PMM

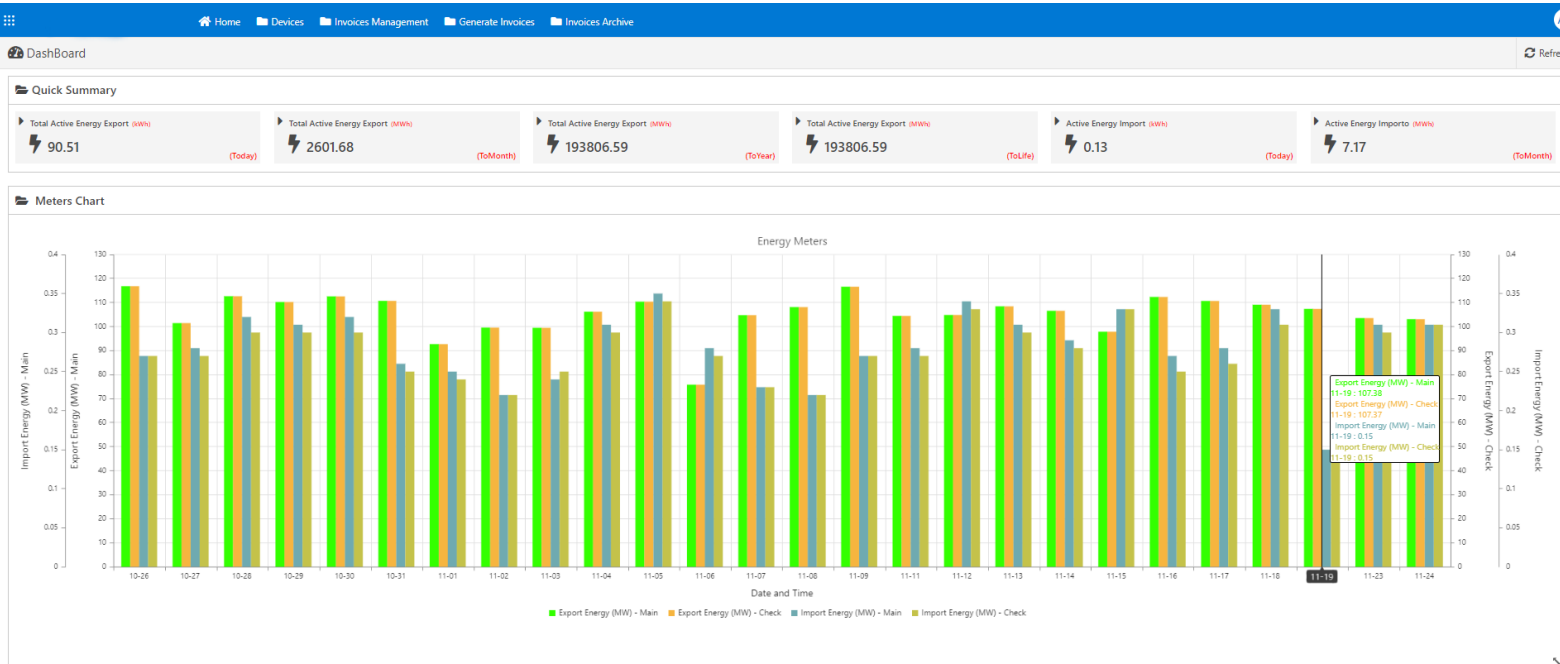## Power Meter Monitor

Business and Mission-
Critical Solutions Provider

Power Plant Energy Metering and Billing System

Data Sheet

Model: PMM1201
Document: Data Sheet
Document version: 1.1
Date: October 2020

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DECLARATION OF CONFORMITY

This restriction is subject to protect the operational process of the system in the business environment, which will produce, use, and transmit radiofrequency energy. Harmful interference to radio communication could result if instructions to the correct installation and usage were not applied. The interference prevention cannot be guaranteed even with proper installation according to the manual. If the device causes a bad effect on the radio / TV signal. The user could preclude that by turning the device on/off.
When this device produces some harmful interference, the user can use the following measure to solve the interference problem:
1- Setting the receiving antenna's direction or location to increase the distance between this device and receiver.
2- Plug in the device's power connector into different circuits of the power outlet with the receiver.
3- If any technical support is needed, the dealer or experienced radio/TV technical personnel must be informed.

TECHNICAL SUPPORT AND SERVICE

Visit Pmm-usa.us to browse FAQs and get further details.
User should collect the following information before submitting technical support and service requests:
- Product name, model and serial number.
- Installed software (operating system, OS version, installed applications and so on).
- Full description of the problem
-Detailed information about every error.

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www.**Pmm-usa.**

KEY FEATURES

Meter Settlement

The accumulated energy read from meters doesn't represent the total value of energy generation.

However, the recorded values in the meter's memory which are accessed using our specialized PMMBEnergy system, represents the settlement information which is used to reconcile the plant's generation for billing purposes. In large plants, the difference between the accumulated energy and the meter's settlement value is significant.

PMMBEnergy billing system can be integrated with almost any energy meters to provide the additional settlement energy values.

Automated Billing

The process of billing can be tedious, since plant operators need to export the data from their SCADA systems and import it into complex spreadsheets or separate systems, so they can divide the data into separate times of day to match the plant's PPA rate schedule.

The information is then logged into the customer's accounting system, where additional details are added, eventually producing a sales order and an invoice that are sent to the off taker for billing.

PMMBEnergy adds the support needed to automate the process. For example, it allows customers to review and automatically create invoices in their accounting systems without any manual manipulation.

DESCRIPTION

PMMBEnergy is an economical solution designed to overcome the complexity of the bill settlement and mundane operations associated with energy data collection. The System is a combination of several hardware and software components of a site, to simplify how owners run their site economics.
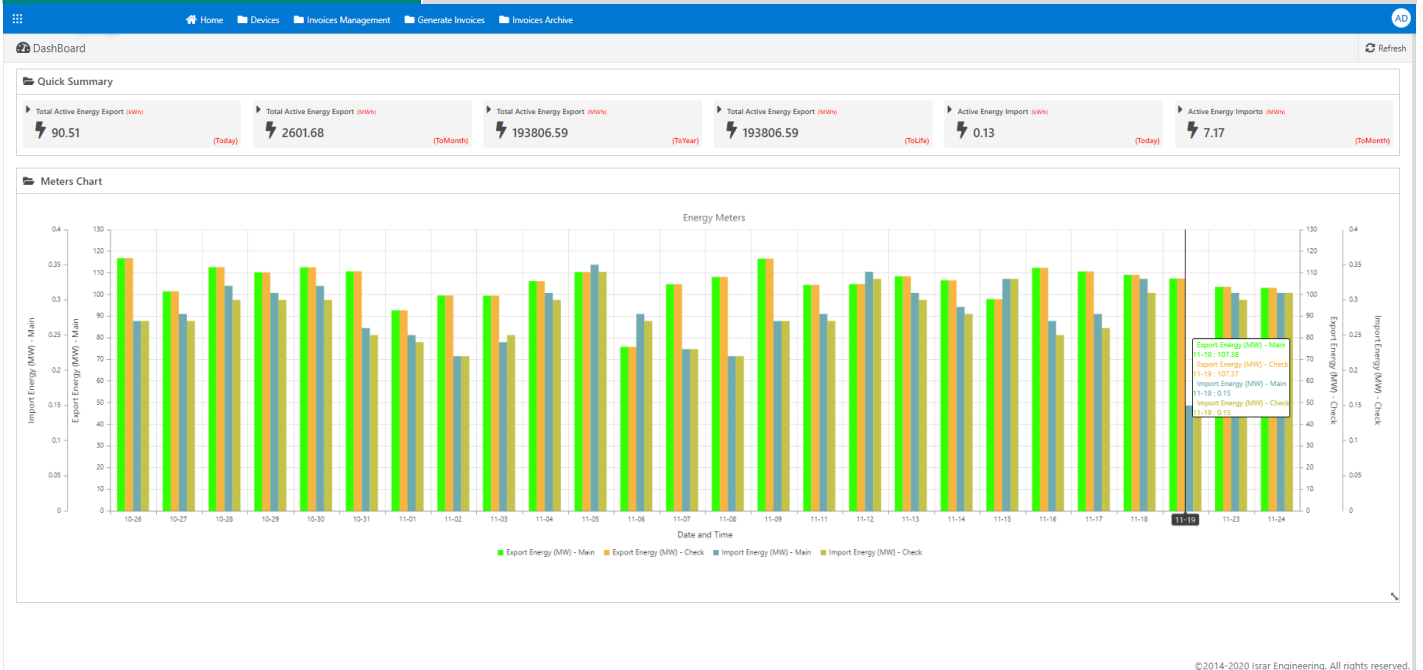
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Power Meter Monitor

SYSTEM BLOCK DIAGRAM

SCADA System Web Interface

Billing System Web Interface
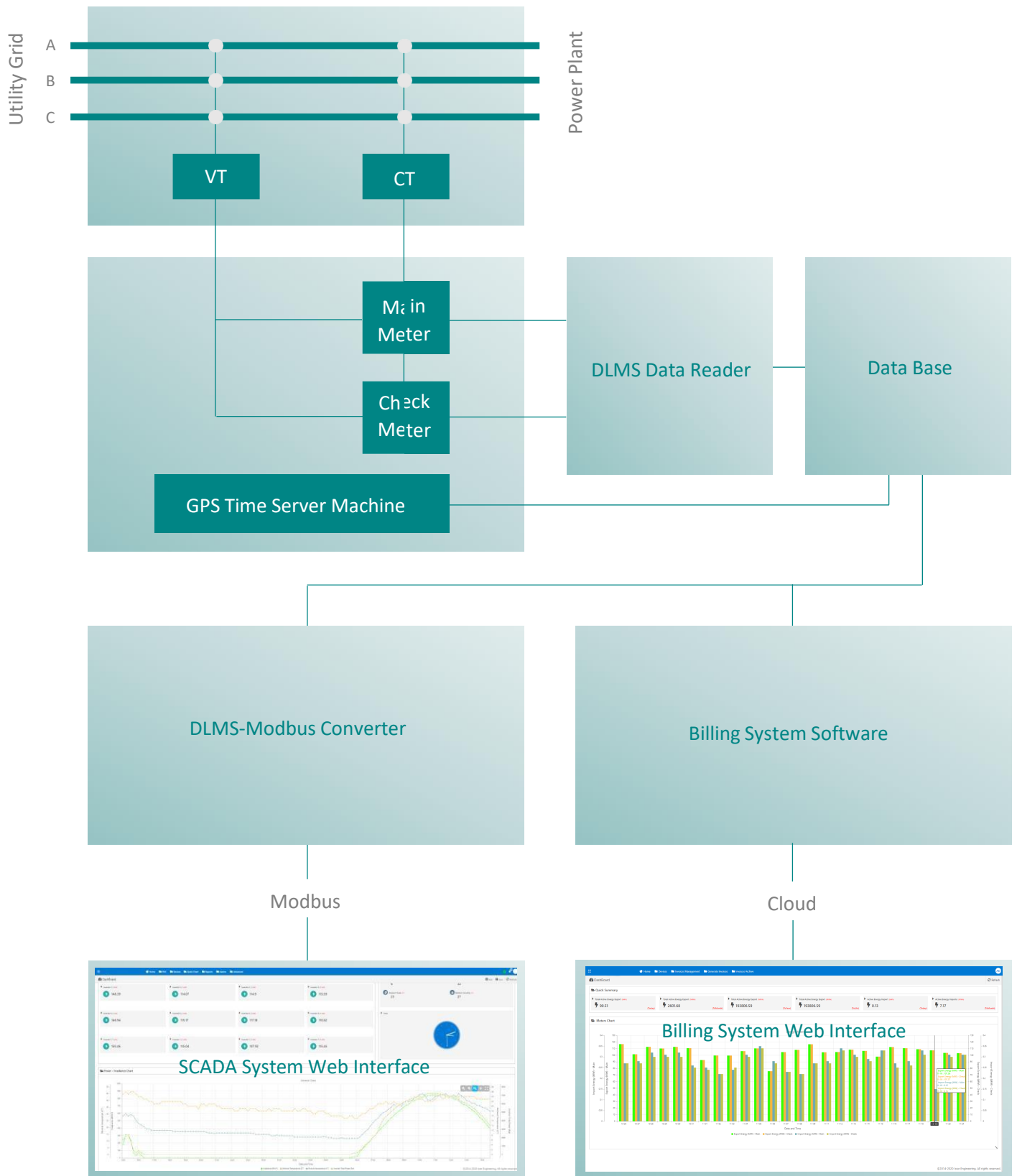
Software- User Interface

Monitoring Dashboard

Harvested Energy	Today, this Month, this Year, Lifetime
Performance Ratio	Plant Performance ration in XX % Percentage
Availability	Plant Availability ration in XX % Percentage that affects billing
Weather Stations Support	Multi Weather Station Support
Weather Stations	Irradiance Ambient Temperature Module Temperature PPCSetPoint Export (Kvar) Curtailment (%)
Meters grid	List of meters associated data: • Export (kwH) • Import (kwH) • Export (Kvarh) • Import (Kvarh)
Main Dashboard	Chart showing system daily performance of the current month

Meters

Reports	System user can generate the following tabular reports for any selected time period (Each records contains accumulated data or every 30 minutes) • TimeStamp • Kwh_export • Kwh_import • Kvarh_export • Kvarh_import
Export Capability	Listed data can be exported to Excel and CSV files

Invoicing

Reports	User can generate the following tabular invoices for any selected time period (Each record contains accumulated data or every 30 minutes) • TimeStamp • Kwh_export • Kwh_import • Kvarh_export • Kvarh_import
Parameters	System user can enter summer time dates before generating the invoice

Charts and Reports

Supported Hardware and Protocols

Supported Protocols

DLMS	Device language message specification
IEC 60870-5	101/104 Save Protocols
Modbus	RTU, TCP
DNP3	Distributed Network Protocol 3
ION	Schneider ION
OPC (Server/Client Gateway)	DA (Data access) AE (Alarm & Events) HDA (Historical Data Access) XML DA (XML Data Access) DX (Data exchange) protocols
Supported Peripheral Interfaces	Ethernet Fiber USB CAN Bus Wi-Fi Serial Communication: RS203/RS485/RS422

Operating System

Operating System	Windows Server R12 2008 and above
Database	My SQL, SQL Server