



SRWF-RFScanner-SDK

Wireless Scanner User Manual



ShangHai Sunray Technology Co.,Ltd



I. Introduction

SRWF-RFScanner-SDK wireless scanner is specially designed for solving discommodious of wired scanner while scanning, It uses 433M wireless transmit technology, and has wireless transmit、data verification、low voltage alarm, guaranteeing the convenience and veracity of data transmit. The System separates the way by using different ID number, supporting point to multi-point communication.

II. Feature of SRWF-RFScanner-SDK Wireless Scanner

- ※ **Low power transmission:** With the transmission power of 17dBm, carrier frequency of 433MHz
- ※ **Multi-channel:** The standard configuration provides 8 channels, meeting the multiple combinational mode of communication.
- ※ **High anti-interference and low BER(Bit Error Rate):** Based on the GFSK/FSK modulation mode, carry on the verification to the each package of data , guaranteeing the accuracy.
- ※ **Low power consumption and sleeping function:** the module will be in sleeping mode when not receiving data from scanner in the enactment time, and cut off the power of scanner. sleep current is $5\pm 2\mu\text{A}$.
- ※ **Not affect mutually when working simultaneously:** Scanners detect Carrier signal before transmitting the data, keeping them from colliding when working simultaneously.
- ※ **Low voltage alarm :** when the battery voltage is below 3.6v,the buzzer will have three short call every third minute or so, reminding charge.
- ※ **Optional work mode:** By scanning special barcodes, the scanner can work in the wired way or wireless way.
- ※ **Long transmission distance:** Within the range of visibility, the reliable transmission distance is 400 m

III. Technical Specification



Serial Numeber	Item	Parameter
1	Light source	650nm Visible laser diode
2	Scanning distance	2-10cm(@0.1mm element width)3-60cm(@0.3mm element width)
3	Scanning depth	5mm-30cm
4	Minimum element width	0.1mm(3mils)
5	Decode speed	120scans/sec
6	Decode capability	UPC.EAN, UPC.EAN with Supplemental, UCC.EAN 128, JAN 8 & 13, Code 39, Code 39 Full ASCII, Code 39 Trioptic, Code 128, Code 128 Full ASCII, Codabar (NW7), Interleaved 2 of 5, Discrete 2 of 5, Code 93, MSI, Code 11, Code 32, Bookland EAN, IATA, UCC/EAN RSS and RSS variants
7	Modulation mode	GFSK
8	Working frequency	433 MHz
9	Transmission power	17dBm
10	Receiving sensitivity	-113dBm
11	Channel counts	8 channel
12	Transmitting current	120±5mA
13	Receiving current	50±2mA
14	Sleeping current	5±2uA
15	Interface velocity	9600bps
16	Power supply	+3.7~5VDC
17	Dimension	95mm x 68mm x 155mm
18	Reliable transmit distance	400m

IV.Parameters Setting

Before using scanner, you have to make simple configuration of your system parameter, Through scanning special barcodes, you can set the scanner's parameters. The parameters can be saved in EEPROM , and be reserved in it when cutting off the power.

1.Setting the time of automatic power off

Scanner will be in sleeping mode when not receiving data in the enactment time, and cut off the power of the scanner. The time of automatic power off can be changed through scanning special barcodes. The range of enactment time is 20 to 255s. When the setting time is less than 20s, system will make the time as 20s by itself. The step is as follows: Scan



“autopower” barcode, at this time the buzzer will tweet, then scan number code, the number code is “number0”~“number9“ barcodes, finally scan the ”setok” code, For example: the barcodes are”autopower”、 “number6”、 ”number0”、 ”setok”, when setting the time as 60s。

2. Setting of the channel

The scanner can supply 8 channels, the range is from 0~7. The Frequency of every channel is shown in Table 3,The barcode of setting the scanner ’s channel is “setchan”(the barcode is shown in appendix 1), For example : when setting the channel as 6,the barcodes are “setchan”、 “number6” 、 ”setok”.

Table 3. The Frequency of every channel

Channel Number	Frequency(MHz)	Channel number	Frequency(MHz)
0	433.85	4	434.80
1	433.45	5	432.20
2	434.00	6	432.60
3	434.40	7	432.80

3.Setting source address and destination address

Every scanner has one source address and one destination address. The system can offer 255 addresses. The setting range is from 0 to 254. The barcode of the source address setting is “setsour”, and the destination address is “setdest”. For example : when setting the source address as 12,the barcodes are “setsour”, “number1” , “number2”, ”setok”. They couldn’t communicate with each other until the destination address of scanner is the same with the source address of receive terminal. when scanners have the same destination address ,they could communicate with the same source address of receive terminal(point to multi-point communication)

4. Setting work mode of the scanner

The scanner can work in the wired way or wireless way. You may judge the scanner’s work mode from the indicator light on the top of scanner. When scanning ,if the light is twinkling , you can judge that the scanner is working in the wireless mode, otherwise working in the wired mode 。if you need change the work mode of scanner , you just need scan special barcode。 For example, if you need the scanner work in the wired mode, you may scan” WIRED”,”setok” barcode , while if you need it work in the wireless mode ,you

must take off the crystal attachment, then scan “WIRELESS”, ”setok”barcode.

5. the edition information inquired

This scanner can be inquired the edition information. When scan the barcode “copyright”, it will display scanner’s edition on the PC .For example:

c=0

s=006

d=002

t=030

Note: “c” means channel number, “s” means source address, “d” means destination address, “t” means automatic power off time.

V. Installation

1. Open the top of the scanner, and take out the mainboard(shown in figure1),then separately connect the VCC, GND, DAT, CLK pin on scanner’s rear to SRWF-RFScanner-SDK(V1.0)(Scanner Connect)module’s. separately Connect the Battery, Bell, Key, L1, Change pin of SRWF-RFScanner-SDK(V1.0)(Scanner Connect)module to the battery, buzzer, waken switch, indication led, charger and so on.



Fig.1

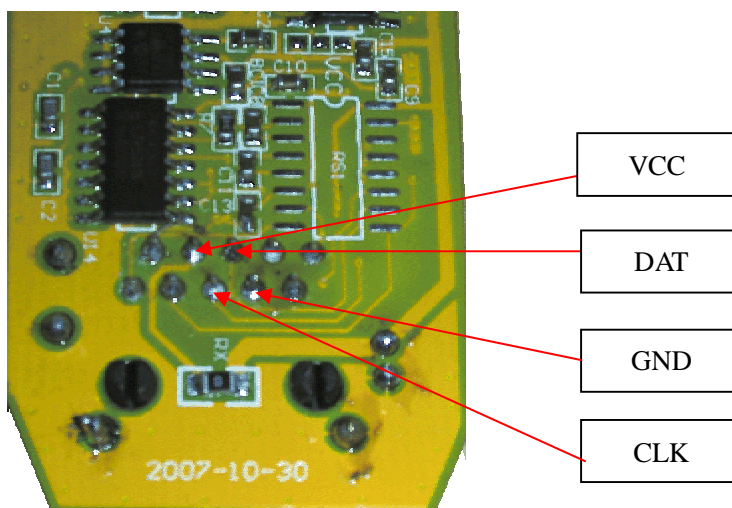
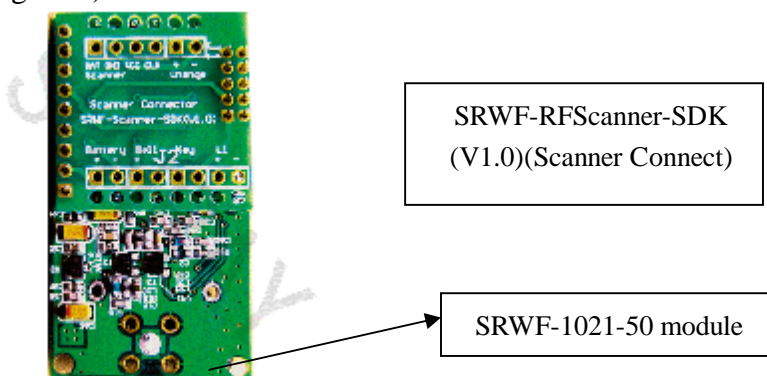


Fig.2

2. Install the SRWF-1021-50(V1.1)module to SRWF-RFScanner-SDK(V1.0)(Scanner Connect) module (shown as Figure 3)。



Fig,3

3. Put the module and the mainboard of scanner to the scanner's rabbet, the laying position of module is shown as Figure 4.

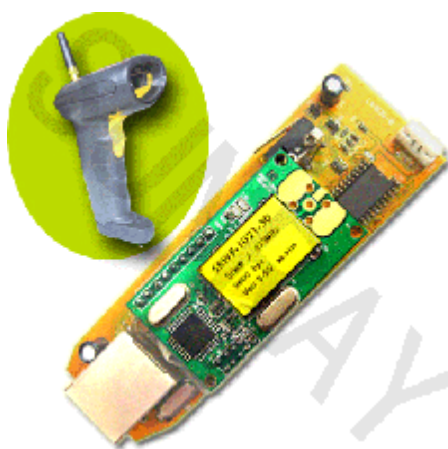


Fig. 4

4. Drill three holes on the top of scanner, and the sizes are suit for just loading Indication light, awake switch, antenna stand. As shown in Figure 5



Fi g. 5

5. After installation ,when scanning barcode, if buzzer tweets, but light doesn't twinkle, the scanner work at the wireless mode .if scanner doesn't work ,press the arouse switch on the top of scanner(The buzzer tweet),then set the channel, source address, destination address, time of automatic power off.

VI. Technology Support And After Service :

We offer sufficient technology support for user use the module and second development for free;mending broken module one year for free, always offer after service.

To adapt different user structure, we can develop smaller module or various size modules

ShangHai Sunray Info-tech Co.,Ltd

**ADDRASS: No 201,Keyuan RD Zhangjiang high-tech park,
Shanghai Pudong china**

Tel:+86-021-50275250/50275255/50273877

Fax:+86-021-50270187

E-mail: sales@tangray.com

Website: www.51sunray.com



number0



number1



number2



number3



number4



number5



number6



number7



number8



number9



setsour



setdest



autopower



setok



copyright



setchan



WIRELESS



WIRED