SUPER-RFID

SP-S100 Hand held CF reader

User manual

1. SP-S100 Hand held CF reader brief description

SP-S100 hand held reader/writer is the product of Shanghai Super electronic technology Co. Ltd, the first RFID hand held PDA reader/writer communicating with PC through CF interface in the whole world. It is microminiaturized, super light, portable, extremely convenient and flexible. SP-S100 offers simple application software to help customers get familiar with our products and do further windows-based customized application development. Commonly, it is carried by operator, finishing data collection for tags in certain area and simultaneously storing collected data in PDA or transmitting to back-end via 802.11b/GPRS, or automatically finishing data writing for tags in certain area under safety control. It is capable of bidirectional and long distance communications with tags, able to supervise hundreds of articles tag attached within range of 10 meters.

As important part of our systematic solution for RF identification, SP-S100 hand held reader/writer fully demonstrated several advanced technologies of our unique i-CollectedTM patent package, and integrated many other advanced technologies, such as micro controller, RF technology, high speed data transmission, high capacity data storage and imbedded real time system. Cooperating with other types of RFID products in our company, it provides high quality solution for cases demanding automatic identification, such as supply chain, storage, animal tracking, product line management (working-in-progress) and electric power equipments routine check.

Performance

1) Identification range is within 10 meters
2) Advanced anti-collision techniques, simultaneously identifying up to 200 tags
3) Applied channel isolation technology, no interferences between equipments
4) Capability of high speed bi-directional data transmission between tag , reader and PC
5) Communicate with computer through RS232/483/weigand 26 or wirelessly
6) Encrypted and certified to assure data safety, preventive of eavesdropping and intentional decoding
7) Work at globally free 2.45GHz ISM band
8) Ultra low RF transmission power consumption, healthier and safer
9) Applied 0.18uM technology to reduce cost
10) Meet harsh industrial environment requirements
11) Stable, work temperature range from -10℃ to 60℃, anti-impact design
12) Anti-jamming capability, tolerance of interfering sources at the scene
13) Applied design techniques of anti-interferences and thunders

Specifications

Mechanical characteristics

parameters	specifications
size	64mm×43mm×11mm
weight	20g
Shell material	ABS、stainless steel
Color	black
Installation manner	Portable, handheld

Microwave link characteristics:

parameters	specifications	
	uplink	downlink
modulation	GFSK	GFSK
frequency	2.4 - 2.4835 GHz	
Working volage	3.3V±10%	
Transmission power	≤0dBm(software adjustable)	
Antenna polarization	linear polarization	
Microwave communication range	Within 10 meters	
Microwave communication error check	Cyclic redundancy check(CRC16)	
Communication encryption	Temporarily confidential	
Bit error ratio/B.E.R	10^{-7}	

Electric characteristics:

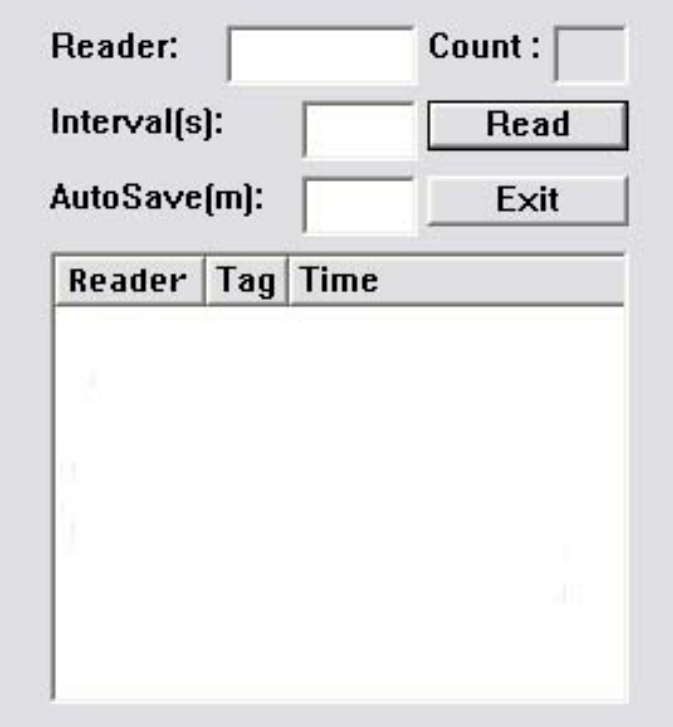
parameters	specifications
power	Supplied by PDA
Communication interface	CF interface
	baud rate: 19200

Environment characteristics:

Parameters	Specifications
temperature	-40℃ — +80℃
Storage temperature	-60℃ — +80℃
Anti-electromagnetism interferences	10V/m 0.1-1000MHz AM waves
reliability	MTBF≥70000 hours
Work life	15 years

2. CF reader parameter setup for testing software

CF reader testing software is named as “Cardreader”, open it, run Cardreader.exe, the application interface is as follows:



"reader" bar can be optionally blank, "count" display the number of tags having been detected, "interval " means the time interval of data renew, usually 1 to 2 seconds. "autosave " is usually set to 1, means one execution produce 1 data backup file.

Once setup is done, click "read". ID numbers and corresponding read time of tags being detected can be displayed on the PDA screen.

Warning:

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.

The equipment compliance with FCC radiation exposure limit set forth for uncontrolled environment

Changes or modifications to this unit not expressly approved by the party responsible for compliance will void the user's authority to operate the equipment. Any change to the equipment will void FCC grant.