ST25RU series
UHF Rain® RFID Readers

UHF Rain® RFID Reader IC for EPC Class1 Gen2 ideal for battery operated handheld devices

The new ST25RU UHF Rain® RFID reader series from ST combine optimal performance with lowest power consumption and follows EPC Class1 Gen2. The ST25RU family offers high sensitivity, while being robust against antenna reflections or self-jamming. This is essential for battery powered mobile or embedded applications, where antenna design is challenging and long battery lifetimes are critical. The ST25RU offers a flexible feature set being a market proven solution from the handheld consumer up to the industrial reader space.

FEATURES

- High chip sensitivity -90dBm
- DRM compliant
- Carrier cancellation
- Frequency hopping support
- Automatic I/Q selection
- Outstanding read range >10m
- Two switchable antenna ports:
  - 20 dBm internal power amplifier
  - 0 dBm output for external amplifier
- Protocol support for:
  - ISO 18000-6C (EPC Class1 Gen2)
  - ISO 29143 (Air interface for mobile RFID)
  - ISO 18000-6A/B through direct mode
- QFN 7x7mm 48pin package

APPLICATIONS

- Consumer, industrial and medical applications
- Authentication, Counterfeiting
- Hand-held readers
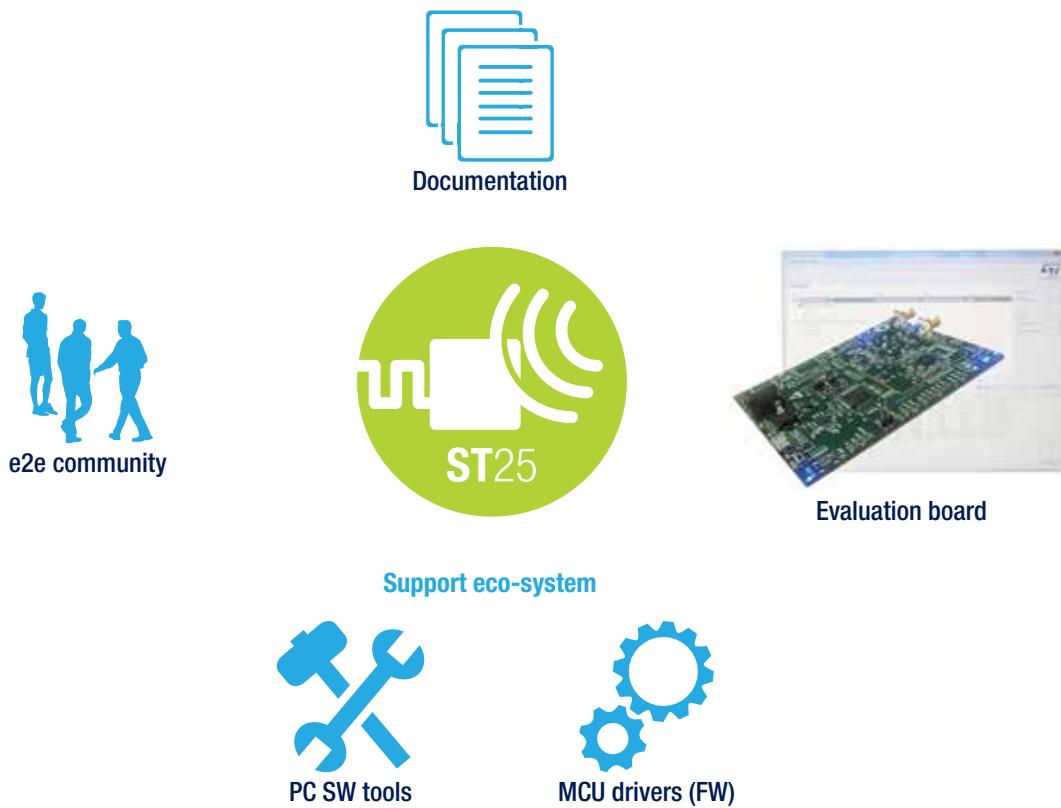- Mobile UHF RFID readers
- Stationary readers

BENEFITS

- Outstanding analog performance
- Fast and painless product design
- Futureproof transparent mode option
- Offers up to 80% longer battery lifetimes than competitors

DEVICE SUMMARY

Part number	Mode	RF interface	Serial interface	Advanced features	Output power	Temperature range	Package	Applications
ST25RU3993	Reader/Writer	ISO18000-6c/b EPC Gen 2	SPI	Dense Reader Mode, Internal VCO, Linear RSSI & Phase Bit, Automatic PSRR regulation, Auto ACK	0dBm 20dBm	-40 °C to +85 °C	48-pin QFN (7x7 mm)	Retail/Stationary Readers, Industrial PDA's, Mobile phones/Handheld Consumer, Industrial and Medical Applications Portable Data Capture, Gaming
ST25RU3980	Reader/Writer	ISO18000-6c without anti-collision	SPI	Dense Reader Mode, Internal VCO, Linear RSSI & Phase Bit, Automatic PSRR regulation, Auto ACK	0dBm	-40 °C to +85 °C	48-pin QFN (7x7 mm)	Fast Moving Consumer Goods, Beverage Dispensing, Authentication, Anti-Counterfeiting Retail/Pharmaceutical Data Capture

ECO-SYSTEM

Documentation

e2e community

ST25

Evaluation board

Support eco-system

PC SW tools

MCU drivers (FW)

TECHNICAL SUPPORT

The ST25RU reader family offers a simple and cost-effective implementation. ST can provide supporting material for integrating the antenna into your application: application notes, reference designs, antenna computation tools, presentations and e-learning.

Visit www.st.com/st25ru

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