

Winnix



HYM750F

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);
- Support 4 RF ports;
- The maximum output power 33dBm, and reading distance can reach more than 25 meters;
- 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	Asynchronos 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	>25m	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	-40°C~+85°C	
3	Relative humidity	10%~90%RH	

Characteristics of DC

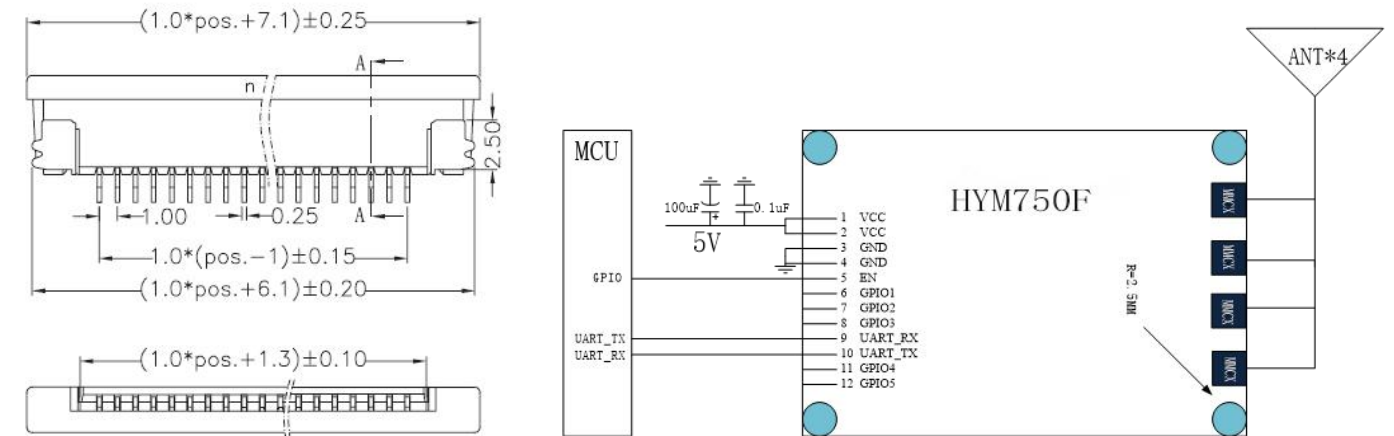
Data	Mini Value	Typical Value	Max Value	Remark
Voltage of power	4.5V	5V	5.5V	DC
Input high level	2V	3.3V	3.5V	GPIO
	2V	3.3V	3.5V	EN
Input low level	-0.5V	0V	0.5V	GPIO
	-	-	0.18V	EN
Output high level	2.3V	-	3.3V	GPIO
Output low level	0V	-	1V	GPIO
Enable current	2uA	5uA	25uA	$V_{EN} \geq 2V$

6Pin debug interface

Pin	Signal name	Signal direction	Function/compatibility description
1	VCC	Input	Module supplying power
2	GND		Module connecting ground
3	EN	-	Enable, High Level Effective
4	GPIO	-	Generic port
5	UART_RX	Input	TTL serial interface receiving
6	UART_TX	Output	TTL serial interface sending

Remark: This interface is reserved for user debugging.

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.

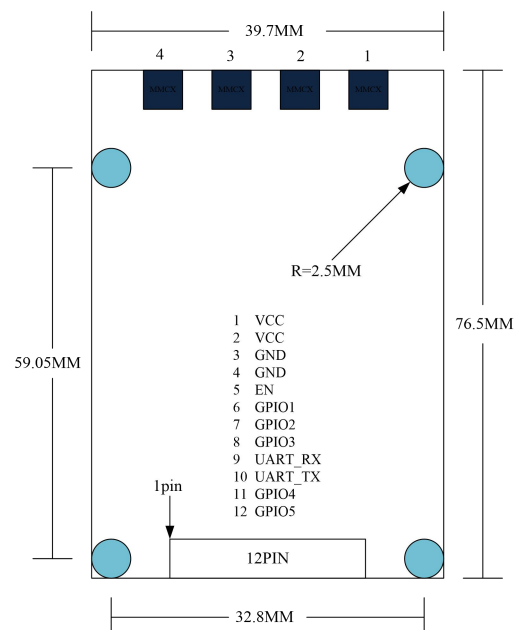
Appearance and Structure

- Size (L×W×H) : 76.5mm×39.7mm×9mm
(Thickness Tolerance±0.5mm)
- Weight: 52g(±3g)

Drawing1 12Pin connector

12Pin 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	GPIO4	Bi-direction	Generic port
12	GPIO5	Bi-direction	Generic port



Drawing2 Front view of the module

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