UHF RFID MODULE
M2210

M2210 UHF RFID module is a high-performance reader/writer designed by Sanray Technology for high challenging RFID application environment. It employs the newest R2000 RF chip providing the customers unprecedented performance of reading and writing experience.

The modules have been tested for non-stop running, and results showed that our module can work ceaselessly for 180 days. The stability and reliability can perfectly meet our customers' application requirements.

The maximum power output of this module is +30dBm, with 8dbi antenna, which can realize a efficient reading/writing distance of 10m or above, and over 400tags/s for tags identification. Meanwhile, the compact design makes this module smaller (56.5*36.0*7.8 MM), coupled with the low working voltage of 3.7V--5V, the module is particularly suitable for application in a device such as a handset.

This product is suitable for RFID intensive and more challenging environment and required a higher reading/writing performance, such as warehousing, logistics, production line management, etc..

Interface Definition

Pin NO.	Name	Type	Description
1	UART_TX	I/O	TTL UART Transmit
2	UART_RX	I/O	TTL UART Receive
3	GPIO3	I/O	Output
4	GPIO2	I/O	Output
5	GPIO1	I/O	Output
6	PWREN_MODULE	I/O	When Pull Down This Pin to Ground, The Module Enter Sleeping Mode.
7	GND	Ground	Ground
8			
9	VCC	Power	DC 3.7V to 5V Power Input.

Product Technical Parameters

NO.	Name	Parameters
1	Working Voltage	DC 3.7 ~ 5V
2	Working Current	1.5A
3	Standby Current	≤50mA
4	Sleep Current	≤1mA
5	Working Temperature	-25 ~ +65℃
6	Working Humidity	≤95%（+25℃）
7	Storage Temperature	-40 ~ +80℃
8	Tag Protocol	EPCglobal UHF Class 1 Gen 2 / ISO 18000-6C
9	Working Frequency	840 ~ 960 MHz
10	Supporting Working Areas	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
11	RF IC	Impinj R2000
12	Output Power	Software adjustable, step interval 1.0dB, maximum 30dBm
13	Output Power Flatness	±0.2dBm
14	Receiving Sensitivity	-82dBm
15	RF Port Standing Wave	≤1.5
16	Reading Distance	≥10m（With 8dBi antenna/Relate to tags type, transmitted power and application environment）
17	Multi-tag Reading	≥400 tags/s
18	Antenna Interface Amount	one（MMCX）
19	Interface Communication Rate	115200bps
20	Working Temprature Detection	support
21	Intensive Read/Write Mode DRM	support
22	Antenna Connection Protection	support
23	RSSI	support
24	LED	Red light (power indicator)
25	Product Cooling Way	Aluminum metal case as cooling fin for the module
26	Dimension	56.5*36.0*7.8 MM