eSMART Technologies
Monitor and control households by bringing intelligence into your home

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Abstract

The energy consumption has become a real challenge and the situation will be more and more difficult in the next years. Energy cost is increasing, and new energy billing procedures emerge in the next years. Users will not only pay the amount of energy they used (kWh) but also what is called the power-peak (a based tax on max. kW used in a month). Moreover at a larger scale, the increase of renewable energy production will force the energy distributor to add intelligence in their electrical grid distribution network, due to the high variability of the renewable energy production. This approach is the so called smart-grid. Currently, there are no solutions for electrical appliance management able to be retrofitted in existing buildings with a high reliability.
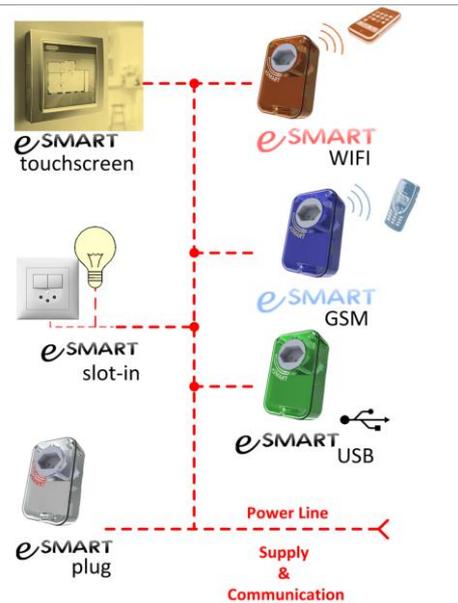
Figure 1: eSMART system

Based on innovative electronic modules that communicating directly through electrical power lines eSMART is a complete Smart Home management system (fig. It transforms any existing house in a broad Smart house without the need of breaking the walls, leading thus to a long-range communication, without electromagnetic emission in the home.

Unique for its reliability, ease of installation and functionalities, eSMART increases the level of security and comfort in your house. In the same time it aims helping to reduce the electrical consumption and therefore permits to reduce your bill related to energy consumption. Thanks to its different numerous user-friendly interfaces, your house becomes easy to manage through a Touch-screen, through your Smart-Phone (either WiFi or GSM connections) or simply with classical switches. Moreover the system is plug-and-play which reduces considerably the configuration and installation time.

Keywords: Electronics, Energy, Smart-grid, Security and Household comfort