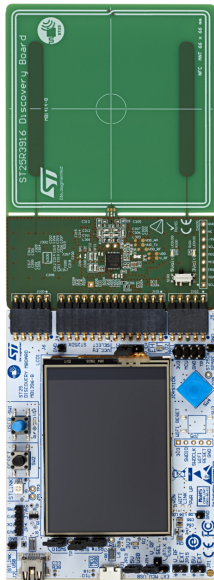


## Discovery kit for the ST25R3916 high performance NFC universal device and EMVCo reader



### Features

- ISO 18092 (NFCIP-1) active and passive initiator and target modes
- NFC Forum NFC-A, NFC-B, NFC-F and NFC-V reader
- ISO 14443A, ISO 14443B and ISO15693 reader
- FeliCa™ reader
- Support of all five NFC Forum tag types in reader mode
- NFC Forum Type 3 tag (NFC-F) host card emulation
- NFC Forum Type 4A tag (NFC-A) host card emulation
- Stream modes to implement other standard and custom protocols
- Integrated capacitive sensing system for low power detection of tag presence
- Integrated inductive sensing system for low power detection of tag presence using phase or amplitude measurement
- High output power
- User selectable and automatic gain control
- Serial peripheral interface (SPI) up to 10 Mb/s
- I2C with up to 400 kbit/s in Fast-mode, 1 Mb/s in Fast-mode Plus
- Automatic antenna tuning (AAT) via variable capacitor

Reference	Order code
ST25R3916-DISCO	ST25R3916-DISCO

# 1 Description

The **ST25R3916-DISCO** kit allows the user to evaluate the features and capabilities of the ST25R devices, a series of high performance HF readers.

The **ST25R3916-DISCO** kit comes with application notes, software applications, drivers, BOM (bill of materials), board schematics, Gerber files and firmware schematics. These documents are downloadable from [www.st.com](http://www.st.com).

The kit is composed of two boards:

1. The MB1396 (ST25\_Discovery\_Mboard) is a microprocessor motherboard which embeds a 32-bit Arm® Cortex™-M4 CPU with FPU high-performance microcontroller.

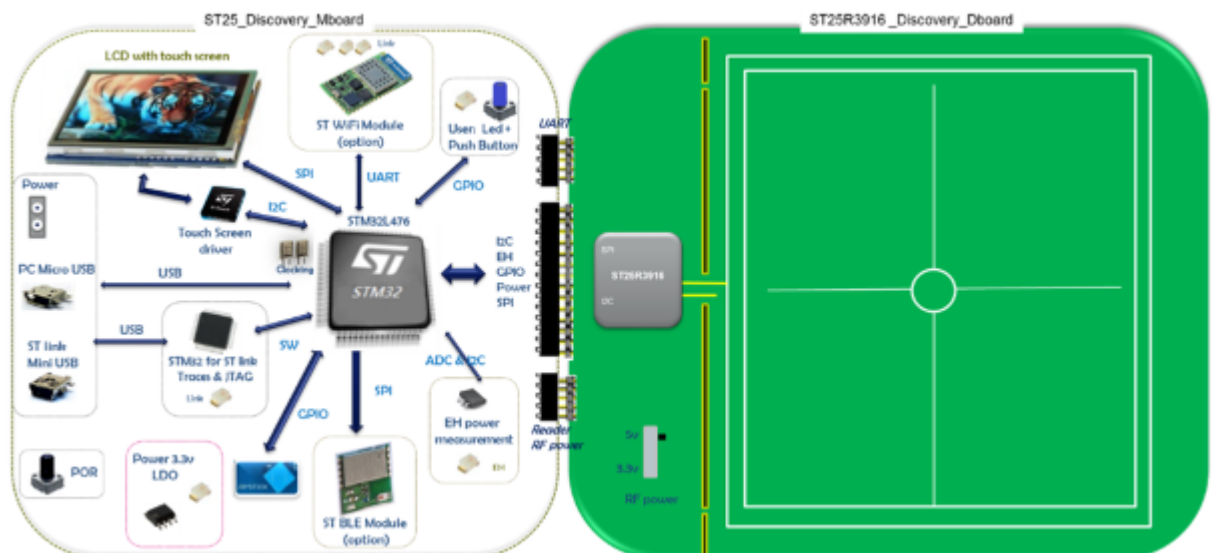
*Note:* Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.

The MB1396 is powered through the USB bus. It is based on an STM32L476 microcontroller and includes:

- An ST-LINK embedded debug tool interface
  - A 2.4” TFT LCD with touch screen capability
  - LEDs
  - Push buttons (reset and user)
  - A mini USB debug connector
  - A user-dedicated micro USB connector
  - Features for ST NFC TAG boards not used with ST25R HF reader series
2. The MB1414 (ST25R3916\_Discovery\_DB) is a daughter board, which embeds the ST25R3916 a highly integrated HF reader / NFC initiator / NFC target IC and antenna etched on the PCB with its VHBR tuning circuit.

The **ST25R3916-DISCO** kit (MB1396 and MB1414) schematics, BOM, Gerber files, drivers and firmware sources are downloadable from [www.st.com](http://www.st.com).

**Figure 1. Connection scheme and diagram**



## Revision history

**Table 1. Document revision history**

Date	Version	Changes
07-Jan-2019	1	Initial release.
06-May-2019	2	Updated figure in front page.

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