

HYM360F

UHF RFID Reader Module

Product Features

- Support EPC C1Gen2 V2.0 and EPC C1Gen2 V1.2;
- Support ISO18000-6C;
- Support ISO18000-6B;
- Support GB 29768;
- Support GJB 7377.1 (special condition available);
- The low power consumption mode of the handheld PDA application scenario, the average power consumption is reduced by 50% compared with the ordinary mode;
- Support temperature protection, if the temperature exceeds (85°C), it will automatically stop working, if the temperature is lower than (85°C), the device will automatically resume work;
- Antenna fault detection
- The power-on startup time is less than 300ms
- Support FastID、Tagfocus、QT、QTWrite、QTRead、BlockWrite、BlockErase、BlockPermalock etc;
- Ultra-fast label writing mode, 12-byte EPC can be written within 50ms;
- Applicable to clothing, retail, electricity, books, warehousing, industrial automation and other industries.

Requirement on Antenna

No	Item	Technical data	Remark
1	Standing wave ratio	≤1.5	

Technical Data

Item	Technical data	Remark
Max current	1600mA	Max power output@5V
Average current	≤300mA	power saving mode
Standby current	≤1mA	EN pin low level
Frequency range	840MHz~960MHz	
Default working frequency	Frequency hopping	Frequency interval 250KHz
Frequency hopping speed	≤2s	
Fixed power	33dBm	
Stepping interval	1dB	0~33dBm adjustable by software
Max reading range	>1000/s	
Communication protocol	Asynchronous serial ports protocol/USB	
Starting time	≤300ms	
Radio-frequency power rising time	≤500μs	
Radio-frequency Power dropping time	≤500μs	
Adjacent channel power leaking ratio	≤-40dB	±1CH
	≤-60dB	±2CH
Frequency stabilizing ratio	±10ppm	-25°C~+40°C
	±20ppm	-40°C~+60°C
Max reading range	>30m	8dBi Antenna to read standard card tag(U9)

Environment Requirement

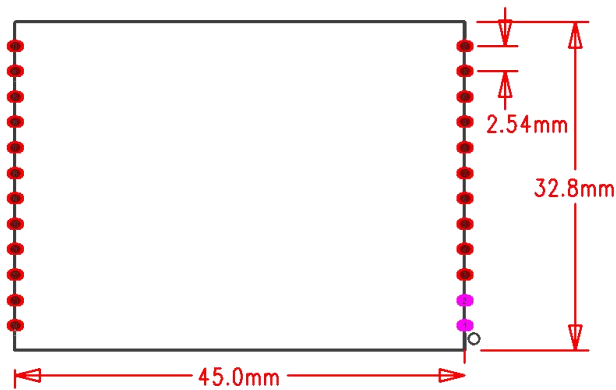
No	Item	Technical data	Remark
1	Working temperature	-25°C~+70°C	
2	Storage temperature	-20°C~+85°C	
3	Relative humidity	10%~90%RH	

Characteristics of DC

Data	Mini Value	Typical Value	Max Value	Remark
Voltage of power	4.5V	5V	5.5V	DC
Input high level	2V	3.3V	3.5V	GPIO
	2V	3.3V	3.5V	EN
Input low level	-0.5V	0V	0.5V	GPIO
	-	-	0.18V	EN
Output high level	2.3V	-	3.3V	GPIO
Output low level	0V	-	1V	GPIO
Enable current	2uA	5uA	25uA	$V_{EN} \geq 2V$

Appearance and Structure

- Size (L×W×H) :45mm×32.8mm×3.7mm
(Thickness Tolerance±0.3mm)
- Weight: 9g(±2g)

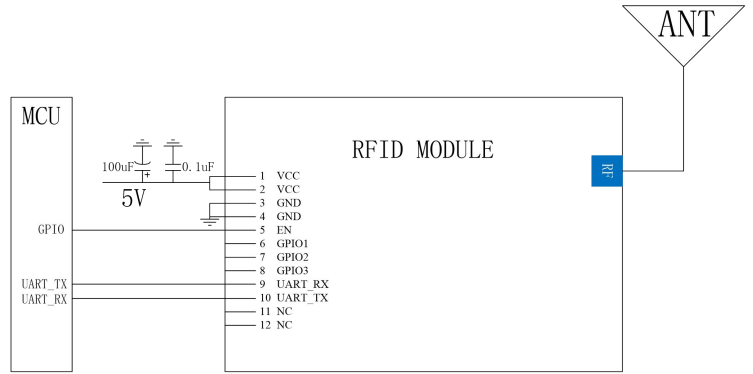


Drawing1 Front view of the module

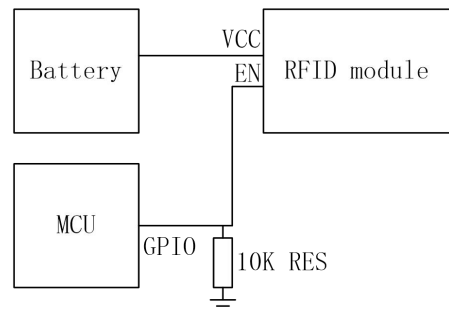
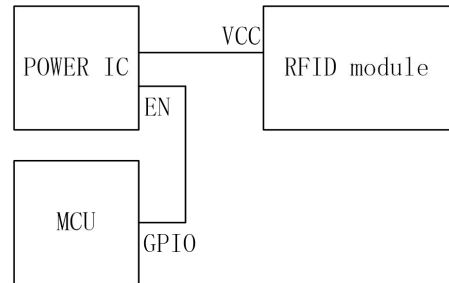
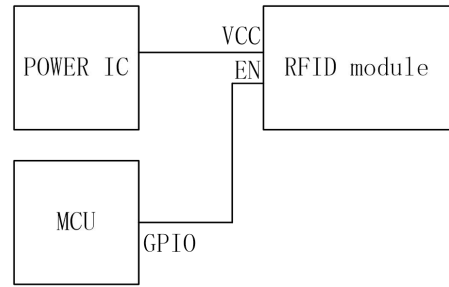
Interface definition

Pin	Signal Name	Signal direction	Function/compatibility description
1	VCC	Input	Module supplying power
2	VCC	Input	Module supplying power
3	GND	-	Module connecting ground
4	GND	-	Module connecting ground
5	EN	Input	Module enabling, highly effective
6	GPIO1	Bi-direction	Generic port
7	GPIO2	Bi-direction	Generic port
8	GPIO3	Bi-direction	Generic port
9	UART_RX	Input	TTL serial interface receiving
10	UART_TX	Output	TTL serial interface sending
11-12	NC		
13	GND		Module connecting ground
14-19	TBD		N/C
20	GND		Module connecting ground
21	RFOUT	output	RF power output
22	GND		Module connecting ground
23	GND		Module connecting ground
24	GND		Module connecting ground

Reference Design



Note: When the module is powered directly by the battery, the EN pin needs to be connected to a 10K resistor pull-down.



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