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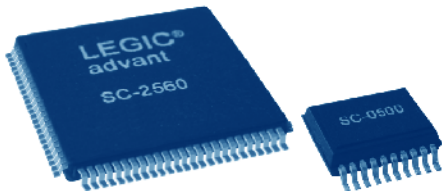
advanced contactless smart card system

LEGIC®

advant innovation in ID technology



High performance for universal readers



LEGIC OS Controller
SC-2560 QFP / SC-2560C QFP

LEGIC RF chip



LEGIC OS Controller
SC-2560 LGA / SC-2560C LGA

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

Key applications



access



ticketing



payment

Typical use

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

Key features

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



Features

- **RF standards:** simultaneous operation of all ISO and LEGIC RF standard, reads UID of transponders based on Inside Contactless technology, e.g. HID iClass
- **Reading/writing of transponders:** secure and contactless; transparent mode
- **Smart card μC / NFC phone support:** LEGIC card-in-card solutions
- **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
- **Reader design:** Reference design and Development Kit for easy and flexible system integration
- **RF wake-up:** watch mode for battery operation
- **Casing versions:** LQFP100: pin compatible to SC-2x40/C series; FLGA145: for smallest space requirements
- **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



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 1 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 QFP	LQFP100 (16 x 16 x 1.4 mm)
Casing OS Controller LGA	FLGA145 (10 x 10 x 1 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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