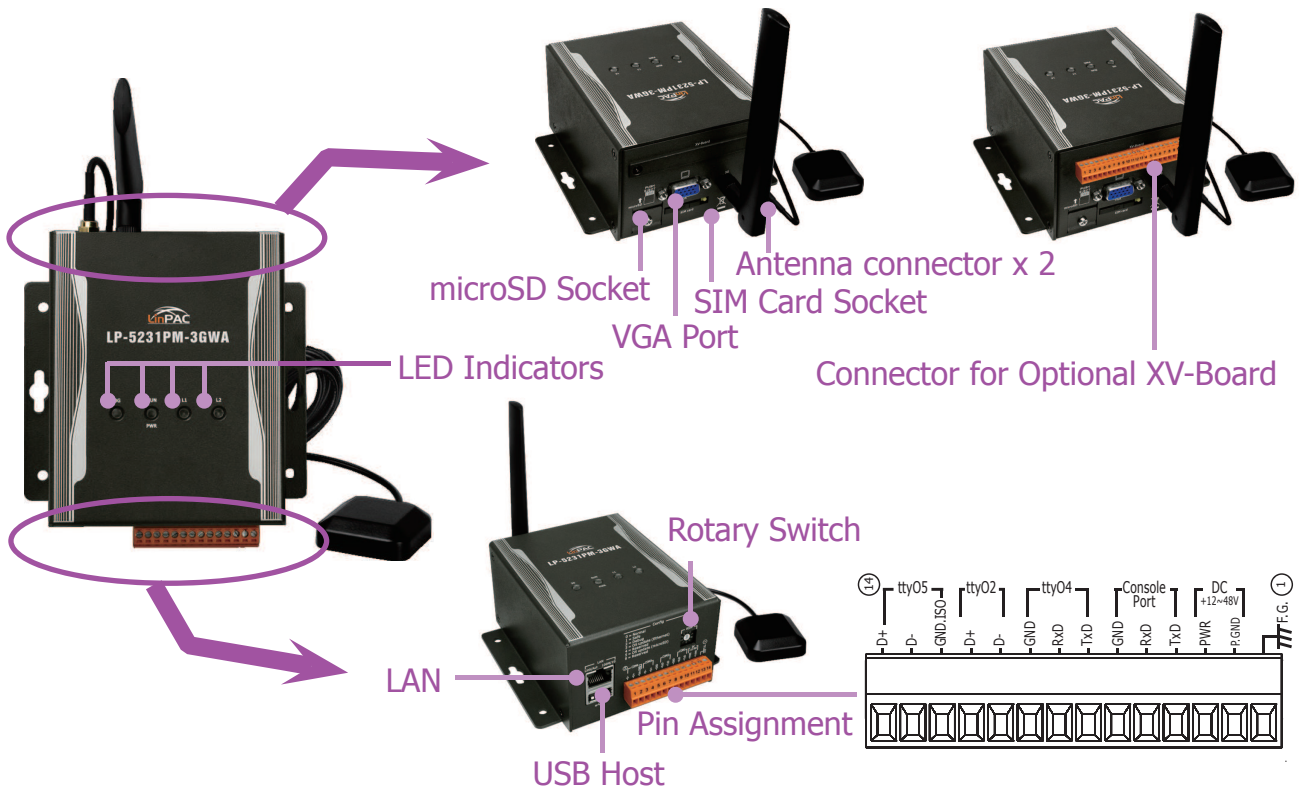
- LinPAC SDK for Windows and Linux
- Support for GNU C Language
- Support for GUI: Using GTK + Library
- Support for DCON, Modbus and SNMP Protocols
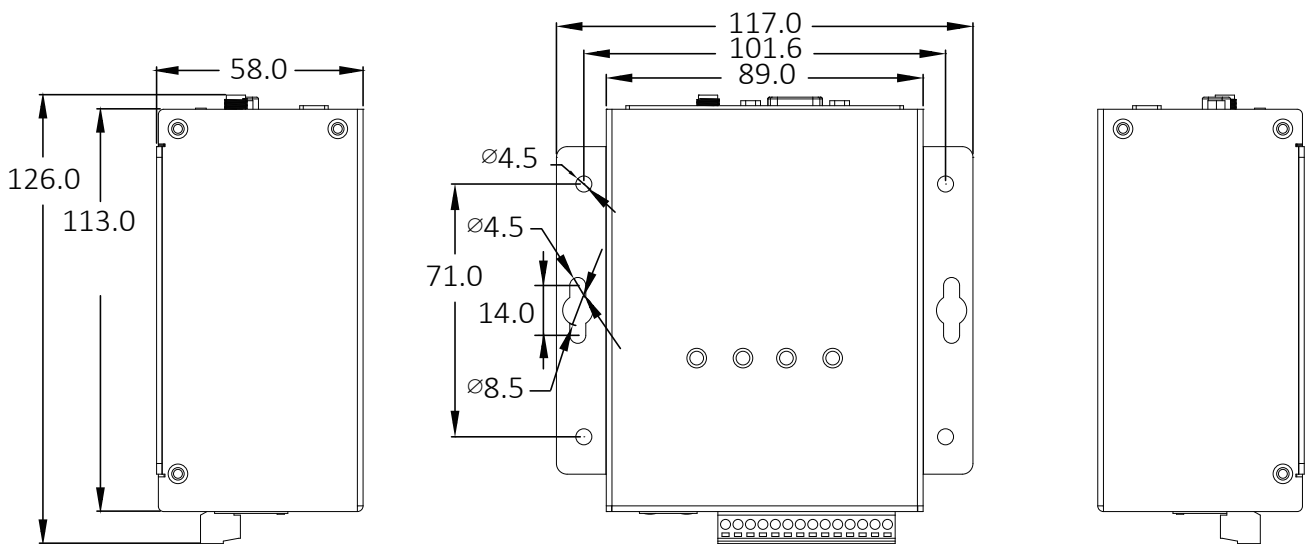- Support for USB to Serial Converter

📂 Specifications

Models	LP-5231PM-3GWA
System Software	
OS	Linux Kernel 3.2.14
Embedded Service	SFTP server, Web server, SSH
SDK Provided	LinPAC SDK (GCC based toolchain and LinPAC Libraries)
CPU Module	
CPU	Cortex-A8, 1GHz
SDRAM	512 MB DDR3
Flash	512 MB
FRAM	64 KB
Expansion Flash Memory	microSD socket with one microSD card (support up to 32 GB microSDHC card)
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
LED Indicators	4 LEDs (Power, Running and 2 user defined LEDs)
Rotary Switch	Yes (0 to 9)
VGA and Communication Ports	
VGA Resolution	800 × 600
Ethernet	RJ-45 x 1, 10/100/1000 Based-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 V_{DC} isolated
I/O Expansion	
I/O Expansion Bus	Yes, one optional XV-board
Mechanical	
Casing	Metal
Dimensions (W x L x H)	117 mm x 126 mm x 58 mm
Installation	DIN Rail and Wall Mounting
Environmental	
Operating Temperature	-25 to +75°C
Storage Temperature	-40 to +80°C
Ambient Relative Humidity	10 to 90% RH (non-condensing)
Power	
Input Range	+12 to +48 V_{DC}
Consumption	6.5 W
GSM System	
Frequency Band	GSM: 850/900/1800/1900 MHz
GPRS Connectivity	GPRS class 12/10; GPRS station class B
Data GPRS	Downlink transfer: Max. 85.6 kbps; Uplink transfer: Max 42.8k bps
3G System	
Frequency Band	WCDMA 850/900/1900/2100 MHz
Data Transmission	WCDMA / HSPA+, Download: Max. 14.4Mbps; Upload: Max 5.76Mbps
GPS System (option)	
Support Channels	32
Protocol Support	NMEA 0183

📂 Appearance

microSD Socket
VGA Port
SIM Card Socket
Antenna connector x 2
Connector for Optional XV-Board
LED Indicators
Rotary Switch
LAN
Pin Assignment
USB Host

📂 Dimension

58.0
126.0
113.0
117.0
101.6
89.0
∅4.5
∅4.5
71.0
14.0
∅8.5

📂 Ordering Information

LP-5231PM-3GWA	PAC with Linux OS and GPS Function (RoHS)

📂 Option Accessories

XV-Board	Add-on I/O Expansion Board