NFC Dynamic Tag sensor node evaluation board

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.

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

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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