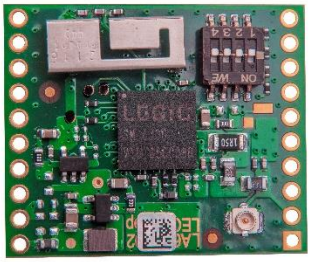
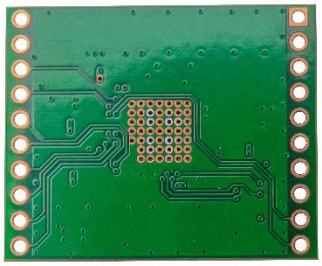
RFID/NFC/Bluetooth Module

LEGIC App 6300® Series





The multifunctional LEGIC App 6300 read/write module series is the latest generation of LEGIC-based compact modules from Smart Technologies.
The LEGIC App 6300 and 6310 provide secure user authentication and access management based on **RFID**, **NFC**, and **Bluetooth Low Energy (BLE)** for enterprise security, smart building, mobility, smart city, supply chain, and industrial IoT applications.
The LEGIC App 6300 includes the features of the SM-4200 and SM-4500 as well as new features supported by the LEGIC SM-63xx series in one module. It is pin-compatible with the already established LEGIC App SM-4000 series from Smart Technologies ID.

The LEGIC App 6300 series comprises variants based on the LEGIC **SM-6300**, **SM-6300init** and **SM-6310**.

With direct access to the LEGIC Security Module, a wide variety of applications, including smartphone-based applications based on LEGIC Connect, can be easily implemented.

The compact size and a power supply of 2.3VDC up to 5VDC provide a significant application advantage over conventional modules.

Highlights:

- Compact design (31,5 x 25,9 x 5,15 mm)
- Integrated Bluetooth Low Energy (BLE) function, Smart V5.0
- Bluetooth antenna on Board
- RFID/NFC & Bluetooth module
- Direct access to the LEGIC chip SM-63xx with LEGIC Connect support
- UART interfaces & SPI interfaces can be switched via dip switches
- Connection of external RFID antennas via u-FL connection or solder contacts
- Lowest power consumption in sleep mode
- Voltage range from 2.3V to 5V
- Single-sided component assembly for easiest integration
- 4 GPIOs
- Pin compatible with the LEGIC App SM-4000 series

Technical specifications	
Operating voltage	2.3Vdc … 5Vdc
Power consumption (Max.) 2,3-5V	220mA* … 650mA**
Power consumption(Typ.) 3,3V	380mA
Power consumption (Sleep Mode)	16uA* … 40uA**
Frequency	13.56 MHz
UART/SPI Level voltage (Max.)	3.3V +0.3V
Bluetooth antenna	2.4GHz on Board
RFID antenna	13.56MHz (external)
Antenna connection	u.FL, Solder connections
PCB connectors	PCB connectors 2.54mm THT solder connections SMT assembly (optional)

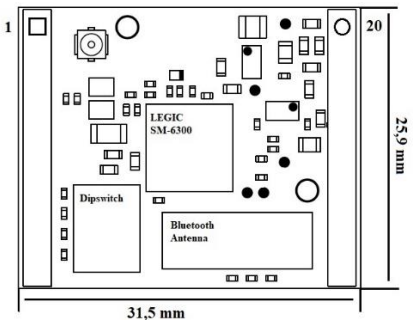
*at an operating voltage of 5V
**at an operating voltage of 2,3V

Interfaces
UART 38.400 bit/s
UART 115.200 bit/s
UART 1.000.000 bit/s
SPI Mode 1 bis 2Mbit/s
SPI Mode 3 bis 2Mbit/s
BLE via LEGIC Connect or Transparent Channel
Optional: SM-6310 Debug (SPI)

Bluetooth Smart
V5.0 BLE (Bluetooth Low Energy) on board

Supported Standards (13,56 MHz)
LEGIC advant
LEGIC Prime
ISO 14443A
ISO 14443B
ISO 15693
ISO 18092 NFC
INSIDE Secure
Sony FeliCa
NFC Typ 3 Tag (partially)
ST SR series

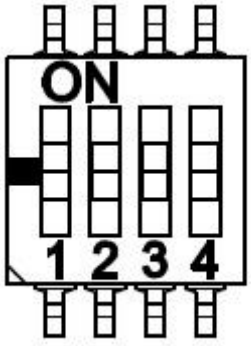
Environmental conditions and mechanical specifications	
Operating temperature	-20°C up to +65°C
Storage temperature	-40°C up to +85°C
Relative humidity	Up to 95 %
Dimensions (L x B x H)	31.5 x 25.9 x 5.15 mm
Weight	Approx. 4g
RoHs-III compliant REACH compliant	



Pinout module (SM-6300 UART-Mode)			
1	n.c.	11	RX
2	TX_ANT	12	TX
3	UB 2.3V…5V DC	13	Not used
4	GND_ANT	14	nCS/nWAKEUP
5	GND	15	nRESET
6	GND	16	IRQ/QIF
7	n.c.	17	DIO_2
8	n.c.	18	DIO_3
9	DIO_0	19	GND
10	DIO_1	20	UB 2.3V…5V DC

Pinout module (SM-6300 SPI-Mode)			
1	n.c.	11	MOSI
2	TX_ANT	12	MISO
3	UB 2.3V…5V DC	13	SCK
4	GND_ANT	14	nCS/nWAKEUP
5	GND	15	nRESET
6	GND	16	IRQ/QIF
7	n.c.	17	DIO_2
8	n.c.	18	DIO_3
9	DIO_0	19	GND
10	DIO_1	20	UB 2.3V…5V DC

Dip switch setting						
IFMODE1	IFMODE0	MODE	Schalter			
			1	2	3	4
0	0	UART 38.400 bit/s	1	0	1	0
0	1	UART 115.200 bit/s	0	1	1	0
0	hi-Z	UART 1.000.000 bit/s	0	0	1	0
1	0	SPI MODE 1	1	0	0	1
1	1	SPI MODE 3	0	1	0	1
1	hi-Z	SM-6310 Debug (SPI)	0	0	0	1



LEGIC Chip variants
SM-6300
SM-6300init
SM-6310