



ROBOT-M24LR16E-A

Evaluation board for the M24LR16E-R dual interface EEPROM

Data brief

Features

- 20 mm x 40 mm 13.56 MHz inductive antenna etched on PCB
- M24LR16E-R dual interface EEPROM
- I²C connector
- Energy harvesting output (V_{OUT}) with a capacitance filtering circuit
- RF WIP/BUSY output with 20 k Ω pull-up resistor, to indicate that an RF operation is ongoing

Description

The ROBOT-M24LR16E-A is a ready-to-use PCB that features an M24LR16-R dual interface EEPROM IC connected to an I²C bus and a 20 mm x 40 mm 13.56 MHz etched RF antenna. It also features two LEDs, powered by the M24LR16E-R V_{OUT} pin and an output connector.

The ROBOT-M24LR16E-A has three functions:

Switch in the “LED” position: the robot demonstrates energy harvesting by powering the LED when a sufficient magnetic field is captured.

Switch in the “ V_{OUT} ” position: the energy captured from the electromagnetic field is used to power an external application through the V_{OUT} pin.

RF WIP/BUSY function: for the RF WIP/BUSY pin of M24LR16E-R, please refer to the M24LR16E-R datasheet for further details.

To demonstrate the energy harvesting function, the ROBOT-M24LR16E-A can be used in conjunction with ST DEMO-CR95HF-A demonstration board.

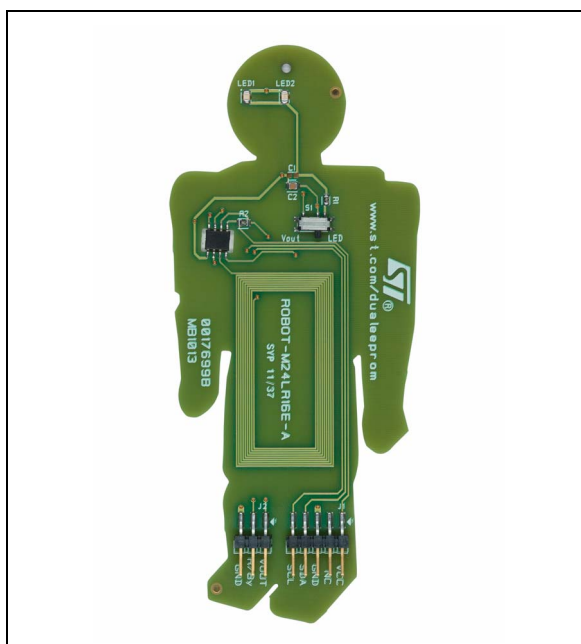
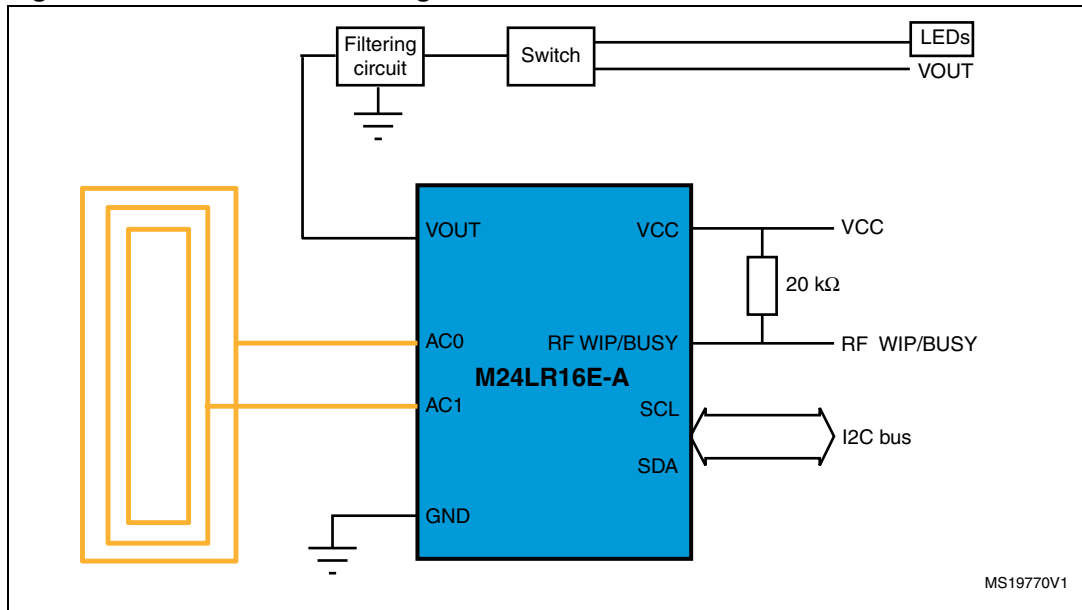


Figure 1. Functional block diagram

1 Associated firmware and PC software

The ROBOT-M24LR16E-A is supported by a PC software, the Dual Interface EEPROM tool software, that allows to configure and control the energy harvesting. This software is available from <http://www.st.com>.

Refer to application note AN3954 “*Developing your own Visual Basic or C/C++ application on a DEMO-CR95HF-A demonstration board*”, for how to adapt the PC software for your application.

2 Ordering information

Table 1. Device summary

Order code	Reference
ROBOT-M24LR16E-A	ROBOT-M24LR16E-A evaluation board

3 Revision history

Table 2. Document revision history

Date	Revision	Changes
27-Sep-2011	1	Initial release.

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