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advant

advanced contactless smart card system

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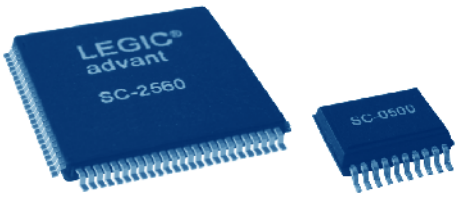

LEGIC OS Controller
SC-2560 / SC-2560C

LEGIC RF chip

Security Chip Set multi-standard SC-2560 / SC-2560C

The solution for universal high performance multi-standard 13.56 MHz contactless smart card readers.

The Security Chip Sets multi-standard SC-2560 and SC-2560C* meet the ISO RF standards ISO 14443 A and ISO 15693 as well as the LEGIC RF standard. The chip sets can operate all RF standards simultaneously, giving choice of different credentials as well as ensuring backward compatibility with LEGIC prime.

* Option SC-2560C: incl. cash handling functions for e-payment solutions

The cost-efficient chip set SC-2560 consists of the LEGIC OS Controller and the LEGIC RF chip. Design-in is made easy due to the available reference design and the development kit giving a high degree of design flexibility and comfort. The format generator enables seamless integration into present installations, supporting various protocols. Advanced high security features and various host interfaces offer a comprehensive base for a secure RFID reader platform.

Standards

ISO — LEGIC RF standard — 13.56 MHz contactless technology

Typical use

- Universal, high performance readers
- Initialisation and personalisation devices
- Compact or mobile readers

Key applications

access — ticketing — payment

Key features

- Compliant with ISO 15693, ISO 14443 A and LEGIC RF Std.
- Wide choice of industry standards (RF, data formats, interfaces)
- Quick integration, easy realized multi-applications
- High security and MTSC – configurable for each application
- Initialization functions for Master-Token and credentials

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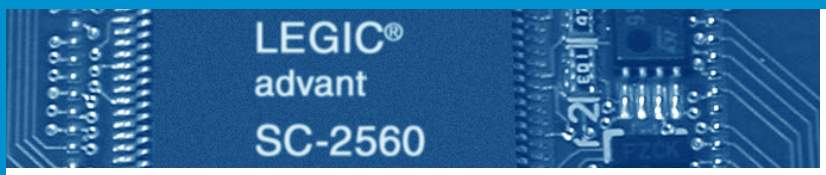

Features

- **RF standards:** simultaneous operation of all ISO and LEGIC RF standard, reads transponder UID based on Inside Contactless technology, e.g. HID iClass
- **Reading/writing of transponders:** secure and contactless
- **Communication range*:** up to 25 cm with standard circuit design
- **Host interfaces:** various protocols (RS232/485, SPI, BPA/L)
- **Application interfaces:** flexible data format generator for Wiegand and OMRON (ABA, Clock & Data)
- **Data transmission:** encrypted along complete data path from transponder memory via RF interface to external host system (end-to-end security)
- **Data encryption:** selectable standards for each application
- **Module identification:** unique serial number
- **Reader design:** Reference design and Development Kit for easy and flexible system integration
- **RF wake-up:** watch mode for battery operation
- **Power consumption:** various low power modes, configurable RF power
- **Pin compatibility:** to SC-2140/C, SC-2240/C series
- **Download function:** firmware upgrades through host or service interface
- **Master-Token System Control (MTSC):** for authorization, data access and application management
- **Multiapplication:** direct access to specific application; variable segment length and freely selectable segment search criteria
- **Application standards for interoperability:** defined data structures and functions for cash handling, access control, biometrics and others
- **FIPS 201:** reads FASC-N according Transition State Specification
- **Initialization function:** for creating Master-Tokens and to initialize application segments on credentials
- **Backward compatibility:** with LEGIC prime

Typical applications

access
parking
payment
ticketing
leisure
member-ship
time & attendance
biometrics
IT-access
identify
loyalty
collect data
stand-alone door locks
government standard

Specifications

Carrier frequency	13.56 MHz
Antenna impedance	50 Ohm
Contactless RF standards	ISO 15693, ISO 14443 A, LEGIC RF Standard, Inside
Range*	up to 25 cm
Operating voltage	3.3 to 5 V DC
Power consumption (5 V typical)	185 mA in RF active mode 27 mA in normal operation 30 uA in watch mode < 5 uA in stop mode
Encryption standards	LEGIC encryption, DES, 3DES host authentication/encryption enable

Direct host interfaces	serial asynchronous (TTL, RS232, RS485); SPI; separate service interface
Baud rates (serial)	asynchronous: 9.6 to 115.2 kbit/s SPI: up to 5 Mbit/s
Direct application interfaces	Wiegand, OMRON (Clock & Data, ABA), BPA/L
Digital input / output	4 input / 4 output
Operating temperature	-40 °C to 85 °C / -40 °F to 185 °F
Conformity	CE, FCC
Casing OS Controller	LQFP100 (14 x 14 x 1.4 mm)
Casing RF Chip	SSOP20 (7.2 x 5.3 x 1.7 mm)

* Max. reading range depends on used RF standard, the requirements of national spectrum management authorities, antenna, reader application, transponder, requested information and surroundings.

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