SANRAY

RFID HARDWARE/RFID SOFTWARE
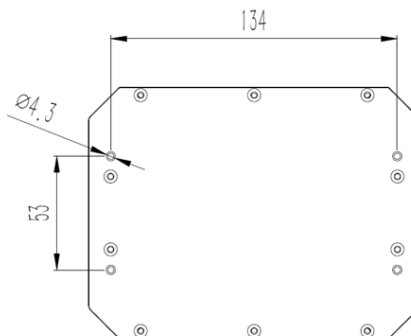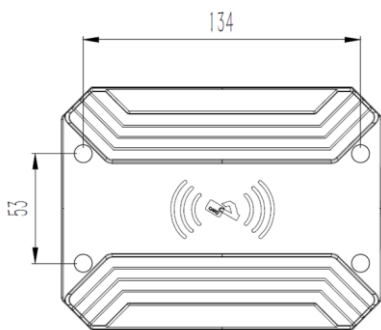
UHF RFID READER F5021

This device is an integrated UHF RFID reader product, model: F5021. The reading distance can reach 4 meters or more, and the performance is stable with a very high success rate for reading. The reader/writer device is waterproof and dustproof (IP65), with strong anti-interference ability, meeting the application requirements of industrial grade products for indoor and outdoor all-weather use, and can be applied in multiple fields such as urban sanitation. Supports EPC global UHF Class 1 Gen 2/ISO18000-6C protocols, featuring multiple interfaces, fast speed, high accuracy, strong anti-interference ability, and easy installation and use.

Product advantages

- High stability, capable of uninterrupted and stable operation;
- Provide comprehensive software development kits (SDKs) and interfaces to facilitate application software integration;
- Adopting integrated RF chips, the module has stable performance and a wide range of application environments;
- Using carrier cancellation technology, the tag reading accuracy is good;
- The protection level reaches IP65 or above, and it can be used normally in harsh environments.

Equipment installation dimension drawing

Product Technical Parameters

NO	NAME	Parameter
1	working voltage	DC+9V ~ +26V (default +12V)
2	stand-by current	< 120mA
3	Working current	< 1.0A
4	Operating temperature	-20℃ ~ +60℃
5	Working humidity	5%RH-95%RH (No condensation)
6	Storage temperature	-20℃ ~ +85℃
7	IP LEVER	IP65
8	tag protocol	EPC global UHF Class 1 Gen 2 / ISO 18000-6C
9	Working frequency	840 ~ 960 MHz(default 920MHz-925MHz)
10	Support work area	China 2 (option: China 1 , Europe , USA ,Japan or Korea)
11	Output Power	+15dBm-+25dBm
12	Power step interval	1.0dB
13	Output power flatness	±0.2dB
14	Receive sensitivity	-62dBm
15	RF port standing wave	≤1.5
16	Maximum reading distance	≥3.5 meters (reading distance, tag angle, tag type and application environment vary close)
17	Tag reading success rate	≥98%
18	Interface communication rate	Default 115200bps (other rates can be set: 38400bps, 9600bps, etc.)
19	Antenna monitoring	Support
20	Acceptance Strength RSSI	Support
21	Antenna type	Paired with 3dBi ceramic antenna
22	Communication interface	RS-232 and RS485
23	Device interface	Small 5557 female connector (other connectors can be customized)
24	buzzer	Yes
25	RTC	yes
26	Material	ABS (base plate is metal)
27	Exterior color	Black
28	Size	155mm*117.5mm*25mm

Tail line definition

There are seven tail lines in total, among which RS485-A, RS485-B, GND and 12VDC are connected to the small 5557 connector (female), and RS232-TX, RS232-RX and GND1 exist in the form of loose lines. Its definition

NO	COLOR	MODEL NO	Definition
1	RED	12VDC	Input power 12V
2	yellow	485-B	RS485 negative signal
3	GREEN	485-A	RS485 positive signal
4	BLACK	GND	reference place
5	BLUE	232-TX	RS232 send signal
6	WHITE	232-RX	RS232 receive signal
7	BLACK AND WHITE	GND1	reference place