SANRAY

RFID HARDWARE/RFID SOFTWARE

UHF RFID MODULE M2130

M2130 is an ultra-high frequency single channel read-write module designed based on PHYCHIPS PR9200. The maximum output power of the module can reach+30 dBm, and when combined with an 8dBi gain antenna module, the reading distance can reach 0-20m. It can achieve a tag recognition rate greater than 200 tags/s, and has stable multi tag reading and anti-interference capabilities.

The M2130 module has undergone extensive testing and continuous operation for 180 days, and its stability and reliability fully meet the requirements for its use.

Product advantages

- The receiving sensitivity of M2130 can reach -62dBm, which is more suitable for harsh application environments than traditional readers;
- Provide comprehensive software development kits (SDKs) and interfaces (APIs) that are easy to integrate with software;
- Adopting integrated RF chips, the module performance is stable and suitable for harsh and high demand application environments;
- Using carrier cancellation technology, the accuracy and range of tag reading are good;
- The module has the smallest volume in the industry;
- Enhanced noise suppression function for reliable data capture;
- Has high-precision return signal strength (RSSI).

Product Technical Parameters

Name	M2130
Sensor	PHYCHIPS PR9200
Air Interface Protocol	EPC global UHF Class 1 Gen 2/ISO 18000-6C
Working frequency	840～960MHz（Default frequency range 920-925MHz）
Support Region	China, Europe, United States, South Korea, Japan, Taiwan……
working voltage	DC 5.0V
Peak operating current	2A
Standby current	≤30mA
Sleep current	≤0.5mA
Maximum output power of RF port	30dBm
Working temperature	-25℃～+65℃
Working humidity	≤95%（+25℃）
storage temperature	-30℃～+70℃
Maximum receiving sensitivity	-62dBm
Antenna interface impedance	50Ω
Serial communication parameters	Baud rate adjustable (default 115200bps), parity: none, Data bit: 8 bits, stop bit: 1 bit
Power output setting	20-30dBm adjustable/adjustable with a minimum interval of 1dBm
DRM mode	Support
RSSI	Support
High temperature automatic protection function	Support
Power Enable	Support
antenna interface	MMCX
FPC interface	10PIN/1.0mm/top connection
Optional development board kit	Our company has developed a corresponding development board kit for single channel read-write modules, equipped with ultra-high frequency demonstration software DEMO. Customers can easily and quickly familiarize themselves with and use single channel modules, and carry out related hardware and software development, shortening the development cycle. Single channel read-write module development board peripheral interface: RS-232. The development board kit includes: single channel read-write module+1 set of development board, 1 12V power adapter, and 1 interface connection cable. Development board size: 22.0 * 12.0 * 3.5CM. Note: Development board related configurations must be purchased separately.

Product Interface Definition

PIN	Name	Description
1	UART TX	Serial interface transmission, TTL level, low level is 0V, high level is 3.3V
2	UART RX	Serial interface reception, TTL level, low level is 0V, high level is 3.3V ~ 5.0V
3	-	-
4	-	-
5	-	-
6	P_EN	Module power enable, this pin defaults to a high level of 5V. When an external low level (0V) is connected, the M2130 module enters sleep mode.
7	GND	GND
8	GND	GND
9	VCC	DC power supply, input voltage of 5.0V, maximum operating current of M2130 is 2A, so sufficient power supply current should be considered when designing the circuit.
10	VCC	DC power supply, input voltage of 5.0V, maximum operating current of M2130 is 2A, so sufficient power supply current should be considered when designing the circuit.

Note: 10PIN connector, with a spacing of 1.0mm, top up type.

Product size