ST21NFCA and ST33F1M complete offer for NFC-enabled devices

STMicroelectronics

From NFC controllers to SIM and secure elements

STMicroelectronics is committed to providing global NFC solutions to the market.

In addition to the ST21NFCA NFC controller, a full range of U(SIM) and secure element solutions supported by the ST33F1M product family embedding a secure, 32-bit SC300 ARM core are available.

ST's system in package devices are pin-to-pin compatible with the standalone ST21NFCA offering maximum flexibility to NFC sevice manufacturers.

Combining the two products brings an unrivalled level of performances and security to NFC-enabled devices.

NFC (near-field communication) technology is at the heart of an expanding spectrum of easy-to-use, intuitive, contactless applications. These are targeting a broad range of electronics devices such as mobile phones, tablets and PCs.

Taking advantage of the three different operating modes (reader, peer to peer, card emulation), NFC technology is used to address a wide variety of use cases such as mobile payment, ticketing and transport, Bluetooth pairing and smart posters.

From a product …

The ST21NFCA offers a ready-to-use solution covering all the contact interfaces to the terminal processor, (U)SIM and all other secure elements. It also includes drivers for all standard RF protocols. It provides a flexible and open solution for a market in evolution by integrating a microcontroller and embedded non-volatile memory that allow an efficient and easy upgrade of the firmware and user functions. With

the various embedded connectivity channels, the ST21NFCA is able to address different phone or contactless device system architectures. The ST21NFCA takes advantage of a field-proven, reliable and cost-efficient 0.13 µm embedded EEPROM technology, extensively used in other secure MCU markets.

… to a complete solution

Being totally committed to the development and promotion of NFC technology, ST offers global solutions including:

- Secure elements in various form factors such as SWP-SIM, packaged eSE and microSD
- GlobalPlatform certified secure OS solutions
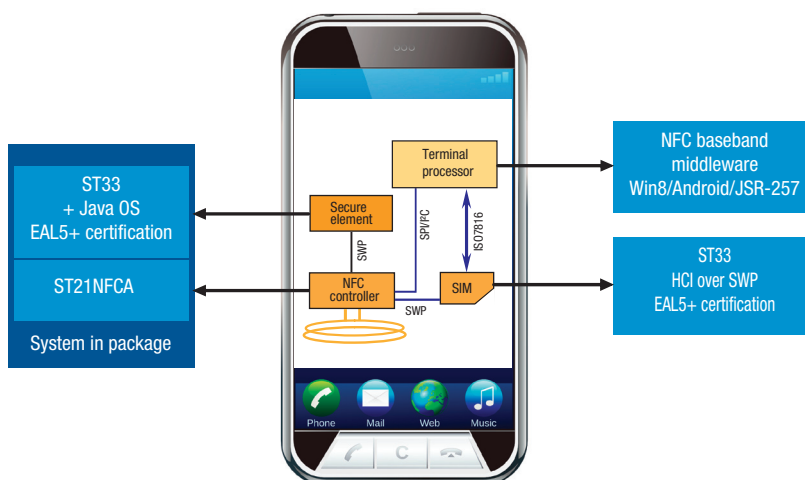- System in packages

ST21NFCA key features

- 8/16-bit CPU core with memories
- ISO/IEC 14443 A, B, F, ISO/IEC 15693 and ISO/IEC 18092 compliant
- I²C/SPI for terminal host
- SWP for UICC and secure element
- Card and reader/writer modes
- Power by the field capability
- Low-power mode
- Embedded drivers for all RF protocols, contact connectivity
- Embedded firmware compliant with ETSI HCI specification
- NFC SW stack in terminal host supporting multiple OS
- Low power consumption switching loop
- Automatic SE selection and AID routing table

ST33F1 key features

- 32-bit ARM® SecurCore® SC300™
- 1.25- and 1-Mbyte Flash with 30-Kbyte RAM
- 896-, 768-, 640- and 512-Kbyte Flash with 24-Kbyte RAM
- 1.8 V, 3 V and 5 V Vcc range
- CPU clock: 21 MHz typical
- UART compliant with ISO 7816-3 protocols down to ETU 8
- High-performance Nescrypt cryptographic engine
- SWP and SPI interfaces
- EMVCo and CC-EAL5+ certification
- Optional MIFARE™ support

Global ST offer in the NFC ecosystem

Order code: FLNFCDEVIC1011

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