Power Meter Monitor

Business and Mission-

Critical Solutions Provider

COMPACT ARM BASED EMBEDDED INDUSTRIAL COMPUTER

Data Sheet

Model: PMM0103
Document: Data Sheet
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DECLARATION OF CONFORMITY

This restriction is subject to protect the operational process of the system in the business environment, which will produce, use, and transmit radiofrequency energy. Harmful interference to radio communication could result if instructions to the correct installation and usage were not applied. The interference prevention cannot be guaranteed even with proper installation according to the manual. If the device causes a bad effect on the radio / TV signal. The user could preclude that by turning the device on/off.
When this device produces some harmful interference, the user can use the following measure to solve the interference problem:
1-Setting the receiving antenna's direction or location to increase the distance between this device and receiver.
2-Plug in the device's power connector into different circuits of the power outlet with the receiver.
3-If any technical support is needed, the dealer or experienced radio/TV technical personnel must be informed.

TECHNICAL SUPPORT AND SERVICE

Visit Pmm-usa.us to browse FAQs and get further details.
User should collect the following information before submitting technical support and service requests:
- Product name, model and serial number.
- Installed software (operating system, OS version, installed applications and so on).
- Full description of the problem
-Detailed information about every error.

SAFETY INSTRUCTIONS

- Only trained and qualified personnel can install, operate, or maintain the device.
- Before starting the installation, all safety precautions must be read and warning labels affixed to the device must be observed. Doing so protects the device from damage and ensures your safety.
- Safety precautions provided in this document may not cover all safety aspects, note to always remain mindful of safety.
- PMM is not liable for any consequence that results from violation of regulations pertaining to safe operations or safety codes pertaining to design, production, and equipment usage.
- DO NOT use liquids or decontamination spray to clean the device surface and assure that it is totally disconnected while cleaning.
- Take all measures to prevent device drop before or during installation.
- Prior to connecting the device to power source, ensure the source and device voltage and power are 100% matched.
- Keep the cables in a suitable covered place.
- If the device is not used for a long time, shut off the power to avoid the damages by transient overvoltage.
- DO NOT allow any liquid flow into the device; to avoid fire or short circuit.
- The recommended storage temperature range should NOT be less than 30°C OR higher than 85°C.

Warning:
- Read the power source and device inlet carefully.
- Handle device with both hands.
- Clean and maintain the device using recommended, safe and suitable methods.

Caution:
If any unauthorized changes of settings or repairs are done without PMM approval; then user's rights of controlling this device will be canceled.

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KEY FEATURES

- Allwinner H5, Quad-core 64-bit high-performance Cortex A53 CPU
- Ubuntu Core operating system
- Embedded 8GB eMMC hard drive
- Built to meet all Power substation requirements
- 2x Ethernet 10/100 ports
- Supports 2.4 WIFI
- 3x customized serial/IO communication ports covering all industrial standards
- 1x USB2.0 Type A
- 10x LEDs for communications and power
- Wide range of power supply options
- -40 to 85°C system operating temperature
- DIN rail, wall, panel and rack mounting
- Compact size with fanless design

TARGET APPLICATION

PMM0103 hardware equips customers with the interfaces and processing power they need to rapidly build, deploy, and effectively operate almost any industrial software applications

It is ideal for (but not limited to) the following target applications:

- Power plant controllers
- NTP timing servers
- SQL data banks
- Data loggers
- Power meter reader
- IEC 101/104 to Modbus converter
- Database synchronizing
- Tracker controller
- Factory automation

DESCRIPTION

PMM0103 is a rugged powerful reliable fanless LINUX BASED embedded industrial computer, powered by Allwinner H5 CPU, which offers high-performance processing with a high degree of functional integration.

The device represents an ideal computing solution for tight spaces, since it is highly compacted in size, designed with small footprints and multiple I/Os. Covered by a durable metal chassis which was designed and tested on the field to withstand shock, vibration, extended temperature ranges and challenging elements of a harsh environment.

PMM0103 offers the client a wide range of interfaces covering most of the industrial standards and increasing the connectivity.

Moreover, PMM0103 is especially designed to meet all power substations and PV plants requirements. Furthermore, it covers all field standards of power, reliability, easy configuration and long-lasting life.

TECHNICAL SPECIFICATIONS

computer

CPU	Allwinner H5 CPU
DRAM	512 DD3RAM
Storage	8GB eMMC
RTC CHIP	DS3231
Pre-installed OS	Ubuntu Core

Computer Interface

Ethernet	2x 10/100Base-T RJ45
USB	1x USB2.0 Type A 1x Micro USB
Wi-Fi	BL-R7601MU5
Serial	1x RS485
Optional Interface	16 pins connector on edge with following connectivity options (max 3 options can be chosen upon order to be factory pre-fitted) RS232 RS485 RS422 CAN bus Analogue Inputs Analogue Output Digital Inputs Digital Output
SD Slot	1x MicroSD card socket for user supplied card up to 64GB

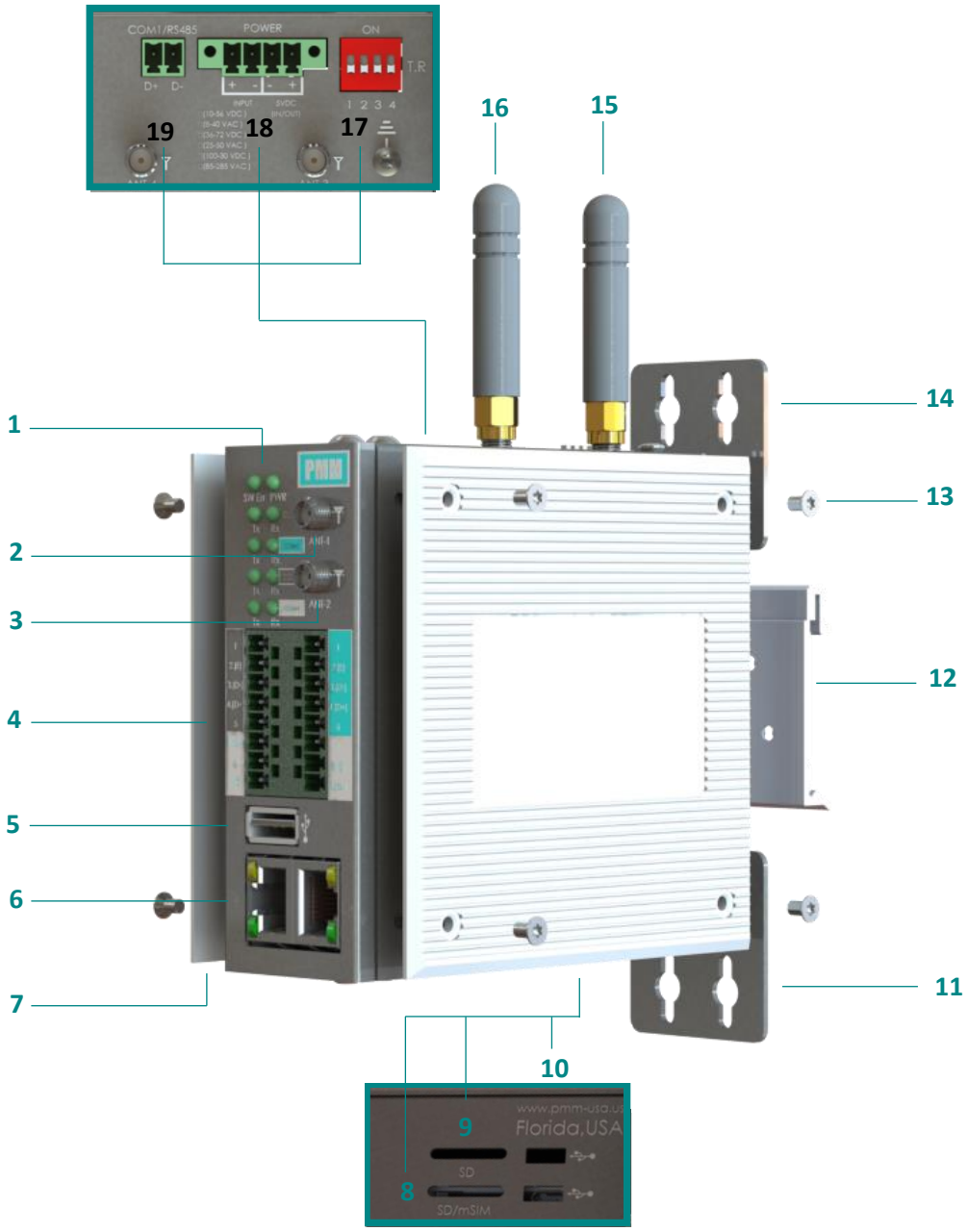
Power Parameters

Power Supply Options	36 VDC – 75 VDC 10 VDC – 60 VDC 85-265 VAC / 100-300 VDC
Power Connector	Phoenix Contact 4pins 3.5mm

Physical Characteristics

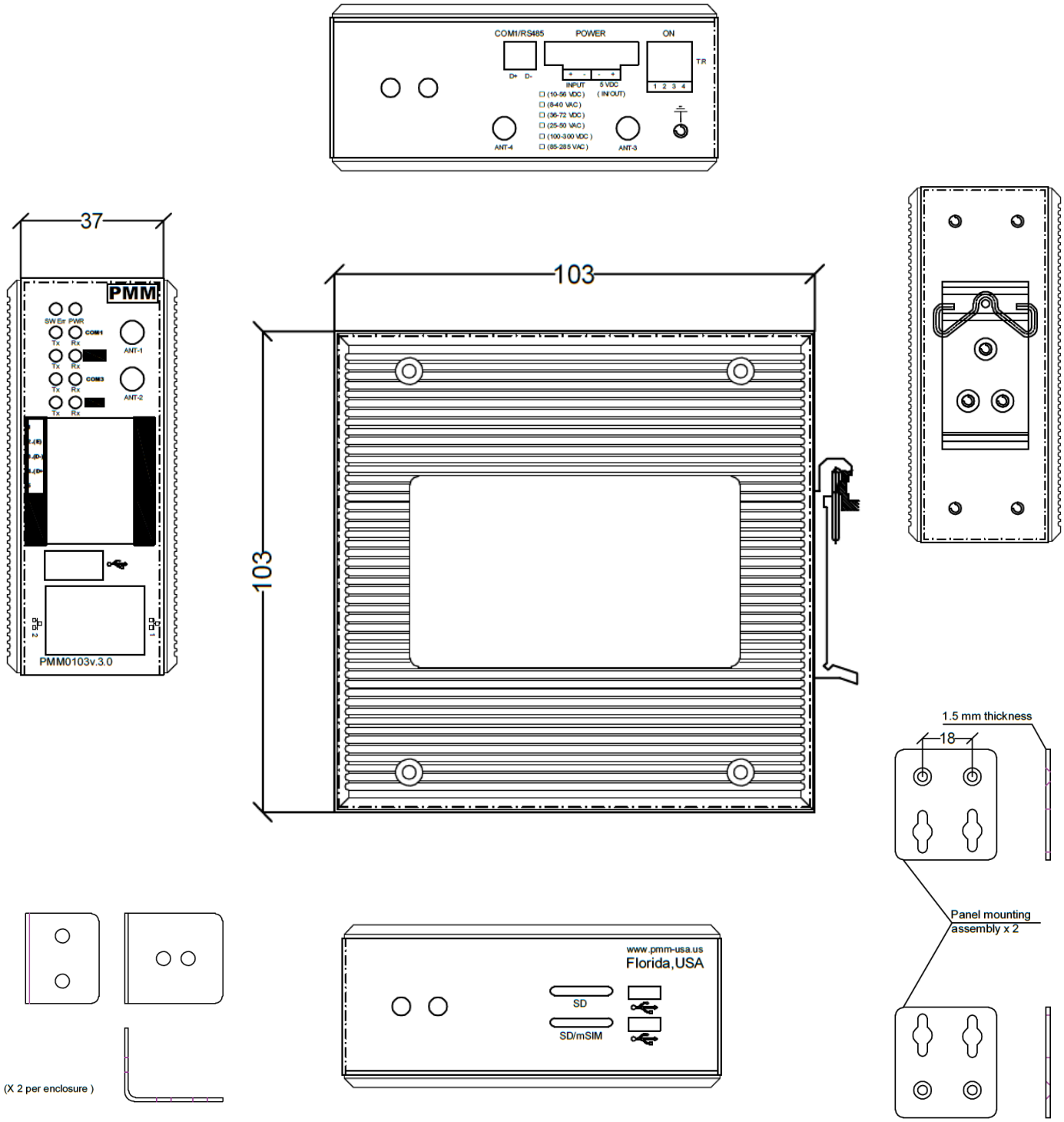
Housing	Metal
Dimensions	3.93*3.93*1.45 inch (100*100*37 mm)
Mounting Options	Standard 35mm DIN Rail Direct Panel Mounting Front Panel Mounting 19” rack 1U

ENCLOSURE ASSEMBLY INFORMATION



ITEM	DESCRIPTION
1	LED indicators
2	Antenna 1
3	Antenna 2
4	3x Serial interfaces (configurable)
5	USB A interface
6	2x Ethernet RJ45 interface
7	Heat sink
8	mSIM interface
9	SD interface
10	USB interface
11	Mounting bracket – rear
12	DIN Rail bracket
13	Screw
14	Mounting bracket – wall mounting
15	Antenna 3
16	Antenna 4
17	Termination Resistor Selector RS485
18	Power inlet
19	RS485 interface

ENCLOSURE DIMENTIONS



ORDERING INFORMATION

Part Number

PMM0103-DC1	PMM0103 with 36 VDC – 75 VDC supply voltage
PMM0103-DC2	PMM0103 with 10 VDC – 60 VDC supply voltage
PMM-AC1	PMM0103 with 85-265 VAC / 100-300 VDC supply voltage

Interface Options

Client can purchase PMM0103 factory pre-fitted with three optional interfaces of their choice (only two modules can be selected).

PMM0908	RS232 module
PMM0911	RS485 module
PMM0913	RS422 module
PMM0912	SPI CANBUS module
PMM0910	UART CANBUS module
PMM0909	RS232 FULL module
PMM0918	Digital inputs module
PMM0917	Digital outputs module
PMM0914	Analog inputs module
PMM0915	Analog outputs module

Accessories

DIN Mount (included)	DIN Rail Mounting Bracket
Wall Mounting Kit (included)	2x Wall Mounting Bracket
Panel Mounting Kit(optional)	2x Panel Mounting Bracket
Rack Mounting Kit (optional)	Rack Mounting Bracket

WORLDWIDE DISTRIBUTION (OUTSIDE USA)

Find us on:

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For direct inquiries, contact us on **sales@Pmm-usa.us**

CUSTOMIZED REQUIREMENT

For any customized inquiries and orders, contact us on **info@Pmm-usa.us**

HAZARDOUS MATERIALS DISCLOSURE

Hazardous Materials Disclosure Table for IPB Products Certified as RoHS Compliant Under 2002/95/EC without Mercury

The details provided in this appendix are to ensure that the product is compliant with the Peoples United States of America (USA) RoHS standards. The table below acknowledges the presence of small quantities of certain materials in the product and is applicable to USA RoHS only.
A label will be placed on each product to indicate the estimated "Environmentally Friendly Use Period" (EFUP). This is an estimate of the number of years that these substances would "not leak out or undergo abrupt change." This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. (These components will be separately marked).
Please refer to the table below.

Part Name	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers(PBDE)
Housing	X	O	O	O	O	X
Housing	X	O	O	O	O	X
Printed Circuit Board	X	O	O	O	O	X
Metal Fasteners	X	O	O	O	O	O
Cable Assembly	X	O	O	O	O	X
Fan Assembly	X	O	O	O	O	X
Fan Assembly	X	O	O	O	O	X
Battery	O	O	O	O	O	O

O: This toxic or hazardous substance is contained in all the homogeneous materials for the part is below the limit requirement in SJ/T11363-2006

X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/T11363-2006