

## 45 mm x 75 mm flexible antenna reference board for the M24LR04E-R Dual Interface EEPROM

Data brief

### Features

- Ready-to-use flexible printed circuit board (PCB) including
  - 45 mm x 75 mm 13.56 MHz inductive antenna etched on the PCB
  - 100  $\mu\text{m}$  thickness PCB (Kapton)
  - M24LR04E-R Dual Interface EEPROM
  - Connection for I<sup>2</sup>C bus
  - Energy harvesting output ( $V_{\text{OUT}}$ ) with a 10 nF capacitance filtering circuit
  - RF WIP/BUSY output with 20 k $\Omega$  pull-up resistor, to indicate that an RF operation is ongoing

### Description

The FLEX-M24LR04E antenna reference board is a ready-to-use flexible PCB that features an M24LR04E Dual Interface EEPROM IC connected to a 45 mm x 75 mm 13.56 MHz etched RF antenna on one side, and to an I<sup>2</sup>C bus on the other side.



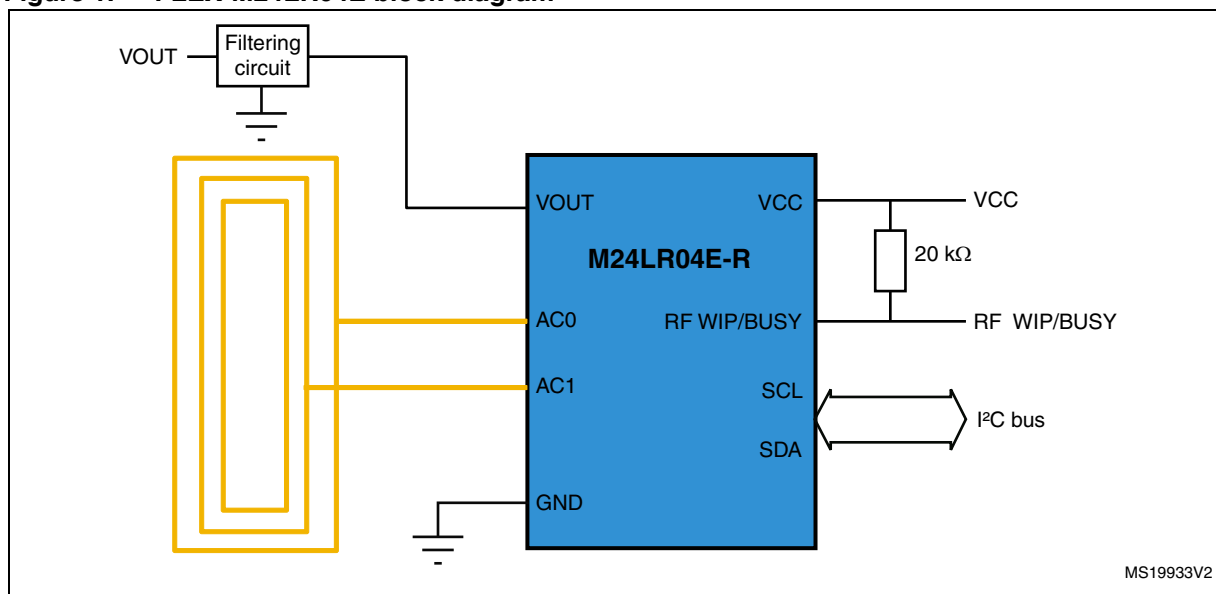
The FLEX-M24LR04E antenna allows system designers to evaluate the M24LR04E performance and capabilities, and to get started with their design.

To demonstrate the energy harvesting function, the FLEX-M24LR04E can be used in conjunction with ST DEMO-CR95HF-A demonstration board.

The application can be powered directly from the M24LR04E  $V_{\text{OUT}}$  pin.

The FLEX-M24LR04E Gerber files can be downloaded from [www.st.com](http://www.st.com).

Figure 1. FLEX-M24LR04E block diagram



## Associated firmware and PC software

The FLEX-M24LR04E board 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 [www.st.com](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.

## Revision history

**Table 1. Document revision history**

Date	Revision	Changes
2-Jul-2012	1	Initial release.

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