

Smartcard ICs for banking

Enabling secure and convenient payment



STMicroelectronics (ST) is a world leader in the development and delivery of chip products for the banking sector.

This is the result of over 20 years in the industry, delivering reliable performance and an unparalleled commitment to the supply of advanced secure products.

Taking advantage of its expertise in non-volatile memories, ST is today offering a brand new product family for banking applications based on the advanced 0.13 μm technology.

Proven and trusted technology from ST

With a long history of working in the banking and finance environment, ST actively participates in major national smartcard rollouts throughout the world. ST's smartcard technologies are implemented in many of our partners' products, and adopted by banks and financial institutions across the world.

Security, convenience and innovation

Closely following new trends in finance, ST has developed a complete range of products fitting with the market's expectations.

The ST23 family is based upon the latest 0.13 μm technology, offering effective high-performance solutions for banking applications.

Taking advantage of all the security improvements that have appeared in the last two years, the ST23 family has been certified EMVco and Common Criteria EAL5+ (ST23YLxx).

- ST23YSxx: standard products for easy and cost-effective SDA migration.
- ST23YLxx: high-performance cryptographic products for DDA/CPA evolution, enabling latest security features.
ST23YLxx products offer a hardware cryptographic coprocessor (Nescrypt) enabling best-in-class RSA cryptographic computations.
- ST23YRxx: contactless/dual-interface products combining both security and convenience for new emerging markets in the US, Asia and Europe.

Key features

- 8/16-bit CPU core
- Complete portfolio from 2 Kbytes to 80 Kbytes of EEPROM
- Hardware cryptographic coprocessor (Nescrypt)
- Advanced 0.13 µm technology

Security certification

- EMVco
- Common Criteria EAL5+ (ST23YLxx)
- ZKA (ST23YLxx)

ST23 family with enhanced 8-/16-bit CPU core

ST23 families based on embedded EEPROM						
Part number	ROM	EEPROM	RAM	Cryptography	Interface	Process
ST23YS02	36 Kbytes	2 Kbytes	2 Kbytes	EDES, AES	ISO, IART	0.13 µm
ST23YS08	108 Kbytes	8 Kbytes	2 Kbytes	EDES, AES	ISO, IART	0.13 µm
ST23YL18	200 Kbytes	18 Kbytes	4+2 Kbytes	EDES, AES, RSA, ECC	ISO, IART	0.13 µm
ST23YL48	300 Kbytes	48 Kbytes	4+2 Kbytes	EDES, AES, RSA, ECC	ISO, IART	0.13 µm
ST23YL80	400 Kbytes	80 Kbytes	6+2 Kbytes	EDES, AES, RSA, ECC	ISO, IART	0.13 µm
ST23YR16	230 Kbytes	16 Kbytes	4+2 Kbytes	EDES, AES, RSA, ECC	ISO, IART, RF ISO 14443-B	0.13 µm
ST23YR80	400 Kbytes	80 Kbytes	6+2 Kbytes	EDES, AES, RSA, ECC	ISO, IART, RF ISO 14443-B	0.13 µm

	Applications	Preferred device
Finance	EMV migration from magstripe to SDA	ST23YS02 ST23YS08
	EMV evolution from SDA to DDA	ST23YL18 ST23YL48 ST23YL80
	EMV contactless and multiapplication	ST23YR16 ST23YR80

Packaging

ST has the unique ability to offer smartcard ICs in wafers and advanced micromodules combining integration and security. All these packages are ECOPACK® versions, compliant with the European Directive 2002/95/EC relating to restrictions on hazardous substances (RoHS).



Development environment

Software development and firmware generation are supported by a comprehensive set of development tools dedicated to software design and validation.



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For selected STMicroelectronics sales offices fax:

China +86 21 34054689; France +33 1 55489569; Germany +49 89 4605454; Italy +39 02 8250449; Japan +81 3 57838216; Singapore +65 6481 7771; Sweden +46 8 58774411; Switzerland +41 22 9292900; United Kingdom and Eire +44 1628 890391; USA +1 781 861 2678

Full product information at www.st.com

Order code: FLBANK0808