



### Features

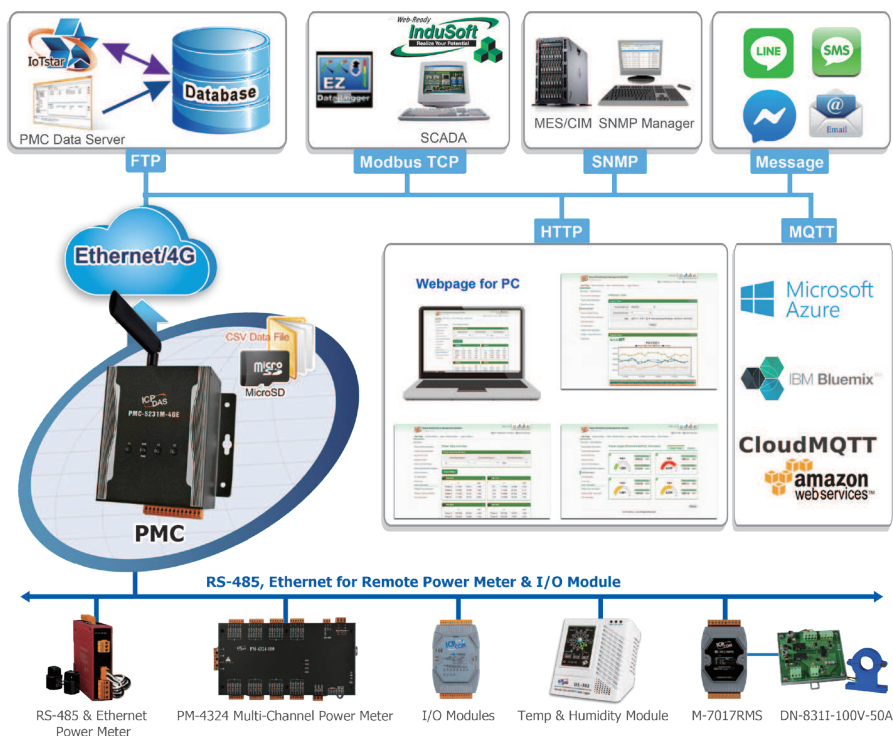
- No extra software tool is required, using browsers to perform system operations
- Support at most 24 ICP DAS Modbus Power Meters (with maximum 16 ICP DAS Modbus TCP Power Meters) and 8 Modbus I/O modules.
  - \* COM3 and COM4 interface can connect to Max. 16 power meters individually.
  - \* Support at most 4 ICP DAS PM-4324 series Power Meters.
- Display real-time or historical power data; Provide power data statistics report.
- Provide microSD card for power data log operation. Data log file auto send-back & recovery when disconnected network is resumed.
- Built-in IF-THEN-ELSE logic engine for thought-out power demand management
- Provide alarm message notification function via LINE, Messenger, Email or SMS
- Adjust device operations by its power status via Modbus I/O modules
- Provide Schedule function for operations of I/O modules (devices)
- Support Modbus TCP/RTU, SNMP and MQTT protocols
- Support Connection with IoT Cloud Platform (Microsoft Azure and IBM Bluemix); Support ICP DAS IoTstar Cloud software
- Support 4G Wireless data communication



### Introduction

PMC-5231M-4GE/4GC 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-4GE/4GC 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-4GE/4GC 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-4GE/4GC 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-4GE/4GC 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-4GE/4GC 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-4GE/4GC a perfect concentrator of power meter in the Energy monitoring and management application of Industry 4.0 age.

### Application

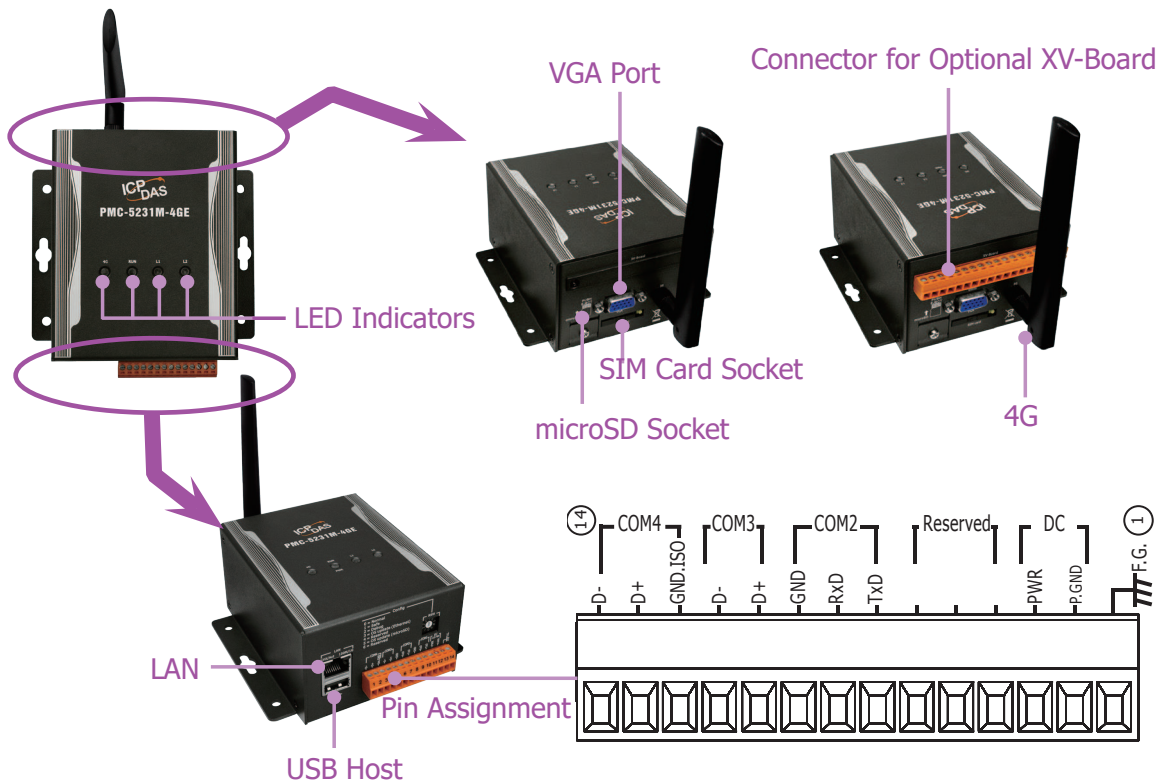


**Specifications**

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 class 12/10; GPRS station class B
3G System	
Frequency Band	4GE : WCDMA 850/900/2100 MHz 4GC : WCDMA 900/2100 MHz;TD-SCDMA 1900/2100 MHz; CDMA2000 (BC0) 800 MHz
Data Transmission	DC-HSPA+ Download: Max. 42 Mbps; Upload: Max 5.76 Mbps TD-SCDMA Download: Max. 4.2 Mbps; Upload: Max 2.2 Mbps CDMA2000 EVDO Download: Max. 14.7 Mbps; Upload: Max 5.4 Mbps
4G System	
Frequency Band	4GE : FDD LTE: B1/B3/B5/B7/B8/B20 MHz. 4GC : FDD LTE: B1/B3/B8 MHz; TDD LTE: B38/B39/B40/B41 MHz.
Data Transmission	Download Max 100 Mbps Upload Max 50 Mbps

**Appearance**



**Ordering Information**

PMC-5231M-4GE CR	Industrial IoT Power Meter Concentrator (Support 4G Wireless data communication. Frequency Band for EMEA, Korea, Thailand, India and Taiwan) (RoHS)
PMC-5231M-4GC CR	Industrial IoT Power Meter Concentrator (Support 4G Wireless data communication. Frequency Band for China) (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)