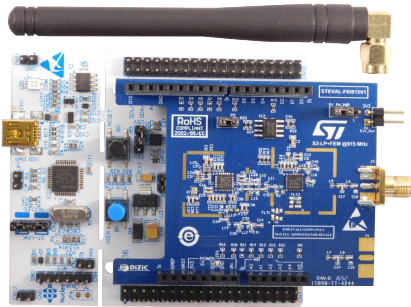


## Sub-1GHz (860-940 MHz) transceiver development kit based on S2-LP



### 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

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 <a href="#">STM32L152RE</a> MCU, supports Arduino and ST morpho connectivity	<a href="#">NUCLEO-L152RE</a>
Ultra-low power, high performance, sub-1GHz transceiver	<a href="#">S2-LPQTR</a>
Ultra-low-power ARM Cortex-M3 MCU with 512 Kbytes Flash	<a href="#">STM32L152RE</a>

### Description

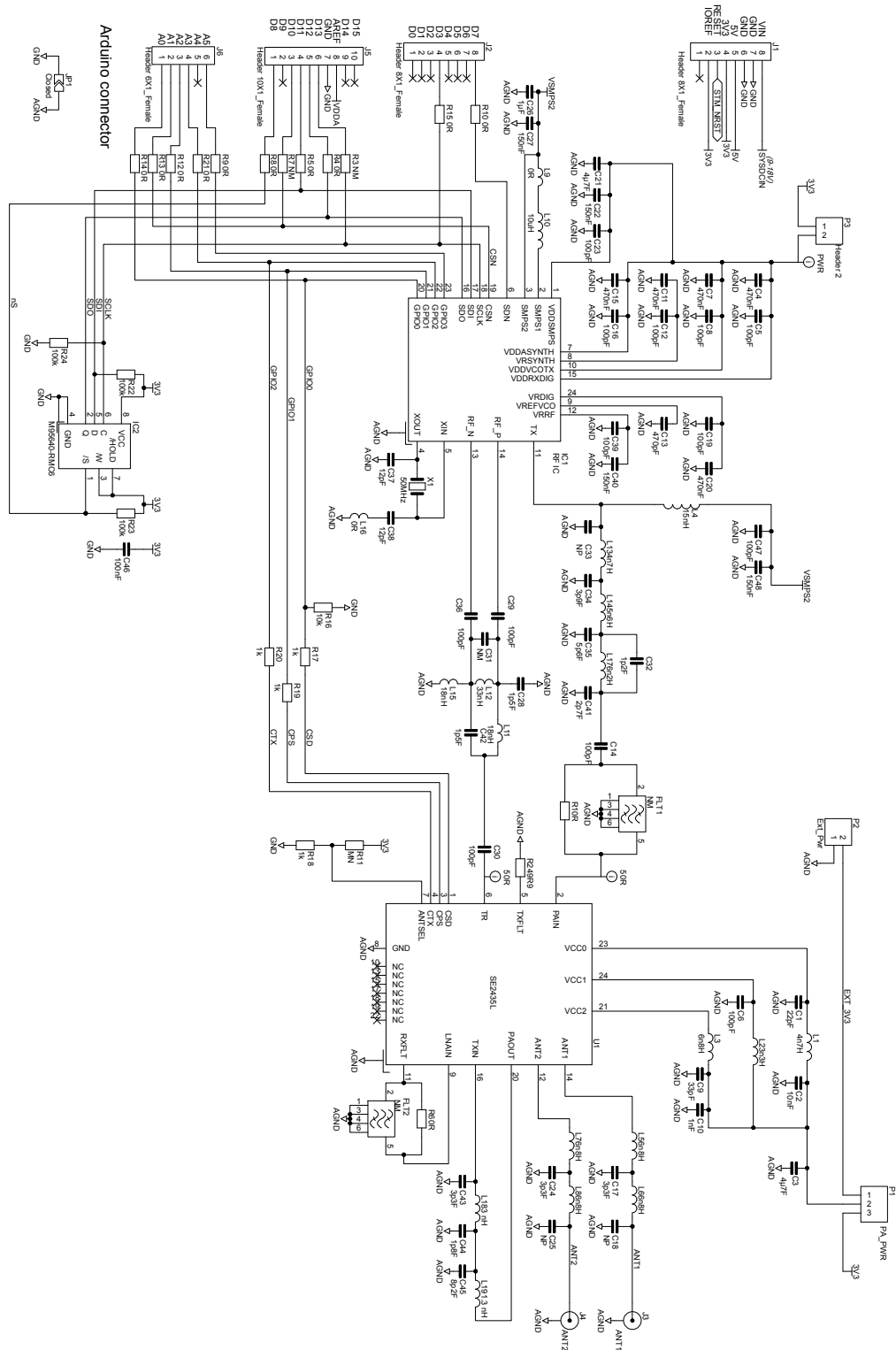
The [STEVAL-FKI915V1](#) evaluation board is based on the [S2-LP](#) sub-1GHz ultra-low power low data-rate transceiver suitable for ISM bands and wireless M-Bus.

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.

# 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 Schematic diagram.
05-Mar-2024	4	Updated product summary and Schematic diagram.

**IMPORTANT NOTICE – READ CAREFULLY**

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgment.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, refer to [www.st.com/trademarks](http://www.st.com/trademarks). All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2024 STMicroelectronics – All rights reserved