STEVAL-SMARTAG1

Data brief

NFC Dynamic Tag sensor node evaluation board





Product summary table
STEVAL-SMARTAG1 NFC Dynamic Tag sensor node evaluation board
ST25DV64K 64-Kbit dynamic NFC/RFID tag NFC Forum type V with I2C interface, fast transfer mode and energy harvesting
STM32L031K6 ultra-low-power ARM Cortex-M0+ MCU with 32-Kbytes Flash, 32 MHz CPU
LIS2DW12 3-axis MEMS accelerometer, ultra low power, configurable single/ double-tap recognition, free-fall, wakeup, portrait/landscape, 6D/4D orientation detections
LPS22HB ultra-compact piezoresistive absolute pressure sensor, 260-1260 hPa, digital output barometer, full-mold, holed LGA package (HLGA)
HTS221 capacitive digital sensor for relative humidity and temperature
STLQ015 150 mA - ultra low quiescent current linear voltage regulator

Features

- ST25DV64K dynamic NFC tag solution based on 64K-bit (8K-Byte) EEPROM and with I²C interface, Fast Transfer Mode and Energy Harvesting features
- STM32L031K6 ultra-low-power ARM Cortex-M0+ MCU running at 32 MHz with 32-Kbytes Flash and 8-Kbytes RAM
- LIS2DW12 ultra-low-power high-performance three-axis linear accelerometer
- LPS22HB ultra-compact piezo-resistive absolute pressure sensor which functions as a digital output barometer: 260-1260 hPa
- HTS221 capacitive digital sensor for relative humidity and temperature
- STLQ015 low drop linear regulator power management
- CR2032 Battery powered (not included)
- STM32Cube function pack (FP-SNS-SMARTAG1)
- Android (Google Play) and iOS demo apps (ST SmarTag)
- Suitable for the following applications:
  - Internet of Things
  - Supply Chain and Cold-Chain Management
  - Smart building, home and city
  - Retail and apparel
  - Smart packaging
  - Medical and pharmaceutical
  - Batteryless sensing
  - Smart agriculture (soil control, animal tracking, etc.)

Description

This smart and flexible NFC Tracker evaluation board with sensors includes a comprehensive software library and a sample application to monitor and log sensor data over NFC from an Android or iOS device.

The ultra-low power sensor node evaluation board mounts an ST25DV NFC Tag, an STM32L0 ARM Cortex M0+, environment sensors (temperature, humidity and pressure) and motion (accelerometer) sensor.

The evaluation board features NFC harvesting to supply power and a battery cradle for a CR2032 battery.

1 Schematic diagrams, bill of materials and other resources

For schematic diagrams, bill of materials and other resources, please visit the STEVAL-SMARTAG1 page on www.st.com

1.1 Application development

For further resources to help you build your application, you can try the Connectivity application page on www.st.com

Revision history

Table 1. **Document revision history**

Date	Version	Changes
19-Feb-2018	1	Initial release.
07-Mar-2018	2	Updated Features.
22-Jun-2018	3	Updated cover image.

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