

**OEM-L1SF-M890-TTL-3.3V
LF RFID OEM Module
Installation Manual**

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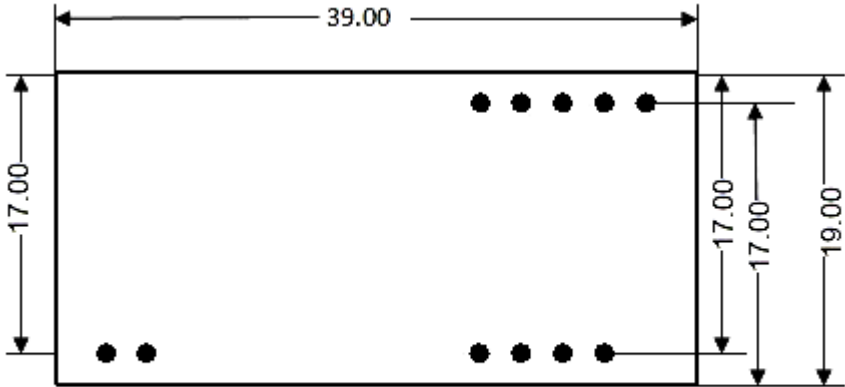
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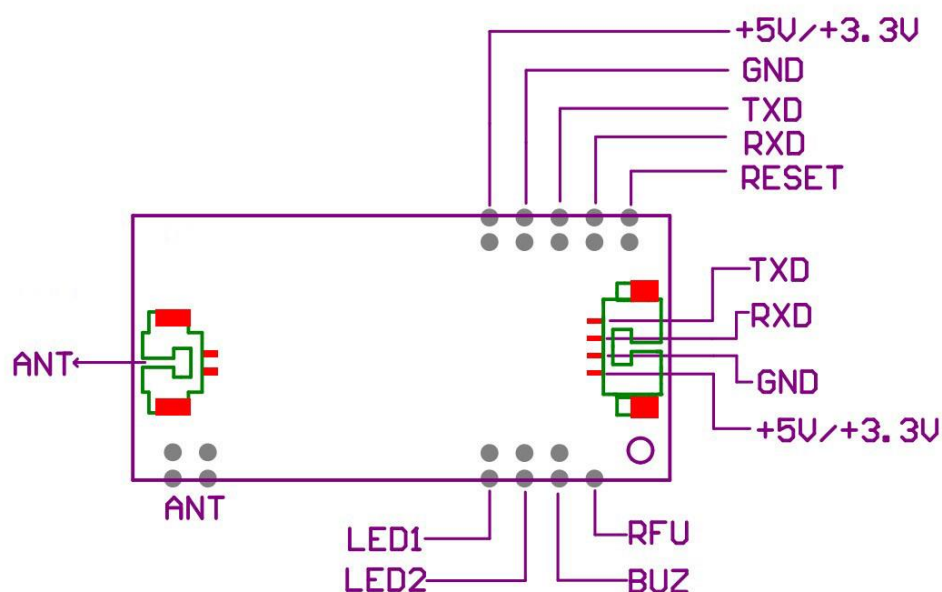
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1 Mechanics



2 Electrical Pinout



Connector P5

PIN	Name	Description
1	Antenna	
2	Antenna	

Connector J2

PIN	Name	Description
1	TXD	Transmit Data (Green)
2	RXD	Receive Data (Yellow)
3	GND	Power Supply – (Black)
4	VCC	Power Supply + (Red)

Solder Joints

PIN	Name	Description
1	Antenna	
2	Antenna	
3	LED1	μC output; do not draw more than 15 mA from this pin, series resistors for LED needed
4	LED2	μC output; do not draw more than 15 mA from this pin, series resistors for LED needed
5	BUZ	μC output; do not draw more than 15 mA from this pin, series resistors for LED needed
6	RFU	–do not connect–
7	RESET	μC reset; open or low = running; high = stop, current consumption reduced
8	RXD	Receive Data
9	TXD	Transmit Data
10	GND	Power Supply –
11	VCC	Power Supply +

3 Tag Information

3.1 EM4100 (64 bits), EM4102 (64 bits), EM4200 (128 bits)

This are read-only chip types, so you can only retrieve a UID.

3.2 Hitag S2048 (2 kbits, 256 Bytes, 64 blocks)

Memory blocks (pages) of 32 bits/4 Bytes.

Block #	Hex Address	Access	Description
1	00	Read-only	UID
2	01	Read/write	Configuration Word (Hitag S: CA0000AA)s
3	02	No access	—
4	03	Read/write	Configuration Word, password protected, default PW: 0000 0000 h
5	04	Read/write	User Memory
...	User Memory
64	3F	Read/write	User Memory

3.3 Hitag S256 (256 bits, 32 Bytes, 8 blocks)

Memory blocks (pages) of 32 bits/4 Bytes.

Block #	Hex Address	Access	Description
1	00	Read-only	UID
2	01	Read/write	Configuration Word (Hitag S: CA0000A9)s
3	02	No access	—
4	03	Read/write	Configuration Word, password protected, default PW: 0000 0000 h
5	04	Read/write	User Memory
6	05	Read/write	User Memory
7	06	Read/write	User Memory
8	07	Read/write	User Memory

3.4 Hitag S64 (64 bits, 8 Bytes, 2 blocks)

Memory blocks (pages) of 32 bits/4 Bytes.

Block #	Hex Address	Access	Description
1	00	Read-only	UID
2	01	Read/write	Configuration Word (Hitag S: CA0000A8)

3.5 Hitag 1 (2 kbits, 256 Bytes)

Memory blocks (pages) of 32 bits/4 Bytes.

Block #	Hex Address	Access	Description
1	00	Read-only	UID
2	01	Read/write	Configuration Word (Hitag 1: FF77AA00)
3	02	No access	—
...	...	No access	—
16	0F	No access	—
17	10	Read/write	User Memory
...	User Memory
64	3F	Read/write	User Memory

3.6 Hitag 2 (256 bits, 32 Bytes)

Memory blocks (pages) of 32 bits/4 Bytes.

Block #	Hex Address	Access	Description
1	00	Read-only	UID
2	01	Read/write	Password RWD, default 4D494B52h
3	02	No access	—
4	03	Read/write	Configuration Word, password protected, default PW: 0000 0000 h
5	04	Read/write	User Memory / 64 bits read-only memory layout for read-only emulation
6	05	Read/write	User Memory / 64 bits read-only memory layout for read-only emulation
7	06	Read/write	User Memory
8	07	Read/write	User Memory

3.7 EM4450/4550 (1 kbits)

Memory blocks (pages) of 32 bits/4 Bytes.

Block #	Hex Address	Access	Description
1	00	Read-only	Password, default 00000000h
2	01	Read-only	Protection Word
3	02	Read-only	Control Word
4	03	Read/write	User Memory
...	User Memory
31	1F	Read/write	User Memory
32	20	Read-only	Device Serial Number (UID)
33	21	Read-only	Device Identification