STEVAL-IHP003V1

Remote-controlled PLM network module based on the ST7540 and STM32F103C8

Data brief

Features

- PLM communication compliant with EN50065-1 (band C)
- FSK modulation with low frequency deviation
- Centre frequency 132.5 kHz ± 0.2%
- Bitrate: 2400 bits/s
- Microcontroller for interfacing PLM with STB
- Robust protocol implementation pursuant to KNX protocol stack (EN50090)
- Plug and play network formation
- Logical network creation
- Master-slave and peer-to-peer network configuration
- Node self-discovery to enable devices (nodes) to discover other devices and/or to be discovered by other devices
- Node admission: automatic, using ID number stored in each device
- Network address management: selection, announcements and conflict resolution
- Operating temperature range: 0 °C -50 °C
- RoHS compliant

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Description

The STEVAL-IHP003V1 module is a PLM (power line modem)-based demonstration application intended as an evaluation platform for the ST7540 FSK power line transceiver and the STM32F103C8 ARM-based 32-bit microcontroller.

The module is dedicated to pay television management, SmartPlug applications, home appliance networks and various types of remote-controlled power distribution.

For example, it can be used in hotels to act as an interface between a set-top box in hotel rooms, and a service server located at the hotel reception. Communication is achieved through the AC power line, by impressing a 132.5 kHz carrier signal on the AC wiring system with frequency shift keying modulation.

The module provides two ports, one dedicated to the power line connection and the other to a server connection.

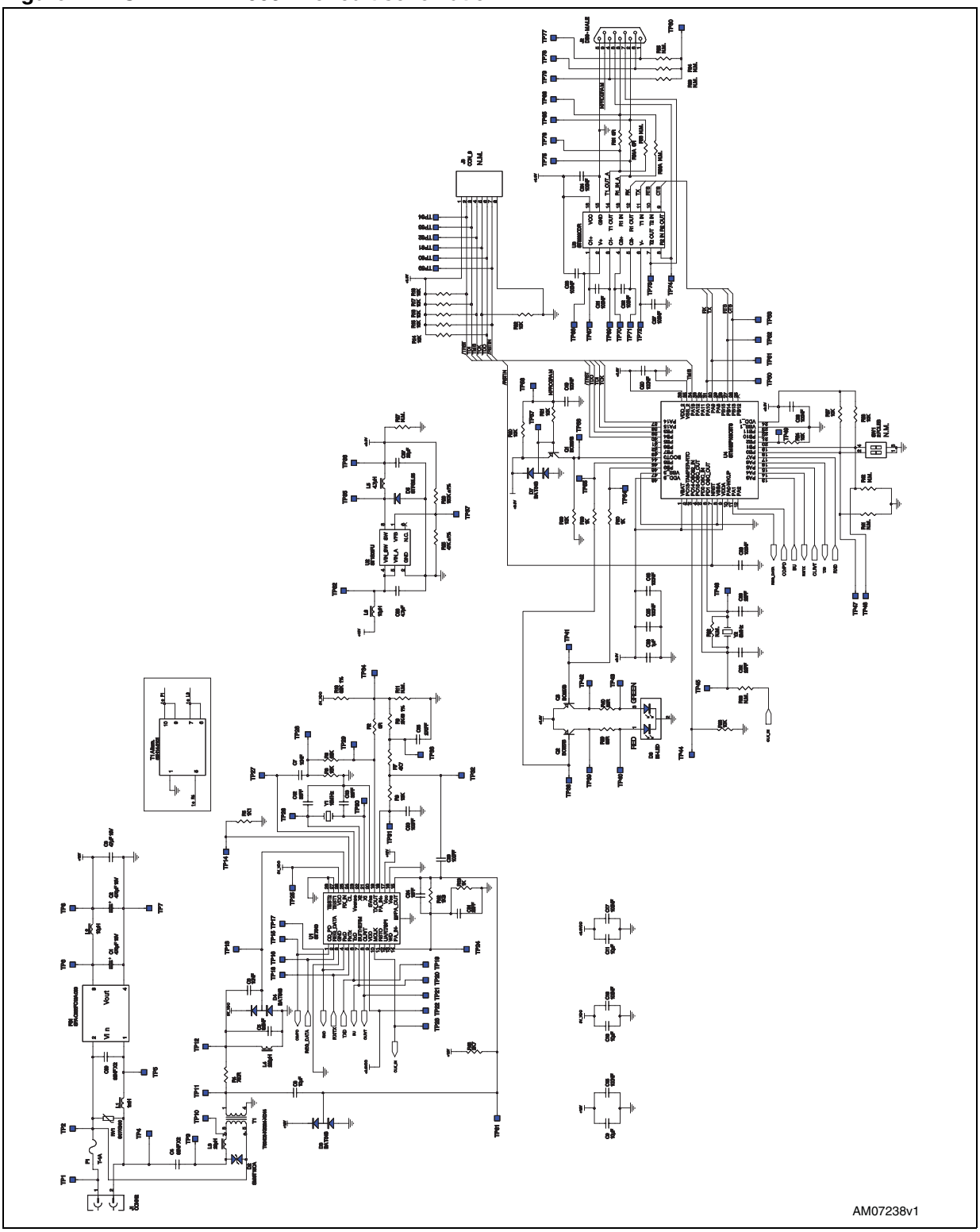
On the top of the module housing, there is a two-color LED to indicate the operating status of the module.

In addition to the ST7540 power line transceiver and STM32F103C8 microcontroller, the module features an ST3232C for RS-232 interfacing and a SPAC265-3W AC-DC switched-mode power supply.

For further information contact your local STMicroelectronics sales office. www.st.com

1 Schematic diagram

Figure 1. STEVAL-IHP003V1 circuit schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
28-Apr-2010	1	Initial release.

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