

S1871

User Manual

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1. Introduction

The S1871 mini UHF RFID reader based on Intel R1000 technology, supports the EPC C1G2 or ISO18000-6C protocol, with the following features:

- 30dBm Maximum RF Power Output;
- DC+3.3 to DC+5V Power Supply;
- The 6W Maximum Power Consumption;
- One 3.3V UART Interface;
- Two Pairs of Different Digital Inputs;
- Two Digital Outputs;
- Firmware Update Pin Supported;
- Dimension: 65mm×40mm×9mm

2. Connector Description

The connectors of S1871 module are shown as Fig 1 and the Table 1 is their description.



Fig 1 The connectors of S1871 module

Table 1 Description of the connectors of S1871 module

Connector	Description
J1	A Mini Connector. Used as data communication and firmware update
J2	A 14-Pin Connector. Mounted on the Top side of the module. Used as data communication, low power control and firmware update control
J3	A 6-Pin Connector. Mounted on the Bottom Side of the Module. Used as GPIO
J4	A Connector to Antenna

3. Pin Description

Table 3 Pin Description

Connector	Pin Number	Signal Name	Description
J2	PIN 1	GND	Ground Signal
	PIN 2	GND	Ground Signal
	PIN 3	Reserved	
	PIN 4	UART TxD	The module's UART transmit signal, at the 3.3V level
	PIN 5	VCC	DC+3.3V-DC+5V
	PIN 6	VCC	DC+3.3V-DC+5V
	PIN 7	GND	Ground
	PIN 8	UART RxD	The module's UART receive signal, at the 3.3V level
	PIN 9	nReset	The module will be reset when this pin is pull-down
	PIN 10	Reserved	
	PIN 11	Reserved	
	PIN 12	Reserved	
	PIN 13	Reserved	
	PIN 14	Reserved	
J3	PIN 1	GPIO 0	
	PIN 2	GPIO 1	

	PIN 3	GPIO 2	
	PIN 4	GPIO 3	
	PIN 5	GPIO 4	
	PIN 6	GPIO 5	

4. Electrical Characteristics

Table 4 The Electrical Characteristics of S1871 module

Parameter		Min	Typical	Max	Comments
Frequency		860MHz	-	960MHz	Supports ETSI, FCC and China RFID Regulation
Max Output Power		-	30dBm	-	50Ω Matching
Adjustable Power Step		-	1.0dB	-	
VCC		DC+3.0V	DC+3.5V	DC+5.0V	
ICC	Sleep	100mA	160mA	210mA	VCC=+3.5V
	Idle	400mA	450mA	500mA	VCC=+3.5V
	Operation	1.8A	1.9A	2.2A	VCC=+3.5V, RF Power=30dBm
VIH		2.0		3.3V	
VIL		0		0.8V	
VOH		2.0		3.3V	
VOL		0		0.8V	
Load Impedance		49.5Ω	50Ω	50.5Ω	

5 Warning

- The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
This device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation.

- Do not attempt to disassemble the product and battery by yourself. Non-expert handling of the devices may damage them.
- Our reader is a radio transmitter and receiver. It is designed and manufactured not to exceed limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. To comply with FCC RF exposure compliance requirements, this product is applicable only in Mobile Configurations. The antennas of this product must be kept a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.
- Some electronic devices are susceptible to electromagnetic interference sent by phone if inadequately shielded. Please use phone at least 20cm or as far as you can from TV set, radio and other automated office equipment so as to avoid interference.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.