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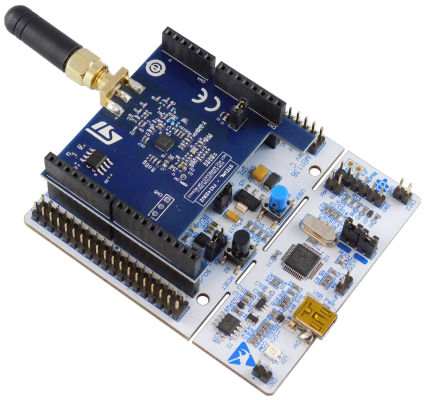
# STEVAL-FKI433V2

Data brief

## Sub-1GHz (430-470 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 430-470 MHz frequency bands
- STM32 Nucleo-64 development board with STM32L0 MCU
- Suitable for wireless M-Bus systems
- Associated S2-LP development kit including, documentation, firmware for STM32L and GUI
- Programmable RF output power up to +16 dBm
- Modulation schemes: 2-FSK, 2-GFSK, 4-FSK, 4-GFSK, OOK, and ASK
- Air data rate from 0.3 to 500 kbps
- Ultra-low power consumption:
  - 6.7 mA RX
  - 10 mA TX at +10 dBm
- 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 (430-470 MHz) transceiver development kit based on S2-LP | STEVAL-FKI433V2 |
| STM32 Nucleo-64 development board with STM32L053R8 MCU | NUCLEO-L053R8 |
| Ultra-low power, high performance, sub-1GHz transceiver | S2-LP |
| STM32L0 series of ultra-low-power MCUs | STM32L0 |
| ST-LINK/V2 in-circuit debugger/ programmer for STM8 and STM32 | ST-LINK/V2 |

## Description

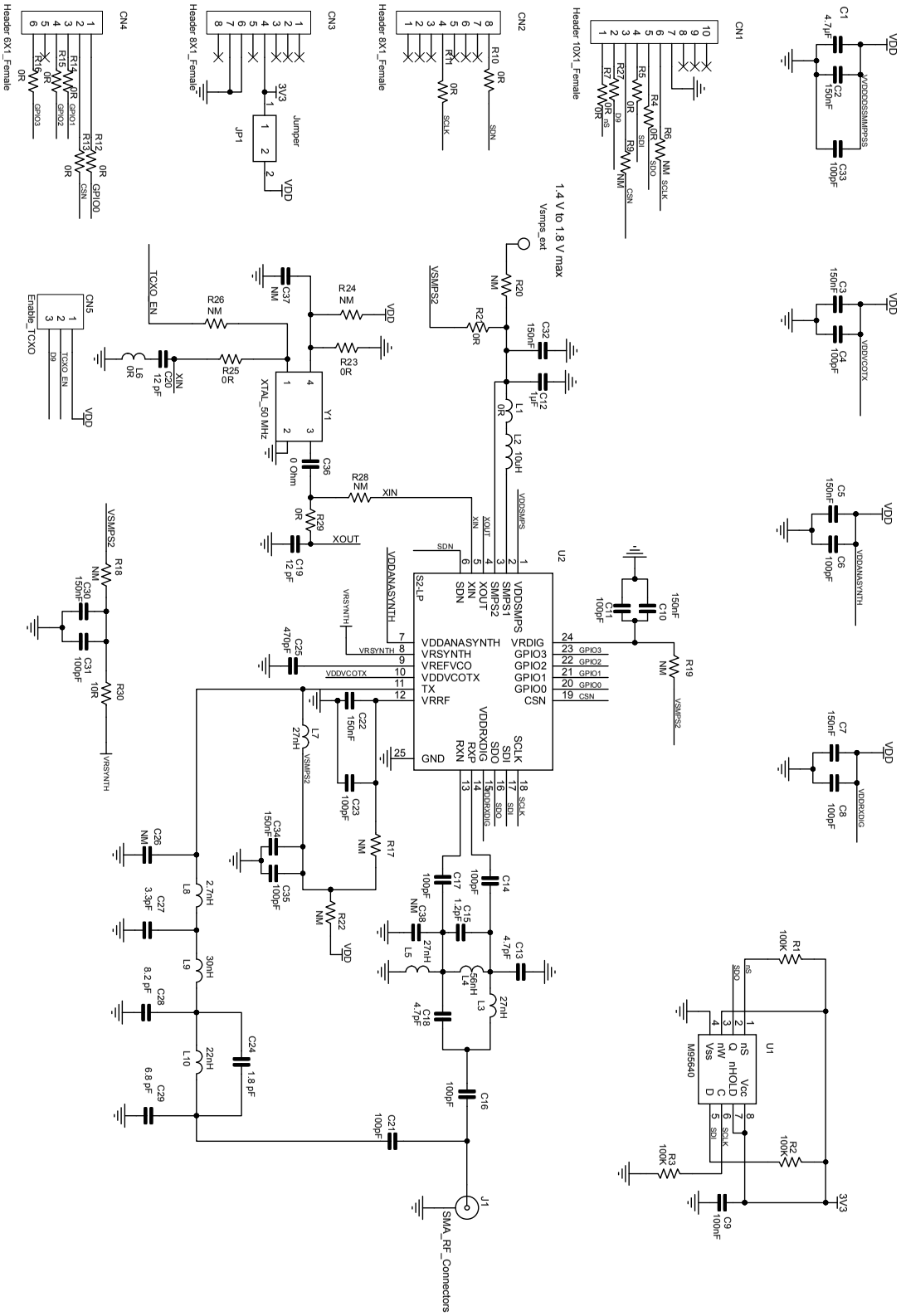
The STEVAL-FKI433V2 evaluation board is based on the S2-LP sub-1GHz ultra-low power low data-rate transceiver suitable for ISM bands and wireless M-Bus.

The NUCLEO-L053R8 motherboard is equipped with an STM32L0 low power microcontroller to control the S2-LP.

The board integrates a ST-LINK/V2-1 debugger/programmer for firmware updating.

# 1 Schematic diagram

Figure 1. **STEVAL-FKI433V2 circuit schematic**



## Revision history

**Table 1. Document revision history**

| Date | Version | Changes |
|---|---|---|
| 02-Mar-2018 | 1 | Initial release. |
| 23-Mar-2018 | 2 | Updated Section 1 Schematic diagram and title. |
| 10-Apr-2018 | 3 | Updated Section 1 Schematic diagram. |