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ST25 NFC / RFID solutions for motor control & power supply unit applications

Brushed motor, induction motor, stepper motor, industrial drives, AC drives, fans, servo drives, AC-DC power supply, industrial power supply, SMPS...

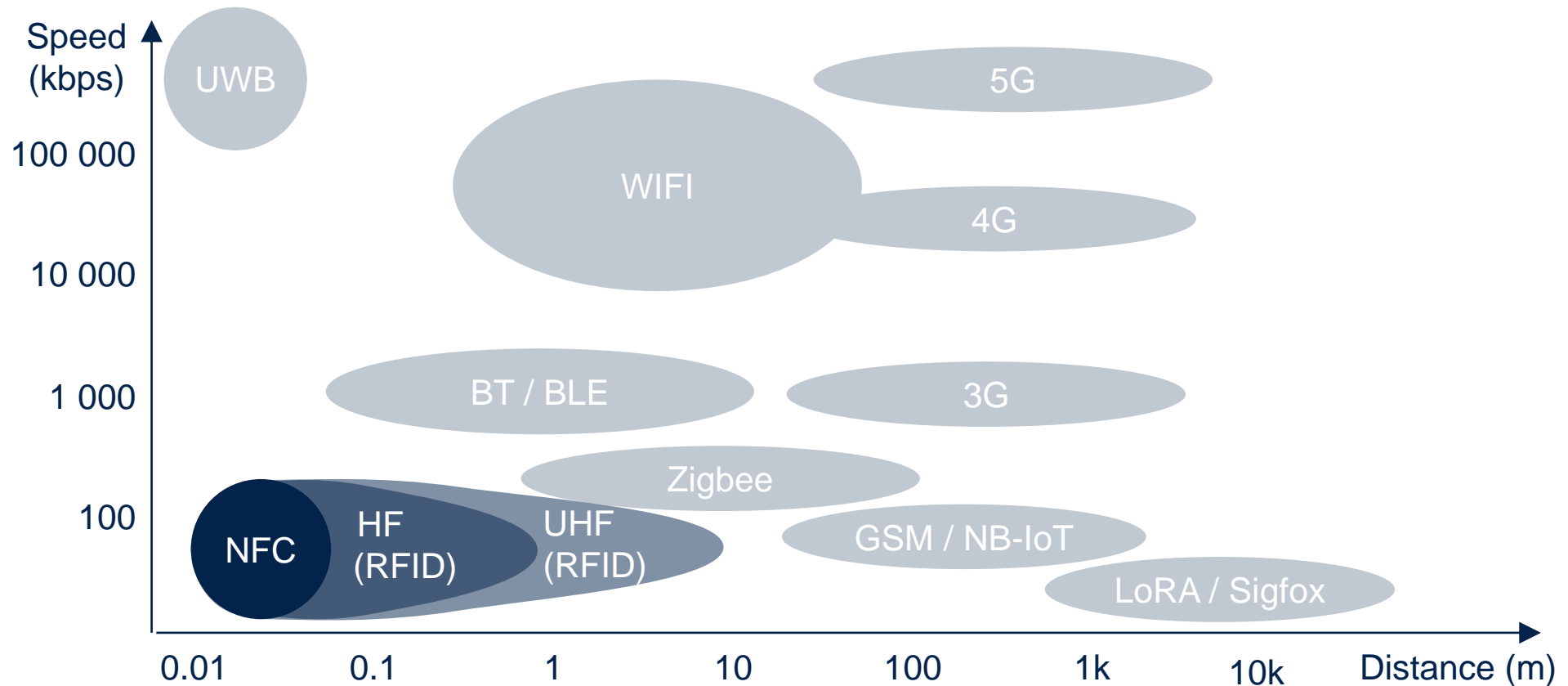
MMY division





NFC, RFID HF & UHF technologies

Complementary solutions to Wireless Technologies



Communication from 1cm (NFC) to up to 10m (RFID UHF)



NFC technology

Near Field Communication



- Short range contactless communication
- Technology operating at 13.56MHz frequency
- Based on RFID HF ISO14443 & ISO15693 standards

Interactive and zero power



- NFC tags powered by phone or RFID reader
- Enabling convenient connection to the Cloud for IoT
- NFC-enabled mobile phone can engage with items by a simple tap

NFC is developed by NFC Forum



- Interoperability between devices with NFC Forum certified products
- Standardized use cases (URL web link, Bluetooth handover...)

Fast growing employment in Mobile phone



- More than 70% of new phones come with NFC
- NFC is used for Mobile Payment with Android and iOS (ApplePay)
- Apple added in 2019 support of NFC reader / writer mode from iOS13 onward



NFC main use cases & benefits

Product configuration

NFC



- Smooth product personalization during production flow
- In the box quick programming thanks to long range capability (up to 1m)
- Parameter settings
- On site motor calibration

Servicing & Maintenance

NFC



- Contactless access to maintenance records in the field
- Ascertain status of each piece of equipment
- Update parameters no matter if device is powered thanks to NFC phone
- Firmware upgrade via Fast Transfer Mode

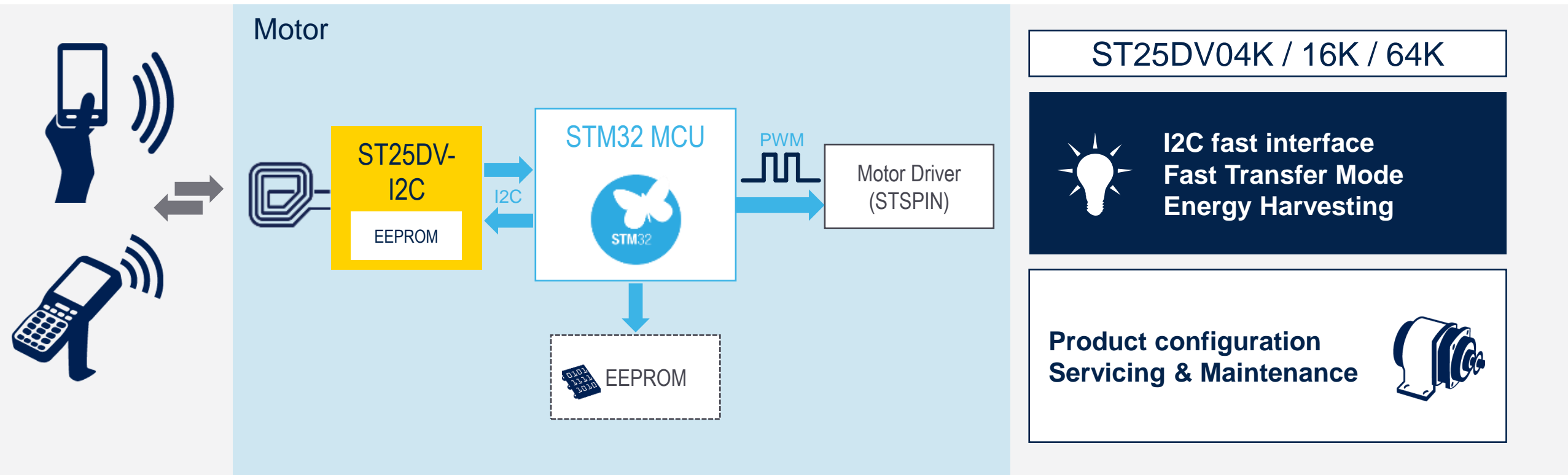


Interactive and zero power technology (Tag powered by Reader)
Trusted communication thanks to short reading distance
Convenient product configuration



Dynamic NFC tag (1/2)

Typical Block Diagram & Usage for Motor Control High End Segment





Dynamic NFC tag (2/2)

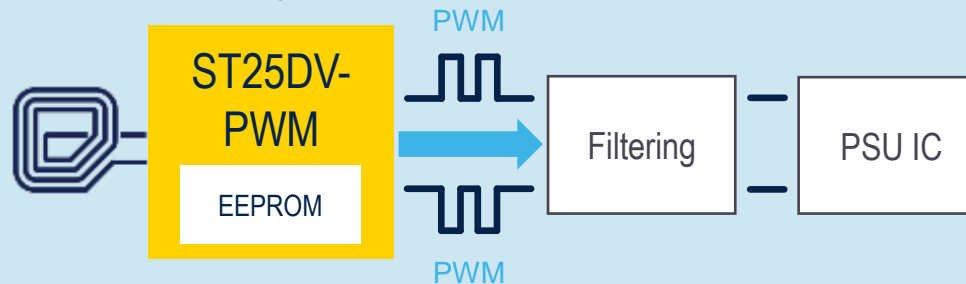
Typical Block Diagram & Usage for Motor Control Entry Level or PSU



Motor



Power Supply Unit



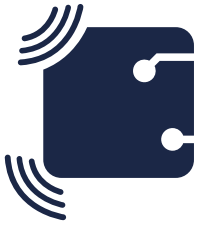
ST25DV02K-W



**Pulse Width Modulation
signal**
Up to 2 PWM outputs
TruST25 digital signature

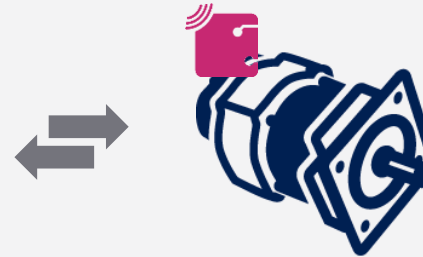
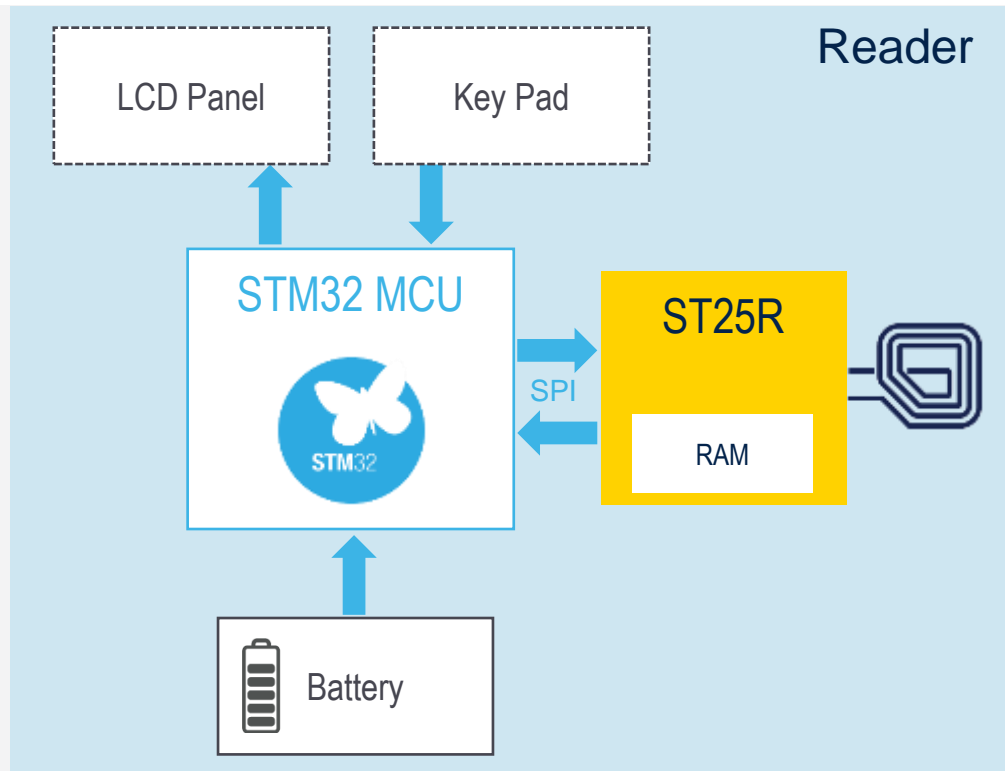
**Product configuration
Servicing & Maintenance**





HF / NFC reader

Typical Block Diagram & Usage for Motor Control Reader



ST25R3911B / ST25R95



High output power
Low power consumption
Automatic antenna tuning
Phone compatibility

Product configuration
Servicing & Maintenance





ST25 rich eco-system



- Discovery Kits based on STM32 MCU
- STM32 Nucleo boards ecosystem
- STM32Cube software ecosystem



- Antenna e-design tool
- Schematic, BOM, Gerber
- IBIS models



- PC software tool ST25 SDK
- Mobile Apps ST25 SDK (Android & iOS)

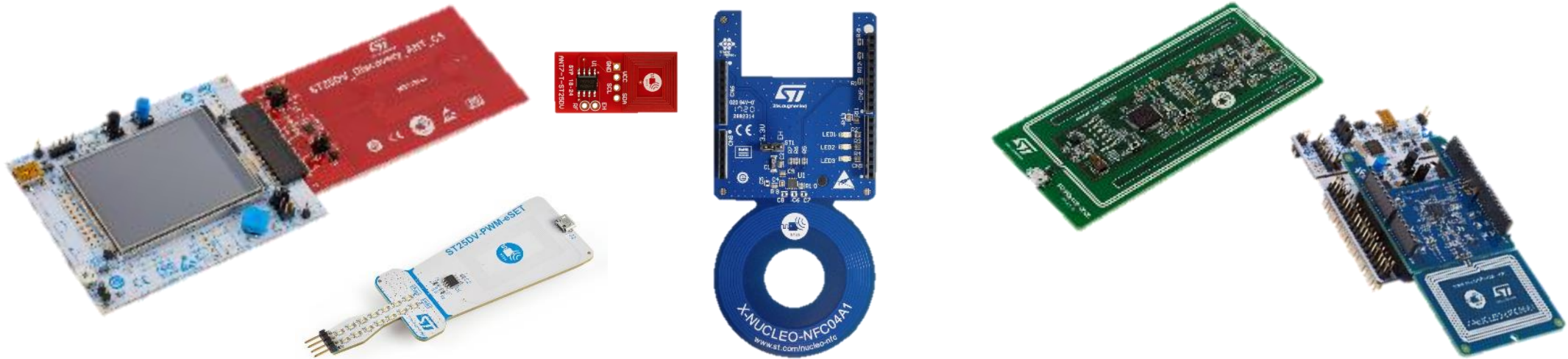


- Documentation
- Training
- Webinar
- MOOC



ST25 hardware solutions

Speed-up Evaluation, Prototyping and Design



DYNAMIC NFC TAG KITS

- ST25DV-DISCOVERY
- ST25DV-PWM-eSET
- ANT-1-6-ST25DV
- X-NUCLEO-NFC04A1
- ANT7-T-ST25DV04K

HF / NFC READER KITS

- ST25R3911B-DISCO
- X-NUCLEO-NFC05A1



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Solutions for NFC / RFID tags & readers



ST25 SIMPLY MORE CONNECTED