Power Meter Concentrator

PMC-5000 Series

Features

- Built-in Web Server allows to view power data via browser
- No extra software tool is required to perform configurations and operations of the power meters
- Immediately display in real-time trend or historical trend and power data storage
- Support FTP Server and FTP Client for easy file management
- Allow to recover Data Log files when the network is resumed after temporary network disconnection
- Offer power demand management and alarm notification functions
- Offer Modbus TCP Slave function that allows seamless integration with SCADA software
- Allow to integrate with ICP DAS I/O modules (XW-107)
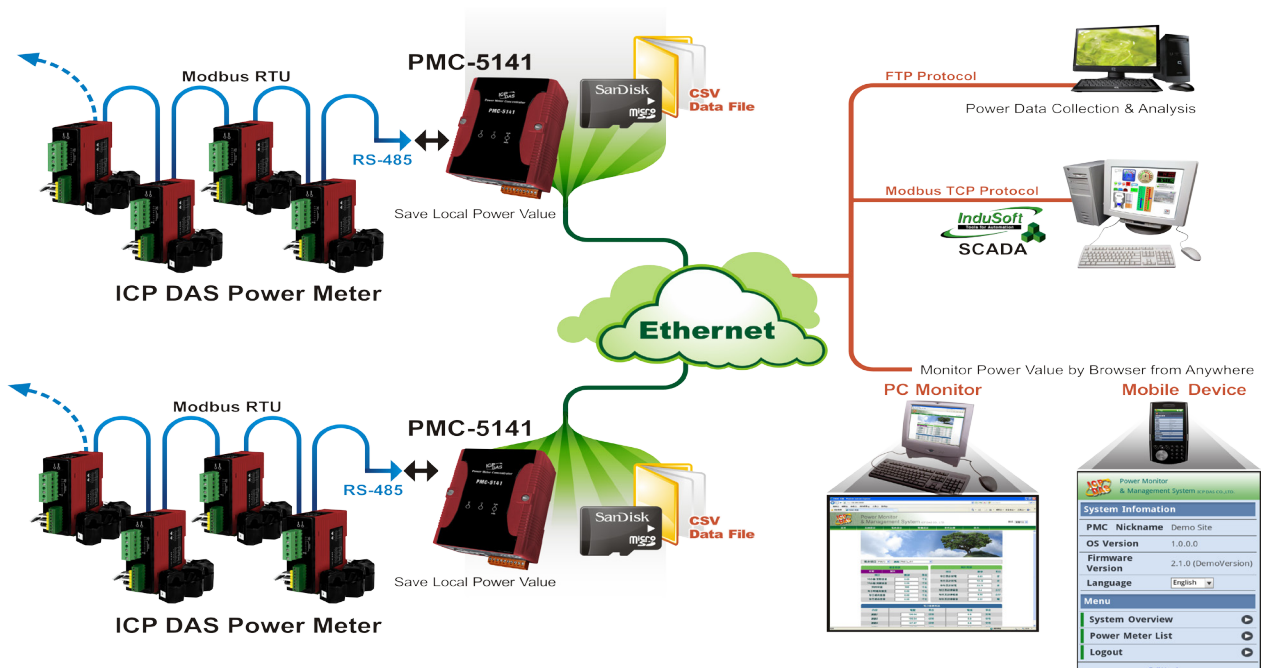- Offer Flash HMI Tools for easy HMI interface design

PMC-5141

Introduction

PMMS (Power Monitor & Management Solution) is a power monitor & management solution developed by ICP DAS. PMMS consists of Power Meter Concentrator (PMC-5141), and Smart Power Meters(PM-XXXx).

PMC-5141 connects to ICP DAS smart power meters via Modbus RTU to read the power data of the devices; enables power monitoring and management functions. The power data can be saved in the microSD card and then being sent to the back-end FTP Server for further data integration or analysis.

PMC-5141 is equipped with built-in Web Server. It allows users to connect to the PMMS web page on PMC-5141 via browser to set up the parameters of the power meters. The users could view power data of the devices in real-time or in historical trend, and the power daily report or monthly report function also provides a quick review for power consumption analysis. In addition, PMC-5141 is equipped with built-in Modbus TCP Slave function that enables SCADA software to connect to PMC-5141 for data communication and interaction. PMC-5141 also provides alarm notification functions, it could send out email or SMS to notify the related personnel for real-time information of the power devices or the system status. During the whole process of system development, no programming is required; it takes only a few clicks on PMMS web page to complete settings and to display, store and manage the power data of the devices.
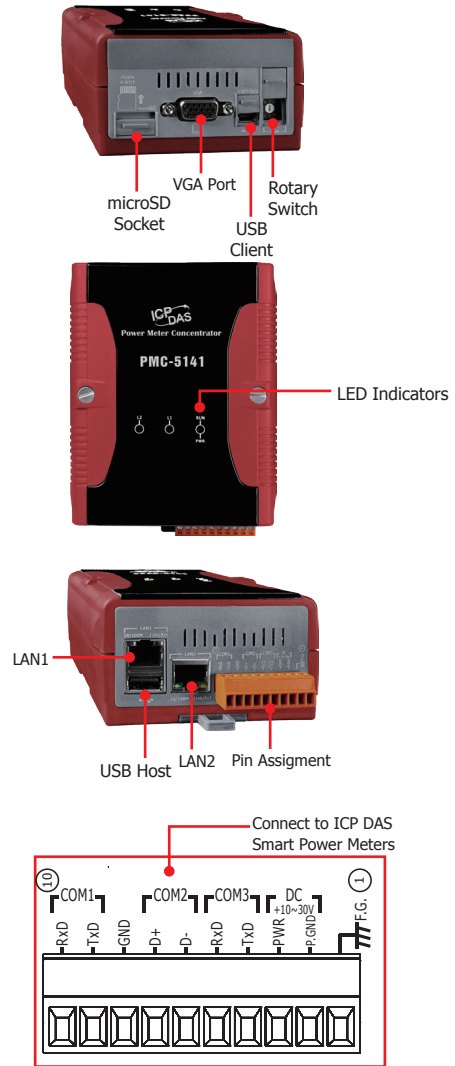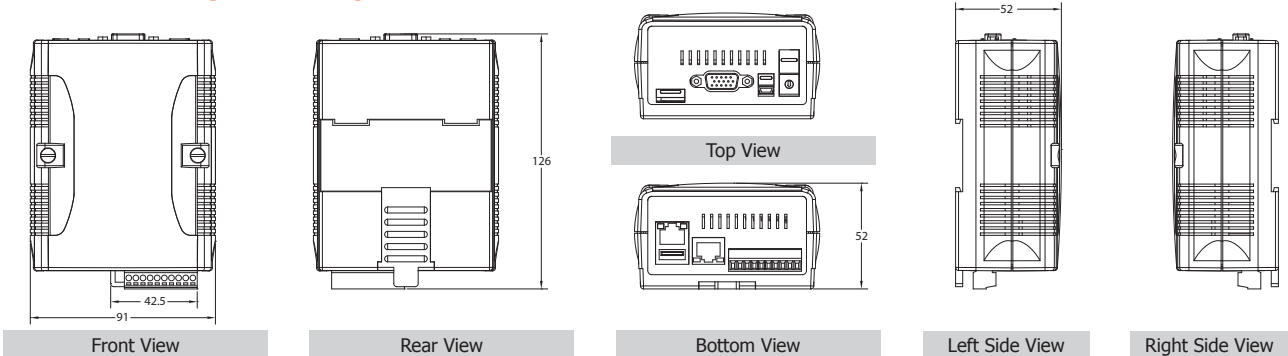
Applications

Specifications

Model	PMC-5141
System Software	
OS	Windows CE 5.0 Core
.Net Compact Framework	2.0
Embedded Service	Web server, FTP server
CPU Module	
CPU	PXA270 CPU (32-bit and 520 MHz)
SDRAM	128 MB
Flash	64 MB (32 MB for OS, 32 MB for System Disk and System Registry)
EEPROM	16 KB Data Retention: 40 years; 1,000,000 erase/write cycles
Expansion Flash Memory	microSD socket with one 2 GB microSD card (support up to 16 GB microSDHC card)
RTC (Real Time Clock)	Provide second, minute, hour, date, day of week, month, year
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) *Note: LAN1 is reserved for PMC-5141
USB 1.1 (client)	1
USB 1.1 (host)	1 *Note: Connect to GTM-201-USB for SMS Function
COM 1	RS-232 (RxD, TxD and GND); non-isolated
COM 2	RS-485 (D2+, D2-); 2500 V$_{DC}$; isolated; *Note: Allow to connect to up to 16 ICP DAS Power Meters (Modbus RTU Interface)
COM 3	RS-232 (RxD, TxD and GND); non-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 °C
Storage Temperature	-30 ~ +80 °C
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

Connect to ICP DAS Smart Power Meters

Dimensions (Units: mm)

Front View

Rear View

Top View

Bottom View

Left Side View

Right Side View

Ordering Information

PMC-5141-EN CR	Power Meter Concentrator (English) (RoHS)

Accessories

Smart Power Meter	PM-2133, PM-2134, PM-3112, PM-3114 (with RS-485 Interface)
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)
XW107i	Add-on I/O Expansion Board (8DI and 8DO)

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