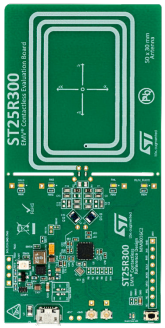
ST25R300-EMVCo

Data brief

EMVCo evaluation board for the ST25R300 high-performance NFC universal device



ST25R300-EMVCo

Product status
ST25R300-EMVCo

Features

Based on the ST25R300 NFC reader for charging, payment, and consumer applications:

- ISO 14443A, ISO 14443B, 15693, and Felica protocols supported
- EMV L1 reference design EMVCo v3.1a and EMVCo v3.2a PCD analog and digital compliant
- EMVCo L1 stack running on STM32U575 microcontroller
- Dynamic power output (DPO) and active wave shaping (AWS)
- 50 mm x 30 mm, three-turn antenna etched on the PCB
- ST-LINK/V2 onboard in-circuit debugger/programmer
- Comprehensive device test environment (DTE) for controlling the EMVCo Level 1 firmware
- Configurable DC-DC, micro-USB, or external power supply for ST25R300
- 4 LEDs indicating the EMVCo transaction status

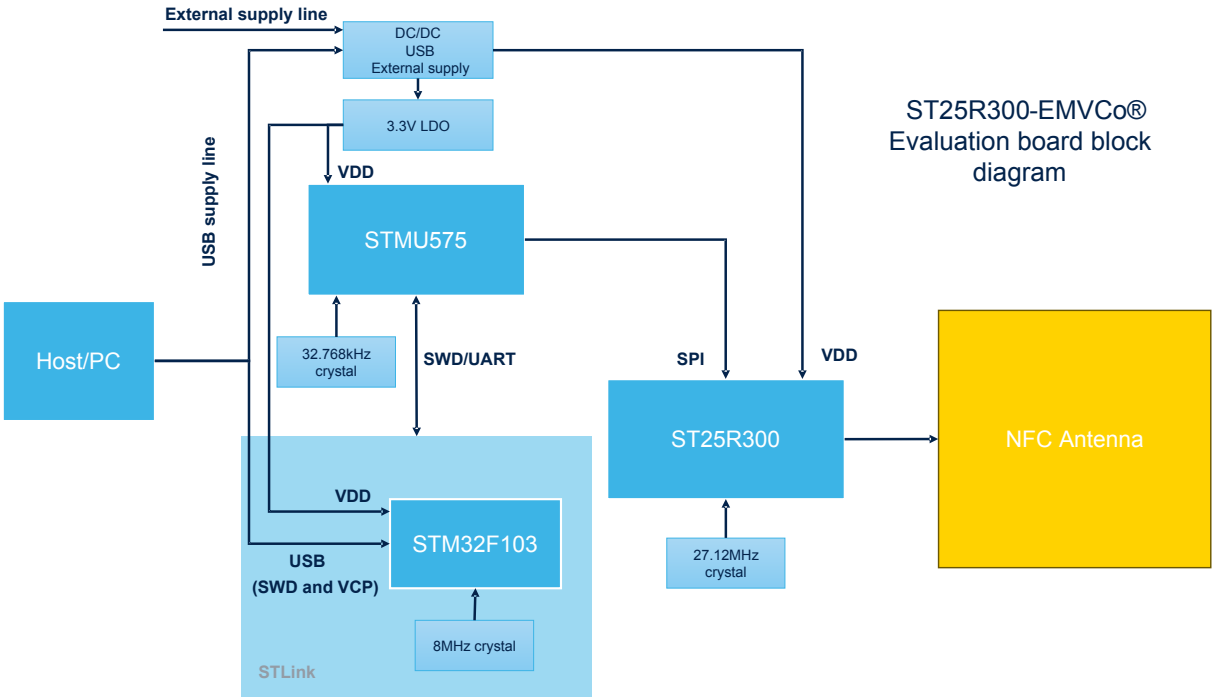
1 Description

The ST25R300-EMVCo evaluation board for the EMV® L1 contactless application consists of a comprehensive development package ready to start off with EMVCo 3.1a and EMVCo 3.2a PCD L1 analog and digital testing. The evaluation board features the ST25R300 NFC reader device (packaged in a 32-pin UQFPN) connected to a small (50 x 30 mm) three turns RF antenna, which can be removed along the tearing edge.

The STM32U575 (packaged in a 48-pin LQFP) serves as a host controller for the ST25R300 and belongs to an ultralow power microcontrollers family (STM32U5 series) based on the high-performance Arm Cortex®-M4 32-bit RISC core.

The ST-LINK/V2 is integrated onboard, which allows direct programming and debugging of the STM32U575.

Figure 1. ST25R300 block diagram



Revision history

Table 1. **Document revision history**

Date	Revision	Changes
26-Mar-2025	1	Initial release.
1-Apr-2025	2	Updated publication properties

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