ICP DAS

LP-5231M

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

⊞ 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)
- ■ Operating Temperature: -25 to +75 ° C

CE FC RoHS

■ 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.
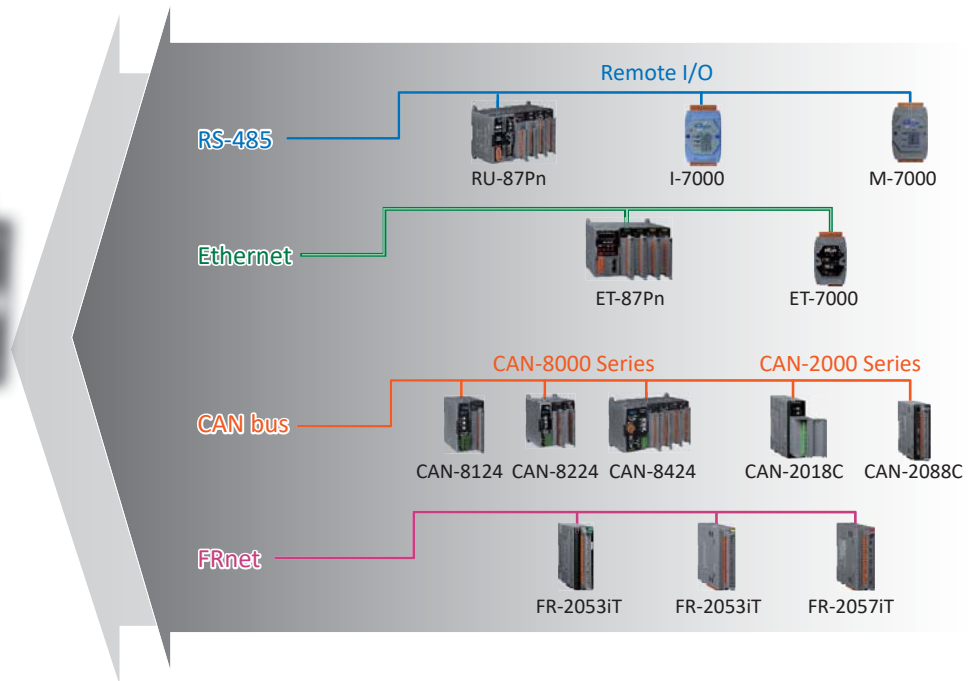
■ Linux Kernel OS

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
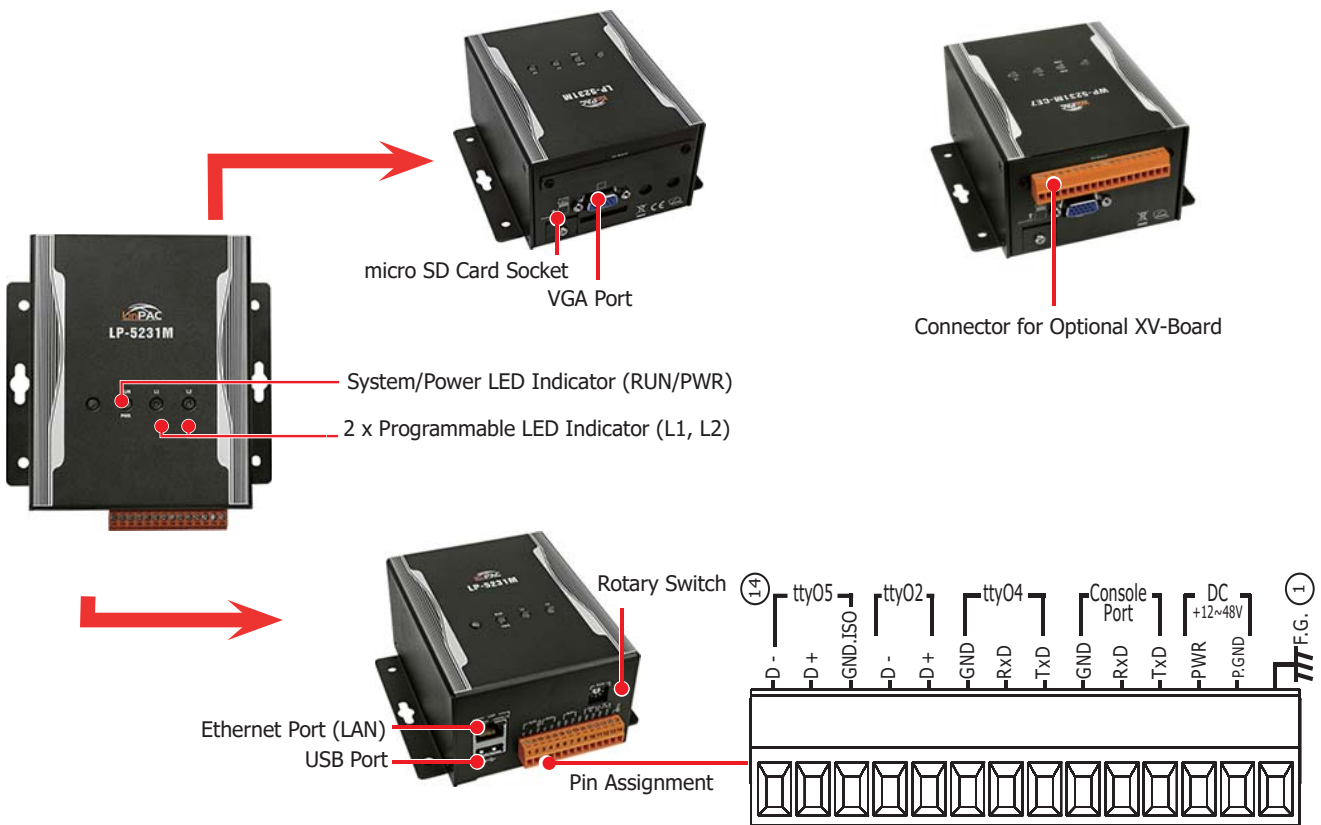
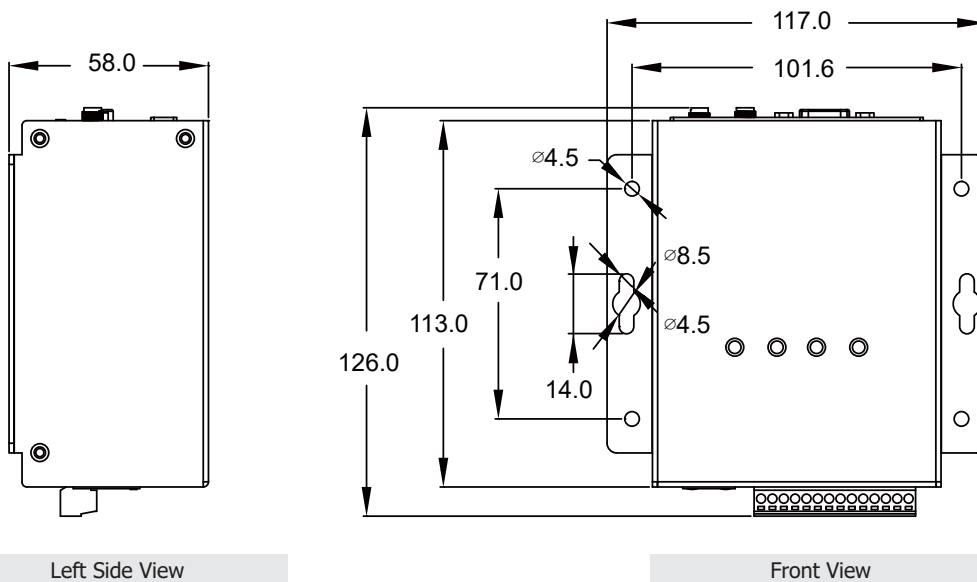### ■ Appications

Remote I/O

RS-485 — RU-87Pn   I-7000   M-7000

Ethernet — ET-87Pn   ET-7000

CAN bus — CAN-8000 Series: CAN-8124 CAN-8224 CAN-8424   CAN-2000 Series: CAN-2018C CAN-2088C

FRnet — FR-2053iT   FR-2053iT   FR-2057iT

■ 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	4.8 W

📁 Appearances

micro SD Card Socket

VGA Port

Connector for Optional XV-Board

System/Power LED Indicator (RUN/PWR)

2 x Programmable LED Indicator (L1, L2)

Rotary Switch

Ethernet Port (LAN)

USB Port

Pin Assignment

14													1
tty05			tty02		tty04			Console Port			DC +12~48V		F.G.
D -	D +	GND.ISO	D -	D +	GND	RxD	TxD	GND	RxD	TxD	PWR	P.GND	

📁 Dimensions (Units: mm)

58.0

Left Side View

117.0

101.6

∅4.5

∅8.5

∅4.5

71.0

113.0

126.0

14.0

Front View

📁 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