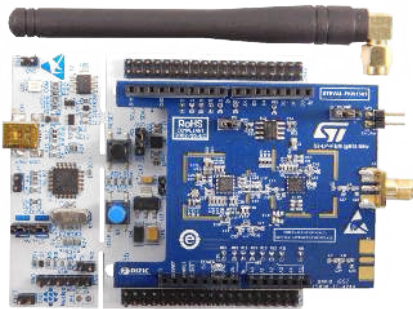


## Sub-1GHz (860-940 MHz) transceiver development kit based on S2-LP



### Features

- **S2-LP** narrow band ultra-low power Sub-1GHz transceiver in a standalone RF module tuned for 860-940 MHz frequency bands with external power amplifier
- STM32 Nucleo-64 development board with **STM32L152RE** MCU
- Suitable for wireless M-Bus systems
- Suitable for SigFox applications
- Associated S2-LP development kit including, documentation, firmware for STM32L and GUI
- Programmable RF output power up to +27 dBm
- Modulation schemes: 2-FSK, 2-GFSK, 4-FSK, 4-GFSK, OOK, and ASK
- Air data rate from 0.3 to 500 kbps
- Excellent performance of receiver sensitivity (up to -130 dBm)
- Low duty cycle RX/TX operation mode
- Automatic acknowledgement, retransmission and timeout protocol engine
- SPI interface for microcontroller
- USB interface
- RoHS compliant

### Description

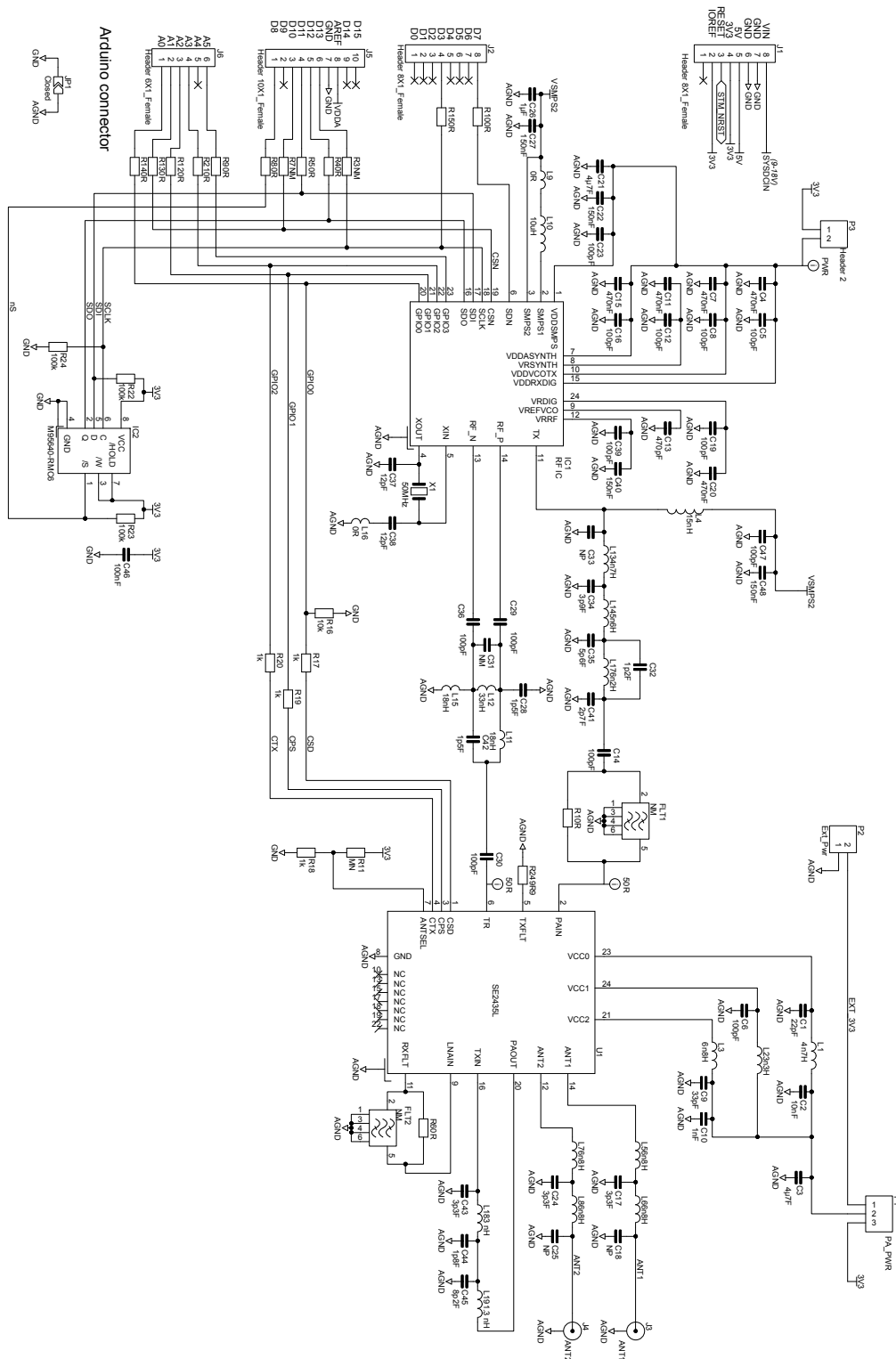
The **STEVAL-FKI915V1** evaluation board is based on the **S2-LP** sub-1GHz ultra-low power low data-rate transceiver suitable for ISM bands and wireless M-Bus.

The **NUCLEO-L152RE** main board with an STM32L low power MCU controls the S2-LP and integrates the ST-LINK/V2-1 debugger and programmer for firmware updating.

The STEVAL-FKI915V1 includes an external power amplifier from SkyWorks®, which allows the application to reach +27 dBm (500 mW) output power.

| Product summary   |                                 |
|---|---------------------------------|
| Sub-1GHz (860-940 MHz) transceiver development kit based on S2-LP                                   | <a href="#">STEVAL-FKI915V1</a> |
| STM32 Nucleo-64 development board with STM32L152RE MCU, supports Arduino and ST morpho connectivity | <a href="#">NUCLEO-L152RE</a>   |
| Ultra-low power, high performance, sub-1GHz transceiver   | <a href="#">S2-LP</a>           |
| Ultra-low-power ARM Cortex-M3 MCU with 512 Kbytes Flash   | <a href="#">STM32L152RE</a>     |

# 1 Schematic diagram

**Figure 1. STEVAL-FKI915V1 circuit schematic**


## Revision history

**Table 1. Document revision history**

| Date        | Version | Changes   |
|-------------|---------|---|
| 14-Dec-2016 | 1       | Initial release.  |
| 30-Jan-2017 | 2       | Updated board photo on the cover page.                          |
| 10-Apr-2018 | 3       | Updated title and <a href="#">Section 1 Schematic diagram</a> . |

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