INTEGRATED RFID READER F5016

The ultra-high frequency integrated series reading device is a high-end integrated UHF RFID reader/writer product. Its design is equipped with our company's developed ultra-high frequency M2210/M2100/M7131 reading/writing module and RFID antenna. The integrated device F5016 can read up to 0-10 meters, and the industry's multi tag algorithm can quickly identify tags. In response to customer needs, tags can be encrypted, and other readers will read garbled characters to enhance confidentiality. Among similar products, the performance is stable and the reading distance is far. The device standard integrates RS232 and 100Mbps Ethernet communication interfaces.

The ultra-high frequency integrated series adopts PC+ABS/aluminum alloy shell design, waterproof and dustproof (IP67), strong anti-interference ability, and meets the design requirements of outdoor all-weather industrial grade products. Supports EPC global UHF Class 1 Gen 2/ISO 18000-6C protocol, with multiple interfaces, long recognition distance, fast speed, high accuracy, strong anti-interference ability, excellent protection performance, and easy installation and use.

There are currently three main products in this series

MODEL NO	MODULE
F5016-H	M2210 MODULE
F5016-L	M2100 MODULE
F5016-S	M7131 MODULE

Product advantages

The H series adopts M2210 module, with a receiving sensitivity of up to -82dBm; The L series adopts M2100 module, with a receiving sensitivity of up to -62dBm; The S series adopts M7131 module, with a receiving sensitivity of up to -82dBm and a maximum power of 33dBm; High performance, also suitable for harsh application environments;

High stability, 60 * 24-hour high-temperature copying machine, can run continuously and stably;

The multi tag dense reading performance is excellent. The H series can achieve a tag recognition rate of over 800 tags/s, the L series can achieve a tag recognition rate of over 200 tags/s, and the S series can achieve a tag recognition rate of over 800 tags/s;

Provide a comprehensive software development kit (SDK) and interface that is easy to integrate with RFID software;

Adopting integrated RF chips, the module has stable performance and can also be applied in harsh and high demand application environments;

Using carrier cancellation technology, the tag reading accuracy is good and the range is wide;
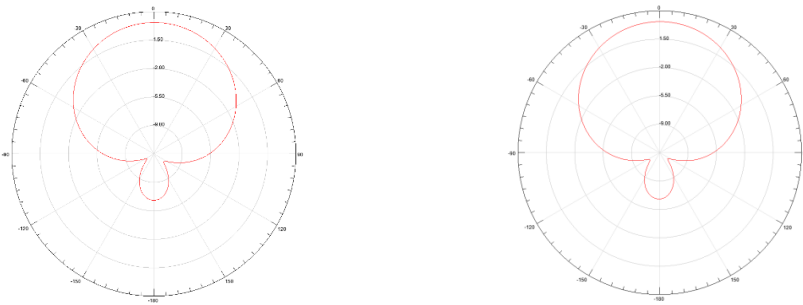
Enhanced noise suppression function for reliable data capture;

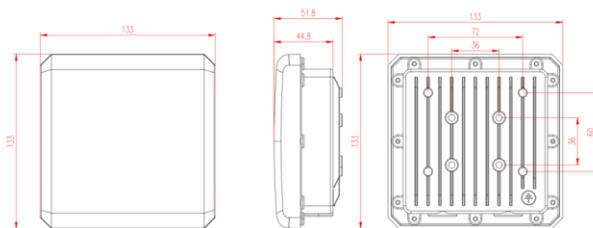Support high-precision return signal strength (RSSI);

Anti interference circuit design;

The PC+ABS/aluminum alloy box shell design is sturdy and durable, and the entire equipment is completely immersed in water for 12 hours without water ingress. The protection level reaches IP67 or above, and it can be used normally in harsh environments.

915MHz radiation pattern

Dimensional schematic diagram

Product Technical Parameters

No	Name	Parameters
1	working voltage	DC 7.5-24V
2	Peak operating current	H series: 12V/2.0A L series: 12V/700mA S series: 12V/2.5A
3	Working temperature	-30 ~ 65℃
4	Working humidity	5%-95% RH No condensation
5	storage temperature	-40 ~ +70℃
6	IP LEVER	IP67
7	Tag protocol	EPC global UHF Class 1 Gen 2 / ISO 18000-6C
8	Working frequency	840 ~ 960 MHz
9	Support work area	China 1，China 2 US, Canada and other regions following U.S. FCC Europe and other regions following ETSI EN 302 208 with & without LBT regulations Japan、Korea、Malaysia、Taiwan
10	output power	Software adjustable: H series: Step interval of 1.0dB,+5dBm -+30dBm L series: Step interval of 1.0dB,+5dBm -+25dBm S series: Step interval of 1.0dB, 0dBm -+33dBm
11	Output power flatness	±0.2dBm
12	receiver sensitivity	H series: -82dBm L series: -62dBm S series: -82dBm
13	RF port standing wave	≤1.5
14	Read distance	F5016-H：0 ~ 10 meter F5016-L：0 ~ 5 meter F5016-S：0 ~ 8 meter The reading distance is related to the tag type, transmission power, and application environment
15	Multi tag reading	H series：≥800tags/s L series：≥200tags/s S series:≥800tags/s
16	Interface communication speed	115200bps
17	Working temperature detection	H. S series support
18	Dense Reader Mode DRM	Support
19	Antenna connection protection	Support
20	Return signal acceptance strength RSSI	Support
21	Antenna type	Paired with 6dBi circularly polarized antenna
22	GPIO controller	Input IO port: 2 channels Output IO port: 4 channels
23	Communication interface	RS-232、Network port WIFI (optional) RS-485 (optional), Wiegand 26/34 (optional), Bluetooth (customizable)
24	buzzer	Yes
25	appearance design	PC+ABS/ Aluminum alloy shell design
26	Size	133*133*52mm
27	Weight	1.25KG