# ST25R3918

## Multi-purpose NFC transceiver with Card Emulation



**ST25R3918 combines enhanced analog reader performance into an affordable NFC transceiver.**

The ST25R3918 NFC transceiver offers an optimal cost/performance ratio, offering features usually included in high-end NFC devices combined with essential output power. It achieves good and stable read ranges while maintaining low power consumption, thanks to a low-power card detection mode.

The ST25R3918 can operate in noisy environments without compromising on read-range performance. The additional card emulation mode enables easy interaction with mobile phones, starting temporary Apps like Apple® App Clips to enhance customer experience.
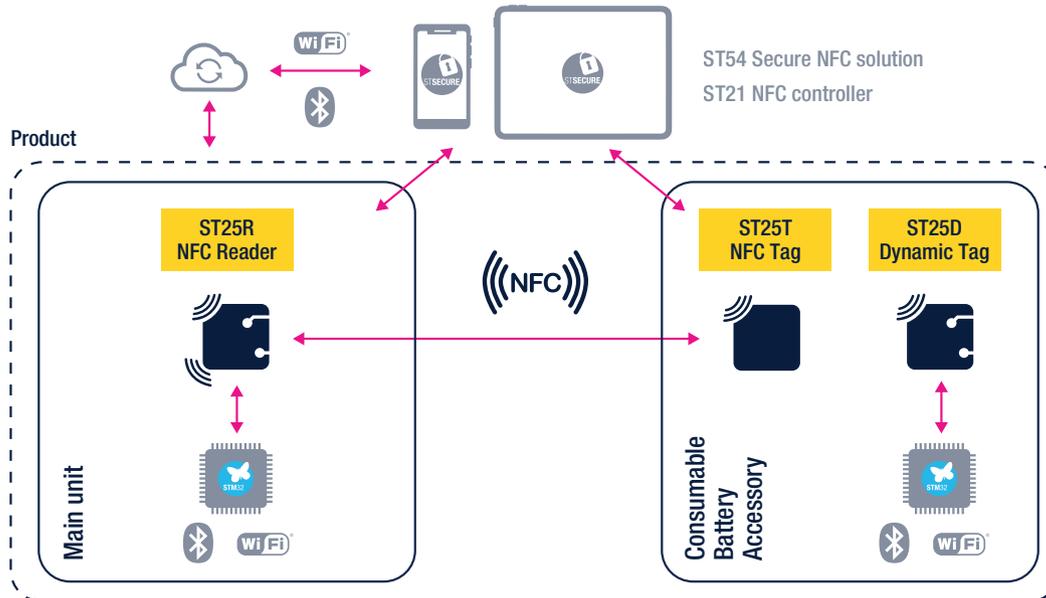
### KEY FEATURES & BENEFITS

- Noise suppression Receiver (NSR)
  - Reduces interference from noise sources and increases immunity
  - Ensures electromagnetic immunity and eases certification
- Active Wave Shaping (AWS) makes over- & under-shoot smoothing easier
- Dynamic Power Output (DPO): 0.5W output power with dynamic power adjustment to optimize power transfer
- Low power card detection Achieves market-leading power consumption using inductive wakeup
- Enhanced user experience starting temporary apps like Apple® App Clips

### KEY APPLICATIONS

- General consumer electronics, IoT, TV & remote control
- Brand protection, accessory recognition
- Healthcare & beauty, gaming, power tools

The ST25R3918 offers a superior feature set for low- to medium-power applications, powered by USB, from the mains or running on battery. In combination with NFC tags, this NFC transceiver IC does not only allow communication with wireless consumables and accessories in a short range, but also enables customer engagement and behavior tracking using cutting-edge features like Apple® App Clips. Through implementing use cases like automated parameter setting by detection of connected accessories and brand recognition, the well-matched combination of NFC reader and tags enhances the convenience of product usage and provides a new level of user experience.

## Implementing NFC with ST25R3918 and ST25 tags



## Device summary

| Partnumber | Mode | RF Interface | Serial Interface | Advanced features | Output Power | Ambient Temp range | Package | Applications |
|---|---|---|---|---|---|---|---|---|
| ST25R3918 | Reader / Writer, PP2P, Card Emulation | ISO14443A/B ISO15693 | SPI, I²C | DPO, AWS, NSR, IWU | 0.5 W | -40 to +105°C | 32-pin QFN (5 x 5 mm) | Access Control, Gaming, IoT Product configuration & authentication, Traceability, Logistics, Industrial |

AAT: automatic antenna tuning; DPO: dynamic output power; AWS: active waveshaping; NSR: noise surpression receiver; IWU: inductive wakeup



**ST25**

**Support ecosystem**

e2e community      PC SW tools      MCU drivers (FW)      Documentation      Evaluation board