

IoTstar Supported

Microsoft Azure Certified

PMC-5231M-3GWA

3G Mobile Network Version

Features

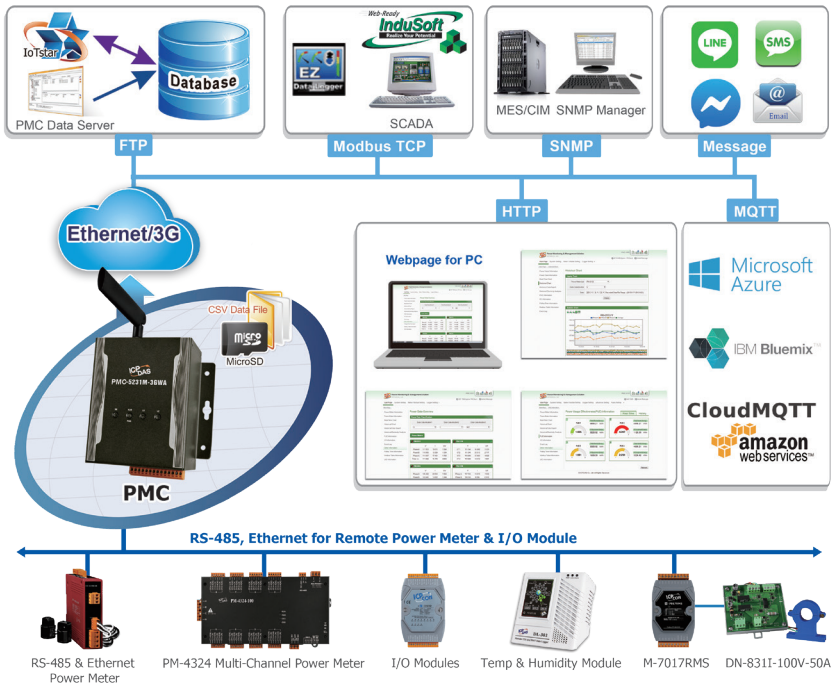
- No extra software tool is required, using browsers to perform system operations
- Support at most "24 ICP DAS Modbus Power Meter modules + 8 Modbus I/O modules" (Max. total of 16 TCP type modules)
  * COM3 and COM4 can connect to Max. 16 Modbus RTU modules individually.
  * LAN can connect to Max. 16 Modbus TCP modules
  * Support at most 4 ICP DAS PM-4324 series Power Meters.
- 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, SMS 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
- Support 3G wireless data communication

Introduction

PMC-5231M-3GWA is the new generation of Power Meter Concentrator for meeting the trend of energy saving and carbon reduction 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 demand management and alarm notification functions. The PMC-5231M-3GWA features a built-in Micro SD card. After it retrieving the power data from the power meter, it will save the power data in data log file, and automatically send back the data log files to the back-end management center for data analysis and statistics.

PMC-5231M-3GWA offers a user-friendly and intuitive web site interface that allows users to implement the Energy monitoring and management system just a few clicks away; no programming is required. In addition to ICP DAS XV-Board and M-7000 I/O modules, the PMC-5231M-3GWA can also connect to standard Modbus TCP/RTU Slave modules. By working with the I/O modules, and functions such as IF-THEN-ELSE logic rule execution and alarm notification functions including LINE/Messenger/Email/SMS, PMC-5231M-3GWA offers more thought-out power demand management and alarm notification functions, and is able to perform load shedding of the devices if required, and enables real-time monitoring and control of the power consumption of the devices. PMC-5231M-3GWA also supports the Modbus TCP/RTU, SNMP, FTP and MQTT protocols for seamless integration with the back-end SCADA/MES/IT/IoT/Network Management systems. So that the administrator can monitor the status of power consumption of each device and perform statistics and analysis of the power information, thus improving the overall efficiency in electricity consumption to save costs on utility bills. All of these features make PMC-5231M-3GWA a perfect concentrator of power meter in the Energy monitoring and management application of Industry 4.0 age.

System Architecture



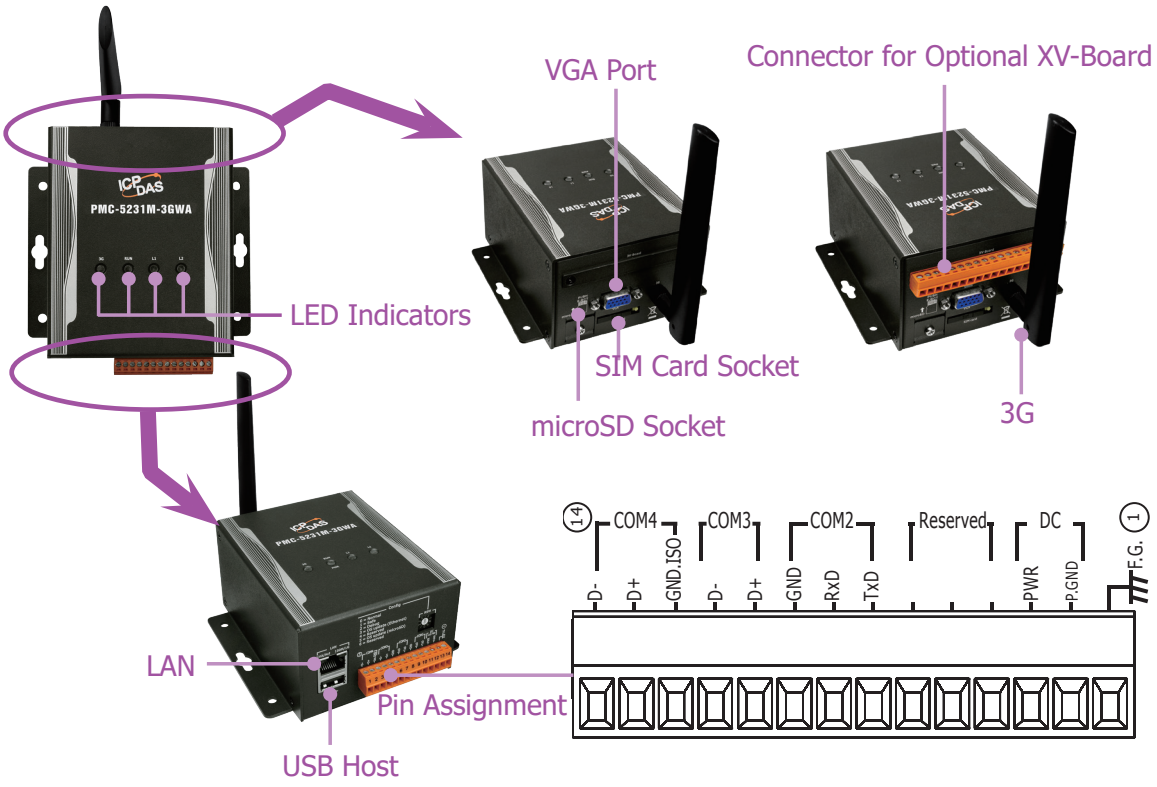
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Specifications

System Software	
Embedded Service	PMC Runtime, Web server, FTP server
CPU Module	
CPU	32-bit ARM CPU, 1 GHz
Expansion Flash Memory	microSD socket with one 4 GB microSD card (support up to 32 GB microSDHC card)
LED Indicator	Yes. LED for Power and System status
Communication Ports	
Ethernet	RJ-45 x 1, 10/100/1000 Based-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)
COM 1	Reserved
COM 2	RS-232 (TxD, RxD, GND), non-isolated, Speed: 115200 bps max.
COM 3	RS-485 (Data+, Data-), non-isolated, Speed: 115200 bps max.
COM 4	RS-485 (Data+, Data-), 2500 VDC isolated, Speed: 115200 bps max.

Mechanical	
Dimensions (W x L x H)	117 mm x 126 mm x 58 mm
Installation	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 VDC
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 Transmission	Downlink transfer: Max. 85.6 kbps; Uplink transfer: Max 42.8 kbps
3G System	
Frequency Band	WCDMA 850/900/1900/2100 MHz
Data Transmission	WCDMA / HSPA+; Download: Max. 14.4Mbps; Upload: Max 5.76Mbps

Appearance



Ordering Information

PMC-5231M-3GWA CR	Industrial IoT Power Meter Concentrator (Support 3G Wireless data communication) (RoHS)

Accessories

Power Meter	Modbus RTU: PM-3033, PM-3133, PM-3112, PM-3114 and PM-4324 Modbus TCP: PM-3033-MTCP, PM-3133-MTCP, PM-3112-MTCP, PM-3114-MTCP and PM-4324-MTCP
DP-660	24 VDC/2.5 A, 60 W and 5 VDC/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
DP-1200 CR	24 VDC/5.0 A, 120 W Power Supply with DIN-Rail Mounting (RoHS)
MDR-20-24 CR	24 VDC/1.0 A, 24 W Power Supply with DIN-Rail Mounting (RoHS)
MDR-60-24 CR	24 VDC/2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)

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