

Reference hardware bundle for MQTT NFC asset tracking with NB-IoT connectivity and NFC-based TLS credential provisioning



Features

- Complete three-board reference configuration for the MQTT NFC asset tracking application
- STEVAL-NBIOTV1 NB-IoT evaluation platform and reference design featuring:
 - STM32U585RI Arm Cortex®-M33 microcontroller
 - ST87M01 low-power NB-IoT industrial module with GNSS capability
 - Embedded NB-IoT and GNSS antennas
 - Onboard motion, pressure, temperature, and humidity sensors
- STEVAL-C34ADPTK1 C34 connector breakout expansion board kit featuring:
 - STEVAL-C34ADPT2 adapter board with all C34 connector pins exposed
 - STEVAL-FLTCB05 15 cm flex cable
- ANT7-T-25DV64KC NFC antenna reference board featuring:
 - ST25DV64KC dual interface EEPROM
 - 14 x 14 mm, 13.56 MHz dual-layer etched antenna
 - I²C interface for firmware access and NFC interface for mobile provisioning
- Device TLS certificate and private key stored on the NFC tag and retrieved by the application through I²C
- TLS-secured MQTT telemetry published to the STAssetTracking dashboard over NB-IoT connectivity

Description

STKIT-NBIOTNFC is a reference bundle that describes the hardware configuration required by the MQTT NFC asset tracking application, which is part of the [STSW-NBIOTV1](#) software package.

The reference configuration combines the [STEWAL-NBIOTV1](#) NB-IoT evaluation platform, the [STEWAL-C34ADPTK1](#) C34 connector breakout expansion board kit, and the [ANT7-T-25DV64KC](#) NFC antenna reference board.

This hardware bundle is supposed to work with the [STSW-NBIOTV1](#) software package, which provides the firmware and software components required to run the MQTT NFC asset tracking application.

The application uses the [ST25DV64KC](#) NFC tag to store device-specific TLS credentials.

After the tag is provisioned with an NFC-capable phone, the firmware running on the [STEWAL-NBIOTV1](#) reads the certificate and private key through I²C, imports them into the ST87M01 secure profile, and publishes sensor telemetry to the STAssetTracking dashboard through a TLS-secured MQTT connection.

Product summary	
Reference hardware bundle for MQTT NFC asset tracking with NB-IoT connectivity and NFC-based TLS credential provisioning	STKIT-NBIOTNFC
Software examples for STEVAL-NBIOTV1	STSW-NBIOTV1
C34 connector breakout expansion board kit	STEWAL-C34ADPTK1
14 mm x 14 mm double layer antenna reference board for the ST25DV64KC Dual Interface EEPROM	ANT7-T-25DV64KC
Applications	Asset tracking Smart city Metering Industrial

1 Practical Information

The STKIT-NBIOTNFC is a non-orderable reference bundle.

You can obtain the following constituent boards separately:

- [STEVAL-NBIOTV1](#)
- [STEVAL-C34ADPTK1](#)
- [ANT7-T-25DV64KC](#)

The following items are also required to run the application:

- [STSW-NBIOTV1](#): firmware and software components for the MQTT NFC Asset Tracking application
- Compatible debugger/programmer (e.g., ST-LINKV3)
- USB power source (can be a PC USB port or a USB wall adapter)
- NFC-capable phone running the ST25 mobile application
- Access to the ST Asset Tracking [dashboard](#)

Revision history

Table 1. Document revision history

Date	Revision	Changes
14-Oct-2026	1	Initial release.

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