PowerAMR Wattmon ULTRA

Remote Monitoring& Control Solution

Specifications

Communication

- Two RS-485 Modbus RTU ports for communication with up to 64 Slaves
- Modbus TCP Client mode for communication with up to 20 Channels
- Modbus TCP Server mode to interfacewith SCADA systems
- RS-232 Serial Port

Inputs & Outputs

- Dallas 1-Wire bus
- 4 Configurable Analog Inputs: mA / V
- 4 Digital Inputs
- 4 Digital

OutputsPower

- Wide input voltage range: 6-60V DC
- High Efficiency DC-DC converter
- Low Power Consumption of < 4

WattsNetwork

- 100 Mbit Ethernet
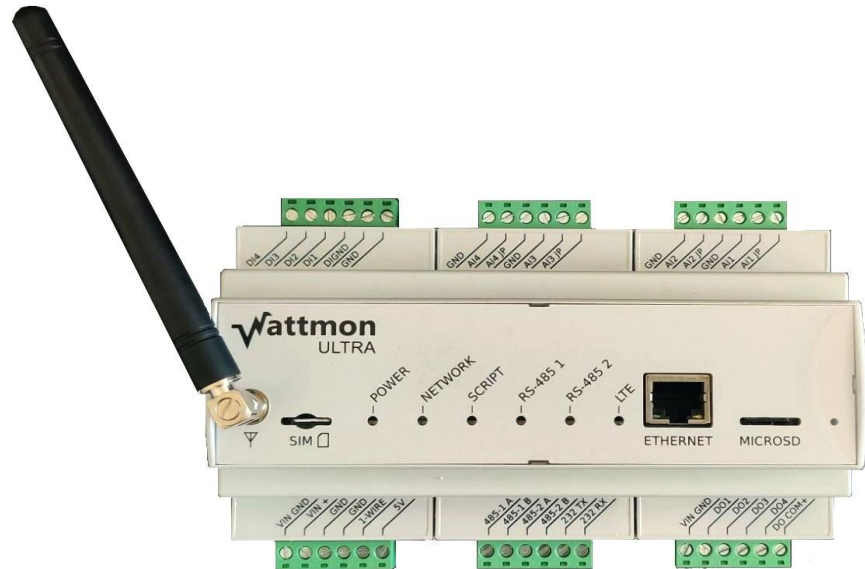- 4G LTE | Nano-SIM
- Wi-Fi (AP and STA Modes)

Storage

- 32 MB RAM
- 64 MB Internal Flash Storage
- 16 GB MicroSD Card

Data Collection & Export

- CSV Format
- HTTP/HTTPS / FTP/SFTP / MQTT/MQTTS

Applications

☐ Inverter Monitoring Inspect generation and efficiency of grid-tie and hybrid inverters.

☐ AC/DC Power Monitoring Supervise load and performance of substations and mini-grids, and monitor battery voltage natively.

☐ Weather Station Monitoring Observe irradiation, temperature and other atmospheric conditions.

☐ Zero Feed-In & DG Protection Reduce active & reactive output power of multiple inverters to regulate energy generation.

Characteristics

Enclosure Material	Polycarbonate, UL94V-O
Degree of Protection	IP20 (Finger Protected)
DIN Standard Mount	DIN EN 60529
Dimensions (L x W x H)	90 x 160 x 85 mm
Weight	155 g

Introduction

The Wattmon hardware and software platform is the most flexible in the industry. It can be used for monitoring Grid-Tie, Hybrid and Off-Grid setups, Solar Water Pumping, Building Loads, and features a Zero Feed-In and DG Protection solution that is compatible with leading manufacturers.

The WattmonULTRA is a Modbus Master (Modbus TCP Client) that can interface with up to 64 RTU Slaves and 64 TCP Servers. It may also be configured as a Modbus TCP Server to interface with a SCADA system. A quick configuration tool allows for the setting up of the device for a range of inverters, energy meters and sensors.

It supports the following data types:

- IEEE754 Float (Big and Little Endian)
- INT32 (Big and Little Endian)
- UINT32 (Big and Little Endian)
- INT16

Benefits

- **Versatile**
  Configurable by anyone using the built-in *EZConfig* function

- **Multilingual**
  Features an interface in English, Español, Deutsch, Français, हिन्दी, தமிழ்

- **Remotely Accessible**
  Log into the device remotely through the Wattmon Proxy server using a 3G/4G SIM Card or via Ethernet or Wi-Fi

- **Industry Compliant**
  Integrate new and existing devices over Modbus RTU/TCP with the on-board device driver creator

- **Local Storage**
  Securely store several years worth of data locally in CSV format and control who can view it

- *Programmable*
  Write scripts in the built-in editor using the uPHP language or the Visual Script Builder

Zero Feed-In & DG Protection

The Wattmon Power Control Solution can throttle the active power output of inverters on sites with no Net Metering or with Diesel Generators, securing against grid export or reverse-feeding and over-frequency damage. The supported brands are :

- ABB
- Delta
- Emerson
- Fronius
- Goodwe
- Growatt
- Huawei
- Ingeteam
- Kaco
- Kstar
- Polycab
- Refusol
- SofarSolar
- Schneider
- SMA
- SolarEdge
- Solis Ginlong
- Sungrow
- Zeversolar
- *and more...*

Energy Monitoring Solution (EMS)

The WattmonULTRA is capable of storing several years worth of data on the MicroSD card. It can also upload the logged data to the Wattmon Energy Monitoring Solution (EMS), a highly customizable cloud portal that displays real-time data in the form of graphs and widgets, allowing users to select the parameters they wish to monitor, and create separate accounts for individual clients.

Conformity

Radiated Emissions	
Conducted Emissions	
RoHS	