

SET-NFC-01

NFC chip and antenna

User's guide



Description

SET-NFC-01 is a bundle containing the IC and an antenna for Near-Field Communication (NFC). It is intended for integration into a device utilizing IQRF wireless connectivity. NFC can be used for easy bonding the device into the IQRF network and possibly for other tasks. The bonding is possible via the mobile phone.

Features

- NFC chip ST25DV04K by STMicroelectronics
- Bidirectional contactless communication (read/write) up to about 4 cm distance
- To store IQRF Code in NFC chip non-volatile (EEPROM) memory
- Contactless Smart Connect bonding via the IQRF Network Manager mobile application
- Energy harvesting (collecting from mobile phone) for extra low power devices
- Flexible NFC antenna

Purpose

- Including (bonding) the device into the IQRF network
- Possibly other installation, service, or maintenance tasks

Applications

- Any device utilizing the IQRF wireless network (IQMESH)
- Smart house
- Internet of Things
- Even for applications without IQRF



Technical specifications

NFC chip	ST25DV04K-IER6C3 by STMicroelectronics
NFC antenna	Printed on a flexible polyimide film (Kapton)
SET-NFC-01A	ANT-FLEXI-NFC-01A (with the terminal in the middle)
SET-NFC-01B	ANT-FLEXI-NFC-01B (with the terminal on the side)

Typical usage

Integrate the NFC chip into your device and implement the I²C bus for access to the NFC memory.

Encode the IQRF Code for your device. The format is described in the `IQRFCODE_XXX.PDF` file included in the `IQRFCODE_XXX.ZIP` file downloadable from [IQRF Standard Manuals](#) page. The easiest way to encode this is by using the interactive [IQRF Code Tool](#) implemented in [IQRF IDE](#).

Write the IQRF Code into NFC memory via the I²C interface. The procedure including the pseudocode is also described in the `IQRFCODE_XXX.PDF` document. The `NFC.c` library in C language is available for this (also included in the IQRF Startup package). Finally, protect the NFC content against modification via RF.

Then it is possible to use the [IQRF Network Manager](#) mobile application to read the IQRF Code from the device and execute the [Smart Connect](#) bonding.

Another usage of NFC is possible too but the functionality must be implemented by the user.

Product information

Ordering code

SET-NFC-01A	NFC bundle with antenna ANT-FLEXI-NFC-01A
SET-NFC-01B	NFC bundle with antenna ANT-FLEXI-NFC-01B

Document history

201119	First release.
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Quality management

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