



High-end smartplug systems to measure and control AC loads based on the SPZB32W1A2.1, STPM10, T2035H and M24LR64

Data brief

## Features

- RF network to monitor and manage the plugged load
- Energy consumption monitoring
- IEEE-802.15.4 communication
- ON/OFF and dimming
- RoHS compliant

## Description

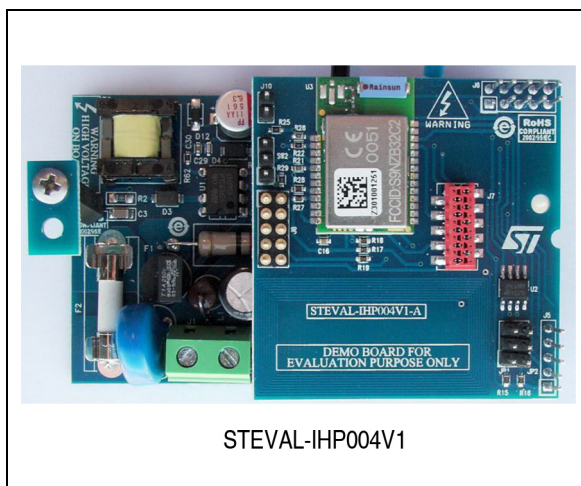
The STEVAL-IHP004V1 demonstration board is a smartplug based on the SPZB32W1A2.1 module which integrates the STM32W108 microcontroller with IEEE-802.15.4 integrated radio and 32-bit ARM Cortex-M3 core.

The STPM10 energy metering IC is used for energy measurement while the AC load can be controlled by a 16 A relay supporting soft-switch by the T2035H TRIAC.

The STEVAL-IHP004V1 demonstration board is a node of an RF network which allows the final user to monitor and manage the plugged load energy consumption. The node personalization is supported by the M24LR64 dual interface EEPROM.

The introduction of the dual interface EEPROM enables RF communication with RFID readers or ISO15693-capable NFC phones, allowing offline programming of the smart plug's parameters/profile, as well as download of events/logs.

The STEVAL-IHP004V1 demonstration board has been developed in order to provide a guideline to build a home/building automation subsystem for energy management and sub-metering. It is designed to fit the dimensions of a standard box for wall installation and easy integration into home/building electrical plants.

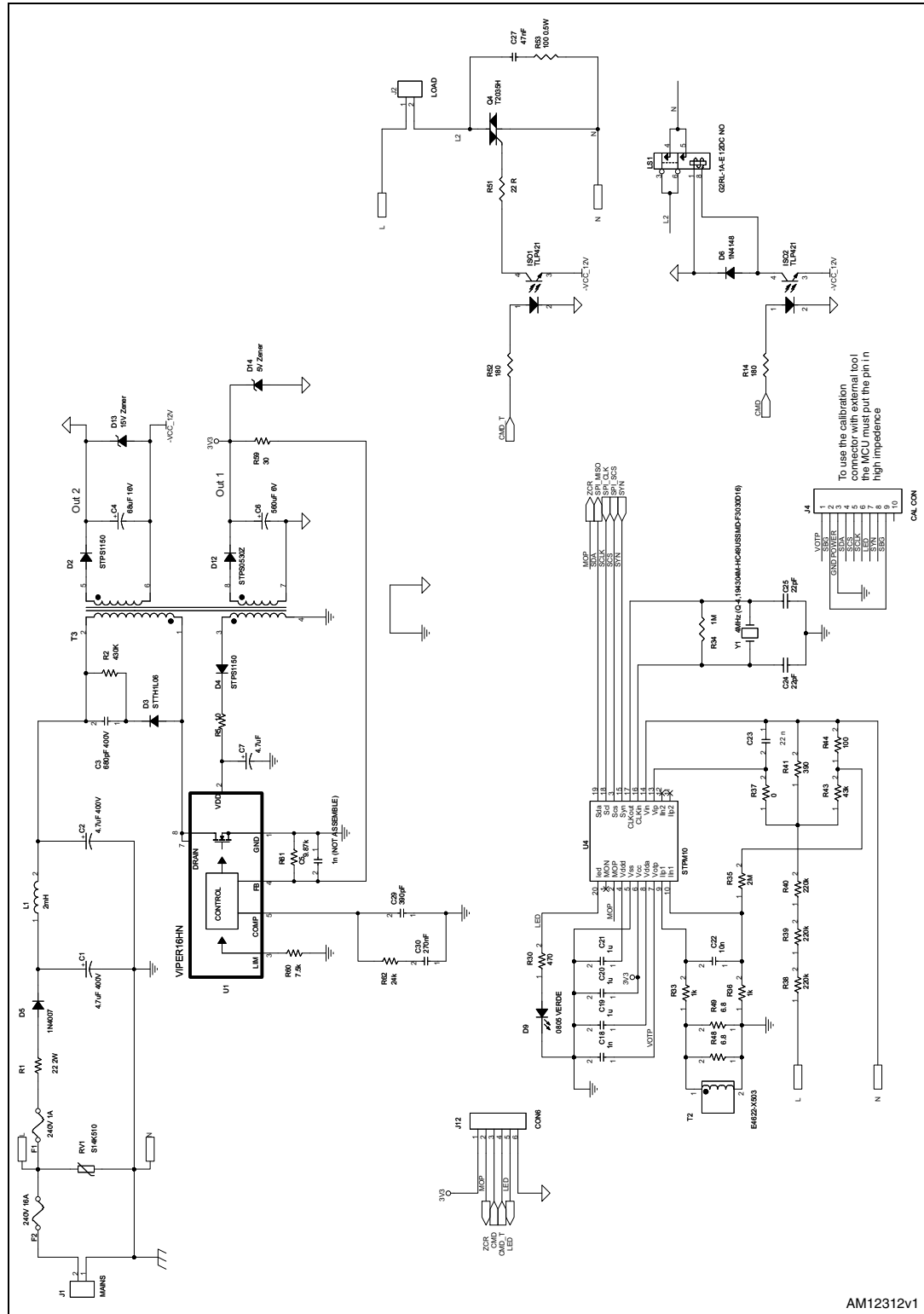


STEVAL-IHP004V1

The current, power, energy and other info related to the electrical load connected to the smartplug board are sent to an IEEE-802.15.4 data concentrator through the home/building RF network.

# 1 Schematic diagram

Figure 1. Schematic diagram



## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
11-Jun-2012	1	Initial release.

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