

A) General Information



Acronym: ADART-EMM

Title of the User-Project: Automated DATA Reading and Transmission via EMM

TA Call:

Host Research Infrastructure:

RSE- DER TF

Starting Date:

October 12 2012

End Date:

October 18 2012

Lead User : Athanasios Vamvakas

Organization:

ETHER APPLICATIONS Ltd

Additional Users:

Kostas Tsirbas, Alexandros Panagiotopoulos

B) Summary of the User-Project

Managing a facility today, from a small household up to geographically dispersed large installations, is a demanding job. Especially with Energy becoming a substantial cost it is paramount to have the right energy data and to be able to act upon them.

Moreover, investing in renewable energy is a clever move on the financial rewards as well as on helping the environment. It still remains an investment though. As a result, monitoring its performance as well as calculating its financial rewards is essential.

The Energy Management Module (EMM), designed and produced by Ether Applications, is intended to be used for automated data reading of energy meters and also for data transmission to central servers for further analysis and processing.

EMM is an innovative product in the field of energy monitoring and management. It can easily monitor energy consumption or production, either via an existing (electricity, gas or water) meter or, in case of electricity only, directly from the energy supply cables using current transformers. The end user can have instant information from the LCD screen of the EMM regarding instant power, daily or monthly consumption/production and the active tariff. The energy information is also transmitted to web portals via an existing WiFi/Ethernet connection or through 3G/GPRS, if Internet access is not available.

The main purpose of the tests was to validate the accuracy in reading and collecting energy data and transmitting them to our online server by both versions of EMM under both a constant load as well as while rapid and sudden load variations take place. Also, we wanted to test EMM-200 regarding its analog inputs. Moreover, it was very important to test whether the communication between EMM and the central database is constant and accurate at various recording rates (no dropped packets).

C) Main Achievements

- EMM-100 recorded pulses with full accuracy either it was recording from a single appliance or from multiple ones.
- EMM-100 recorded very accurately also in the case that different and sudden changes in the operating loads were taking place
- EMM-100 transmitted the collected data reliably and on time, as scheduled.
- EMM-200 test were successfully as regard digital and analogue measurements

D) Dissemination of the Results

- in Ether webpage www.ether.gr
- in EMM dedicated web page www.clevermetering.com
- in the greek magazine regarding economy-ecology-construction ECON3 (www.econ3.gr)

E) Use of the Resources

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| Nr. of Users involved: | 3 |
| Access Days: | 5 |
| Stay Days: | 5 |