IoTstar
Supported



10.4" TFT LCD
PMD-420x

7" TFT LCD
PMD-220x

PMD-220x/420x

Power Meter Concentrator with Display

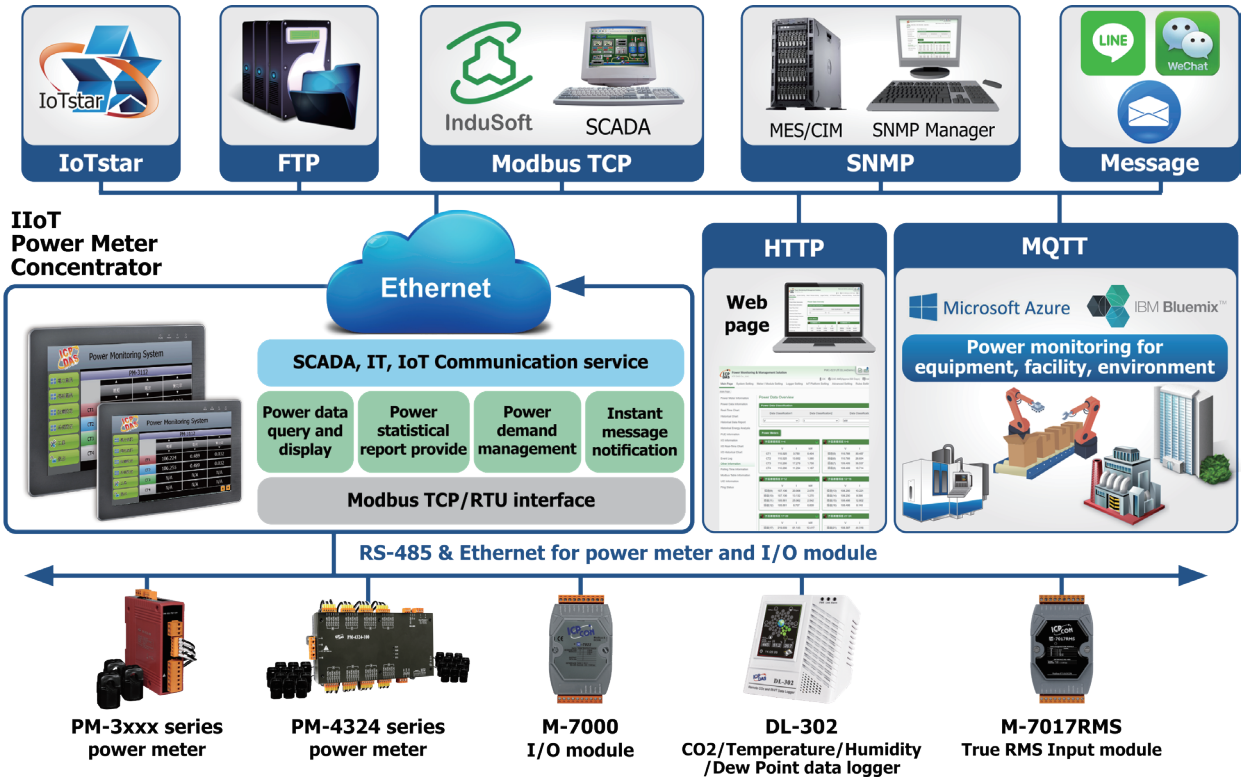
Features

- No extra software tool is required, using browsers to perform system operations
- Support at most "24 ICP DAS Modbus Power Meter modules + 8 Modbus I/O modules" (Max. total of 16 TCP type modules)
  * COM1 and COM2 can connect to Max. 16 Modbus RTU modules individually.
  * LAN can connect to Max. 16 Modbus TCP modules
  * Support at most 4 ICP DAS PM-4324 series Power Meters.
- 7"/10.4" TFT LCD (with Touch Panel) & PoE (Power over Ethernet) supported
- Display real-time or historical power data; Provide power data statistics report
- Power data logger and data files send back function supported.
- Built-in IF-THEN-ELSE logic engine for power demand management
- Support Line, WeChat and Email message notification
- Support Modbus TCP/RTU, SNMP, MQTT, FTP and CGI protocols.
- Support connection with IoT Cloud Platform (Microsoft Azure,IBM Bluemix) and IoTstar Cloud Management Software

Introduction

PMD is the IIoT Power Meter Concentrator for meeting the trend of energy management in the Industry 4.0 age. It provides flexible integration with the ICP DAS power meters via RS-485 or Ethernet interface, and features various functions such as: measure the power consumption of the devices, energy usage analysis, power data log operation, power demand management and alarm notification functions. PMD offers a user-friendly and intuitive web site interface that allows users to implement the Energy monitoring system just a few clicks away; no programming is required. PMD is also equipped with the Touch Panel for viewing the power data and performing system setting at the local side. By working with the power meters, IF-THEN-ELSE logic rule execution ability, and LINE/Email/WeChat alarm message notification functions, PMD offers more thought-out power demand management functions, and is able to perform load shedding of the devices if required. It also supports the Modbus TCP/RTU, SNMP, FTP, MQTT and CGI protocols for seamless integration with the back-end SCADA/IT/IoT systems.

System Architecture



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Hardware Specifications

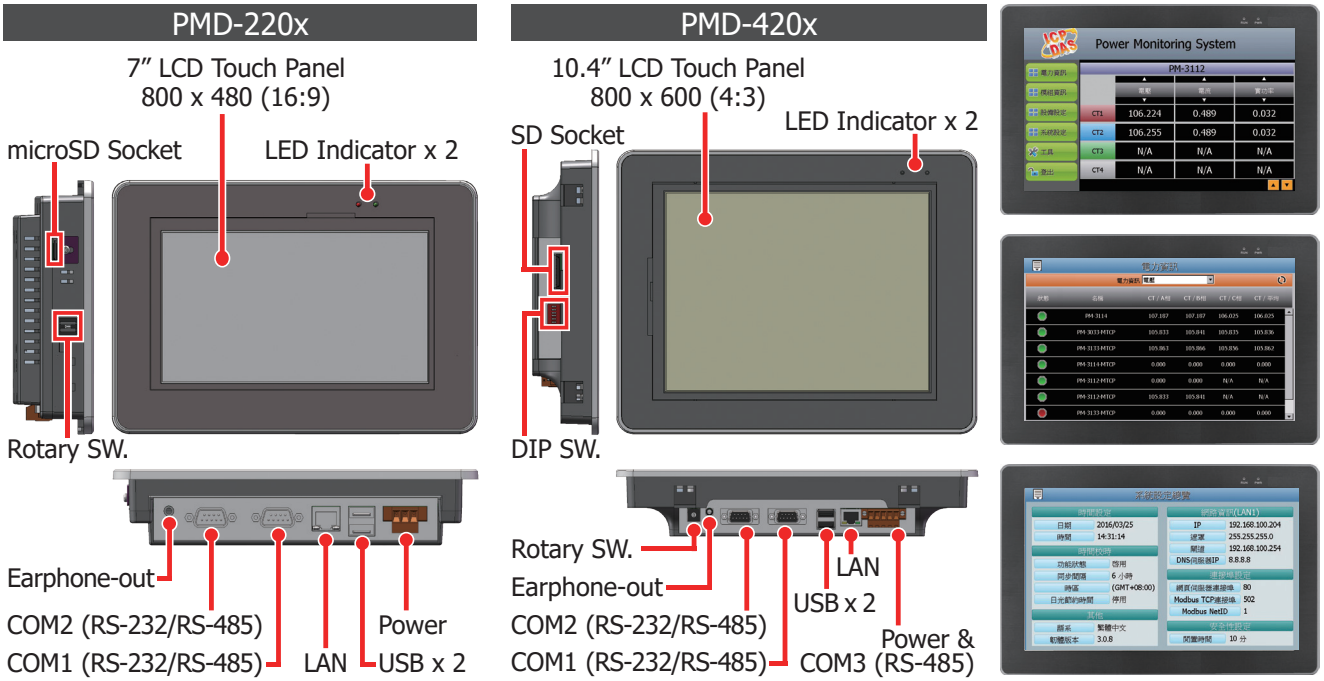
Model	PMD-220x	PMD-420x
System		
CPU	32-bit ARM CPU (1 GHz)	
microSD	Built-in one 4 GB micro SDHC card (support up to 32 GB)	Built-in one 4 GB SDHC card (support up to 32 GB)
LCD		
Diagonal Size / Resolution	7" (16:9); 800 x 480	10.4" (4:3); 800 x 600
Brightness (cd/2) / Contrast Ratio	400; 500:1	
LED Backlight Life (hrs)	20,000	50,000
Touch Panel	4-wire, resistive type; light transmission: 80 %	5-wire, resistive type; light transmission: 80 %
Communication Interface		
Ethernet	RJ-45 x 1, 10/100/1000 Base-TX (Auto-negotiating, Auto MDI/MDI-X)	
COM1/COM 2	RS-485 (Data+, Data-) (9-wire DB9 connector); Speed:115200 bps max. Support 2500 VDC isolation.	
COM 3	-	RS-485 (Data+, Data-), Speed: 115200 bps max. 2500 VDC isolation.
Module Support		
Remote Side	• Support at most "24 ICP DAS Modbus Power Meters + 8 Modbus I/O modules" (Max. 16 Modbus TCP modules) * COM1 and COM2 can connect to Max. 16 Modbus RTU modules individually * LAN can connect to Max. 16 Modbus TCP modules. * Support at most 4 ICP DAS PM-4324 series Power Meter	
Mechanical		
Casing	Metal	
Dimensions (W x L x H; mm)	213 x 44 x 148	291 x 54 x 229
Installation	Panel Mounting	
Panel Cut-Out (W x H ; mm)	197 x 133, +/- 1	277 x 215, +/- 1
Ingress Protection	Front panel: NEMA 4/IP65	
Environmental		
Temperature/ Humidity	Operating Temperature: -10 ° C to +60 ° C; Storage Temperature: -20 ° C to +70 ° C; 10 to 90% RH, Non-condensing	
Power Requirements		
Input Range/	+12 to +48 VDC	
Consumption	Power from PoE (IEEE 802.3af); 6W	Power from PoE (IEEE 802.3af); 13W

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Software Specifications

Function	Description
Operation Interface	• Web Page & Touch Screen
Power data collection	• Power data collection; Real-time and Historical power data displayed • Power data logging and historical power data statistics report provided • PUE information provided and displayed
Power demand management	• Built-in IF-THEN-ELSE logic engine for thought-out power demand management • Adjust equipment operation by its power status via Modbus I/O modules • Provide Schedule function to manage the equipment's operation(via the Modbus TCP/RTU protocol) • Provide message notification function via Email, LINE (PMD-x206 also provides WeChat message notification function)
Integrate with SCADA/ IT/IoT/ System	• Support Modbus TCP/RTU, MQTT, SNMP(v1, v2c), CGI protocols to transmit real-time power data • Power data logging and power data file auto send-back (by FTP protocol) & recovery when network is resumed after disconnection • Support DDNS (Dynamic DNS) system • Support Microsoft Azure, IBM Bluemix IoT Cloud platforms • Support ICP DAS IoTstar Cloud software

Appearance



Ordering Information

PMD-2201-TC CR	IIoT Power Meter Concentrator with 7" Display (English) (Metal casing)
PMD-4201-TC CR	IIoT Power Meter Concentrator with 10.4" Display (English) (Metal casing)
PMD-2206-TC CR	IIoT Power Meter Concentrator with 7" Display (English) (Metal casing; Additional support for WeChat Message Sending)
PMD-4206-TC CR	IIoT Power Meter Concentrator with 10.4" Display (English) (Metal casing; Additional support for WeChat Message Sending)

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