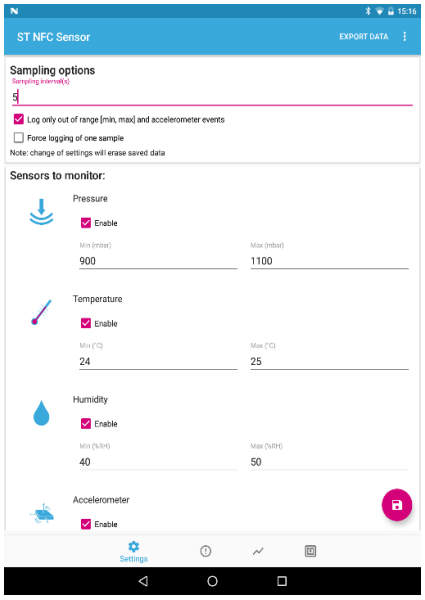
STNFCSensor

Data brief

NFC Sensor TAG mobile application



Product summary	
NFC Sensor TAG mobile application	STNFCSensor
NFC Dynamic Tag sensor node evaluation board	STEVAL-SMARTAG1
STM32Cube function pack for IoT node with Dynamic NFC Tag, environmental and motion sensors	FP-SNS-SMARTAG1

Features

- Sensor data reception and command transmission over NFC (near field communication)
- Available on Android and I/Os stores
- Energy harvesting feature demonstration

Description

The STNFCSensor application, available for Android and I/Os, demonstrates the innovative energy harvesting capability integrated into the embedded ST25DV series dynamic NFC tag.

This feature enables the device to operate without an internal battery, harnessing energy wirelessly from an external NFC reader.

The STEVAL-SMARTAG1 development board, which runs the FP-SNS-SMARTAG1 firmware, leverages this energy harvesting functionality to power the system solely through the energy captured from the NFC field.

As a result, the device can reliably collect and transmit sensor data even in one-shot mode, where data is read once per activation, without relying on any onboard power source.

This capability is particularly advantageous for applications where battery replacement is impractical or undesirable, such as in remote sensing, asset tracking, or maintenance-free IoT devices.

By eliminating the battery, the system reduces maintenance costs, improves reliability, and supports sustainable, eco-friendly designs.

1 Detailed description

The app gives the possibility of setting the duty data sampling time and the sensors to monitor and store, using a threshold mechanism.

The app available panels are:

- One-shot panel to:
  - Show the sensor data in real-time (humidity, temperature, pressure, and accelerometer)

Note: All the previous functionalities have been transferred to the STAssetTracking application.

Revision history

Table 1. **Document revision history**

Date	Version	Changes
05-Jul-2018	1	Initial release.
12-Sep-2025	2	Updated Features, Description and Section 1: Detailed description.

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