# PMC-5151

## Features

- No extra software tool is required, using browsers to perform system operations
- Support at most 24 ICP DAS Modbus Power Meter and 8 Modbus I/O modules
- Display real-time or historical power data (in data table or chart form)
- Provide power data statistics report (Daily and Monthly report)
- Offer Flash HMI Tools for easy HMI interface design
- Data file auto send-back & recovery when network is resumed after disconnection
- Built-in IF-THEN-ELSE logic engine for thought-out power demand management
- Provide alarm message notification function via Email or SMS (for SMS message sending, GTM-210-USB is required)
- 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 Slave protocol for seamless integration with SCADA
- With PMC Data Server software, allow importing the power data into database
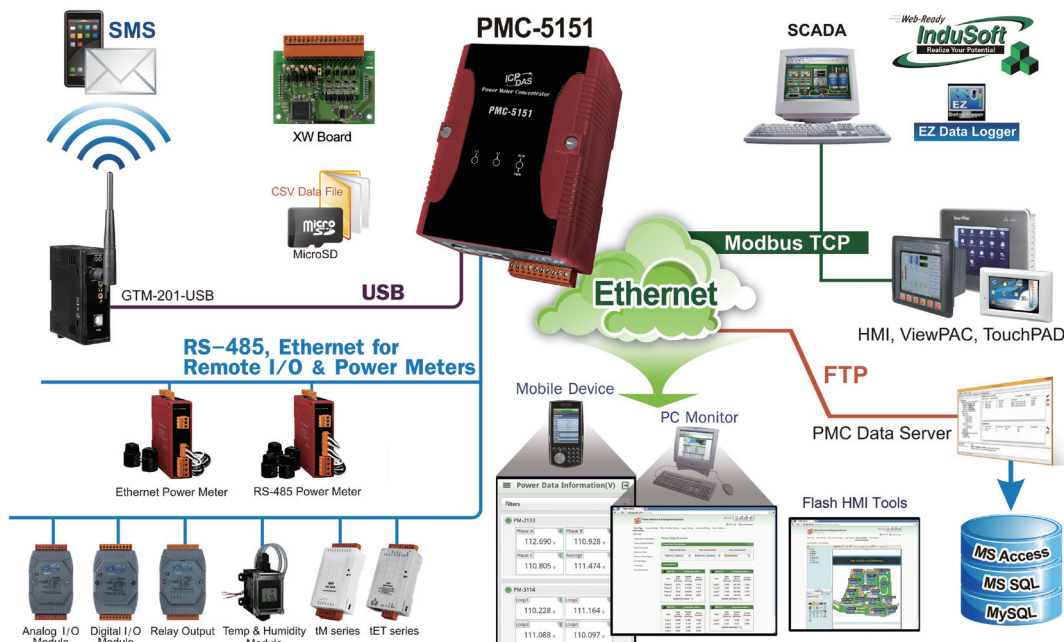
## Introduction

The PMC-5151 is a web-based intelligent Power Meter Concentrator developed by ICP DAS. It offers webpage interface, and features various functions such as: power data collection, logic control, power demand management, data logger and alarm notification functions. PMC-5151 allows connections to ICP DAS Smart Power Meters via RS-485 or Ethernet interface to read the power data of the devices measured by the power meters; and then real-time record the power values in the data logger file. PMC-5151 also provides data logger file auto send-back function; together with PMC Data Server software or SCADA software, it allows collection and analysis of the power data.

PMC-5151 is equipped with built-in Web Server that allows direct connections via browsers to the PMC-5151 for viewing power data and setting up the system parameters. In addition to the standard power data review page, by using the Flash HMI web page editor function on PMC-5151, the users could easily design a specific power monitor page by a few clicks on browsers. PMC-5151 also offers Modbus TCP/RTU Slave function that allows SCADA software or HMI devices to connect to PMC-5151 to get real-time power data of the devices via Modbus TCP/RTU protocol.

In addition to ICP DAS XW-Board and M-7000 I/O modules, the PMC-5151 also could 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 Email/SMS Alarm Notification, PMC-5151 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.

When using PMC-5151 to build a power management and monitoring system, during the whole process of system development, no programming is required; it takes a few clicks on web page to complete all settings; it is easy for the user to quickly view the power data of the devices and furthermore process the data for statistics and analysis. The PMC-5151 is an easy-to-use and easy-to-build total solution for power management and monitoring that makes more efficient energy usage.
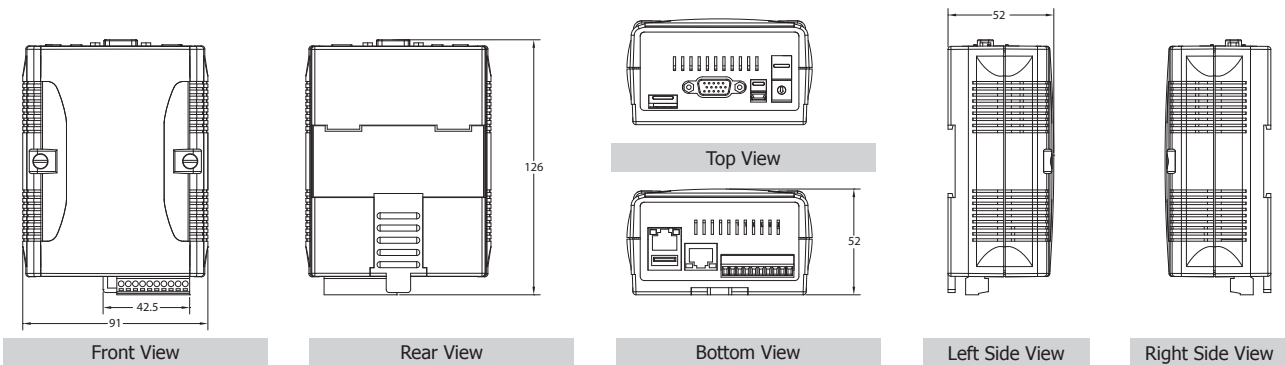
## Applications

## Specifications

| Model | PMC-5151 |
|---|---|
| **System Software** | |
| OS | Windows CE OS |
| Embedded Service | PMC Runtime、Web server、FTP server |
| **CPU Module** | |
| CPU | 32-bit ARM CPU |
| SDRAM | 128 MB |
| Flash | 64 MB |
| Expansion Flash Memory | microSD socket with one 4 GB microSD card (support up to 16 GB microSDHC card) |
| LED Indicator | 1 LED for Power and Running |
| Rotary Switch | Yes (0 ~ 9) |
| **VGA & Communication Ports** | |
| VGA | Yes, Resolutions:640 × 480/800 × 600 |
| Ethernet | RJ-45 x 2, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators) |
| USB 1.1 (client) | 1 |
| USB 1.1 (host) | 1, can connect to SMS Modem (GTM-201-USB) |
| COM 1 | RS-232 (RxD, TxD and GND); non-isolated |
| COM 2 | RS-485 (D+, D-); 2500 $V_{DC}$; isolated |
| COM 3 | RS-485 (D+, D-); 2500 $V_{DC}$; isolated |
| **Mechanical** | |
| Dimensions (W x L x H) | 91 mm x 126 mm x 52 mm |
| Installation | DIN-Rail Mounting |
| **Environmental** | |
| Operating Temperature | -25 ~ +75 ℃ |
| Storage Temperature | -30 ~ +80 ℃ |
| Ambient Relative Humidity | 10 ~ 90% RH (non-condensing) |
| **Power** | |
| Input Range | +10 ~ +30 $V_{DC}$ |
| Isolation | 1 kV |
| Consumption | 4.8 W (0.2 A @ 24 $V_{DC}$) |

## Appearance



microSD Socket
VGA Port
USB Client
Rotary Switch

LED Indicators

LAN1
USB Host
LAN2
Pin Assigment

COM1 RxD TxD GND
COM2 D+ D-
COM3 D+ D-
DC +10~30V PWR P.GND
F.G.

## Dimensions (Units: mm)



| Front View | Rear View | Top View / Bottom View | Left Side View | Right Side View |

91
42.5
126
52
52

## Ordering Information

| PMC-5151-EN CR | Power Meter Concentrator (English) (RoHS) |
|---|---|

## Accessories

| Power Meter | Modbus RTU: PM-213x, PM-311x<br>Modbus TCP: PM-3112-MTCP, PM-3114-MTCP |
|---|---|
| DP-660 | 24 $V_{DC}$/2.5 A, 60 W and 5 $V_{DC}$/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting |
| DP-1200 CR | 24 $V_{DC}$/5.0 A, 120 W Power Supply with DIN-Rail Mounting (RoHS) |
| MDR-20-24 CR | 24 $V_{DC}$/1.0 A, 24 W Power Supply with DIN-Rail Mounting (RoHS) |
| MDR-60-24 CR | 24 $V_{DC}$/2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS) |
| GTM-201-USB CR | Industrial Quad-band GPRS/GSM Modem with USB Interface (RoHS) |

Power Meter Concentrator

PMC-5000 Series