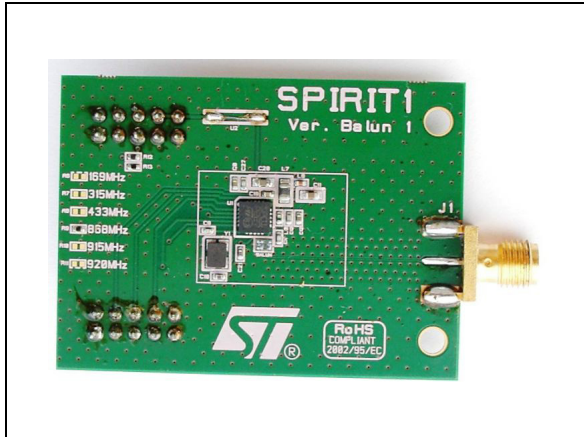


**SPIRIT1 - low data rate transceiver - 868 MHz - daughterboard  
integrated balun**

Data brief

**Description**

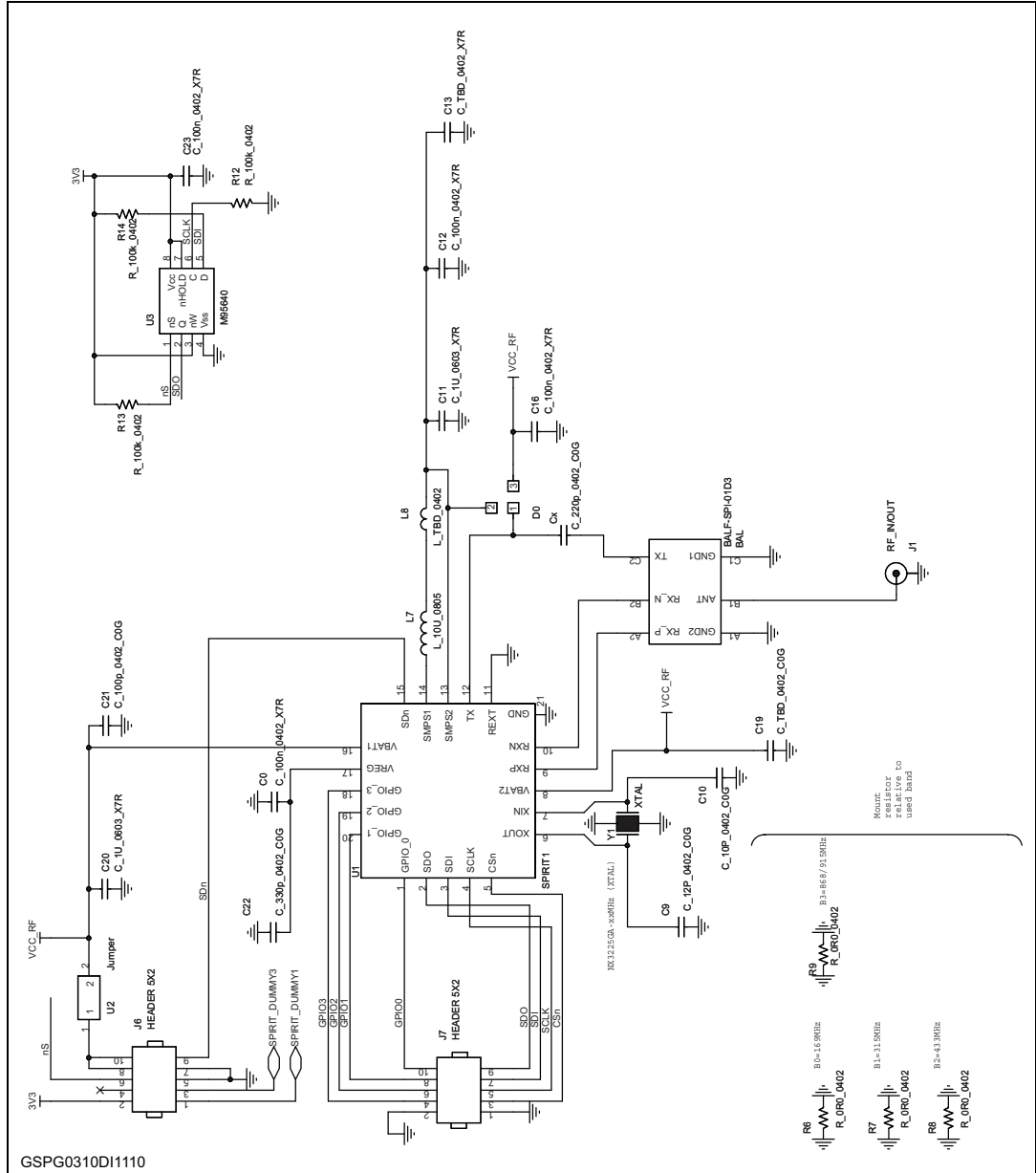
The STEVAL-IKR002V4B evaluation daughterboard is based on the SPIRIT1, a sub-GHz low power, low data rate transceiver suitable for ISM bands and wireless M-BUS. The board is equipped with external balun, matching and filter in a single BALF-SPI-01D3 device which optimizes size, RF performances and number of external RF components (from 16 SMD passive components to just 1).

**Features**

- SPIRIT1 low power, sub-GHz transceiver in a standalone RF module tuned for the 868/915 MHz bands
- External balun + matching + filter in a single component: BALF-SPI-01D3
- Suitable for wireless M-BUS systems
- Associated SPIRIT1 development kit includes documentation, firmware for STM32L and GUI
- Modulation schemes: 2-FSK, GFSK, MSK, GMSK, OOK, and ASK
- Air data rate from 1 to 500 kbps
- Very low power consumption (9 mA RX and 21 mA TX at +11 dBm)
- Excellent performance of receiver sensitivity (up to -120 dBm)
- Low duty cycle RX/TX operation mode
- Automatic acknowledgment, retransmission, and timeout protocol engine
- AES 128-bit encryption co-processor
- SPI interface for microcontroller
- RoHS compliant

# 1 Schematic diagram

Figure 1. STEVAL-IKR002V4B circuit schematic



## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
08-Jan-2014	1	Initial release.
02-Apr-2014	2	Title has been modified.

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