

## EMVCo reference design for the ST25R3911B high performance HF reader

Data brief



### Features

- Based on ST25R3911B high performance HF reader with 1.4 W output power
  - ISO14443A, ISO14443B (more protocols supported on ST25R3911B-DISCO kit)
  - Up to 1.4 W output power with differential antenna
  - DPO (Dynamic Power Output)
  - User selectable and automatic gain control
  - QFN32, 5 mm x 5 mm package
- STM32L476 32-bit microcontroller with 1 Mbyte of Flash memory
- 65 mm x 74 mm, two turn antenna etched on the PCB
- Micro-USB connector for communication with the host PC and board supply
- Integrated ST-LINK/V2 for programming and debugging of the STM32L476
- 2.4 inch resistive touch TFT connected in 16 bit parallel mode
- S-Touch controller
- Comprehensive Device Test Environment (DTE) for control of the EMVCo Level 1 firmware

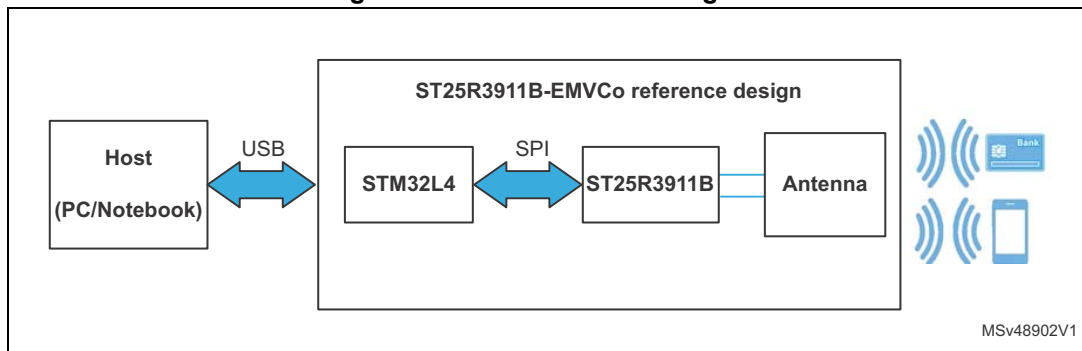
# 1 Description

The ST25R3911B-EMVCO reference design is a ready to use contactless payment terminal implementing a complete EMVCo Level 1 software stack. It allows contactless testing to be made with appropriate test systems, according to the EMVCo specifications.

The ST25R3911B-EMVCO reference design is equipped with a 2.4 inch resistive touch panel, surrounded by a two turn RF antenna, it shows a typical use case in contactless payment.

The STM32L476 100-pin LQFP MCU serves as host controller for the ST25R3911B and connected peripherals.

Figure 1. Functional block diagram

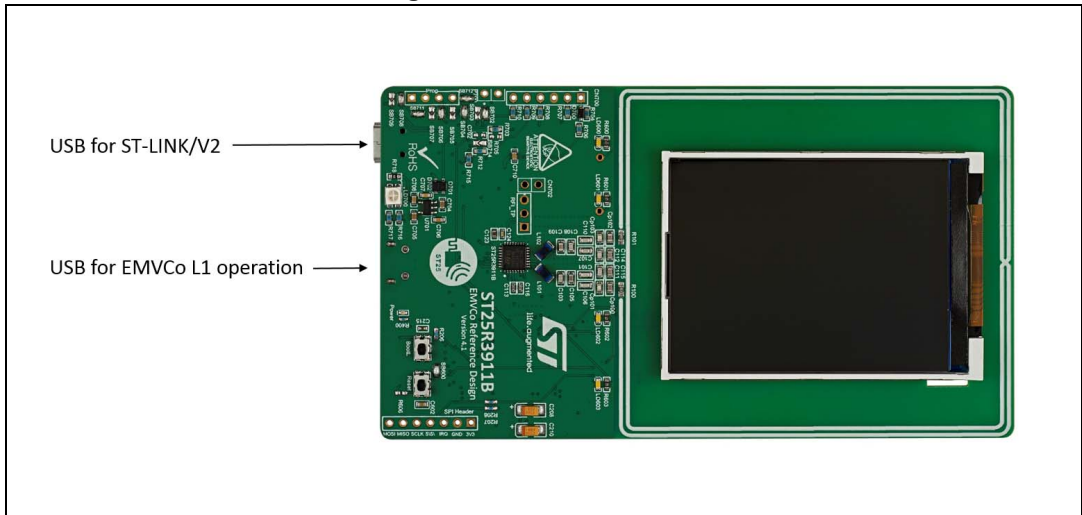


## 2 Hardware configuration

The ST25R3911B-EMVCO reference design needs to be connected to a PC via USB. For normal EMVCo L1 operation, only the micro USB must be connected to the PC.

During the power-up, a default configuration is written to the MCU and ST25R3911B, so that the user can immediately start with the product evaluation.

Figure 2. USB connection



### 3 Revision history

Table 1. Document revision history

Date	Revision	Changes
10-Nov-2017	1	Initial release.

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