



**SUPER-RFID**

SP-K300 series long range RF Tag

# User manual



As a unique identifier for objects being attached to, SP-K300 tags can communicate with reader bi-directionally at 2.45GHz microwave frequency band.



### Product performance:

- Long range automatic identification (2-80m adjustable)
- Anti collision capability, simultaneously identification up to 200
- High speed Multi channel identification capability
- Globally free ISM 2.45GHZ microwave frequency band
- Ultra low RF transmission power consumption, healthier and safer
- Unique power saving mode design with long work life from 6 to 8 years
- Time division multi address technology based on HDLC and synchronized communication mechanism
- Provide simple and clear instructions and memory area for customers
- Provide standard 1K bytes storage space and can be divided into some sectors
- Anti-jamming capability, tolerance of interfering sources at the scene
- Solid state encapsulation, tolerance of high strength dropping and vibration, preventive of disassembling
- Meet harsh industrial environment requirements



## product specifications

### Mechanical characteristics:

parameters	specifications
Tag type	Read/Write
Size	86mm*54mm*5mm
Weight	30g
Shell material	High temperature modified alloy plastics
Color	Black,white etc.
Installation place	Object Surface
Installation manner	3M two-sided glue or other sticking methods, or using screw to fix

### Microwave link characteristics:

parameters	specifications	
	Uplink	Downlink
Modulation	GFSK	GFSK
Communication data rate	1000kbit/s	1000kbit/s
Frequency	2.4 - 2.4835 GHz	
Working voltage	2.2V-3.3V	
Max output power	0dbm	
Wakeup time	Less than 3uS	
Antenna polarization	Vertical polarization	
Receiving sensibility	- 80dBm--90Bm	
Bit error rate	$10^{-7}$	

### Electric characteristics:



Parameters	Specifications
Power consumption	< 2 $\mu$ A (quiescent current) <3.5mA (work current)
Work life	3.0V/750mAh lithium cell (6-8 years) Can choose cell with ten-years work life

**Environment characteristics:**

Parameters	Specifications
Temperature	-40 $^{\circ}$ C ~ +80 $^{\circ}$ C
Storage temperature	-60 $^{\circ}$ C ~ +85 $^{\circ}$ C
Vibration	10~2000Hz 15g three axes
Free dropping	1500mm concrete floor , twice on each side
Anti electromagnetism	10V/m 0.1 ~ 1000MHz AM electromagnetic waves

**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.