

HYM740E

UHF RFID Reader Module

Product Features

- Support EPC C1Gen2 V2.0 and EPC C1Gen2 V1.2;
- Support ISO18000-6C;
- Max Output 33dBm, max reading distance is up to 30m with 8dBi antenna;
- Max reading speed is up to 1000 tags/second
- Low power Consumption mode for Handheld PDA terminal scenarios, average consumption drops to 50% of normal mode;
- Support Temperature protection, automatically stop working when temperature is over 85°C, And restart to work again when temperature is below 85 °C;
- Support antenna failure detection;
- Power on time less than 500ms;
- Support FastID、Tagfocus、QT、QTWrite、QTRead、BlockWrite、BlockErase、BlockPermalock;
- Support Super-fast tag writing Mode , writing 12byte EPC within 50ms;
- Suitable for garment.retail.electricity, library,warehouse storage,industry automation and other relative industries.

Requirement on antenna

No	Item	Technical data	Remark
1	Standing wave ratio	≤1.5	

Technical data

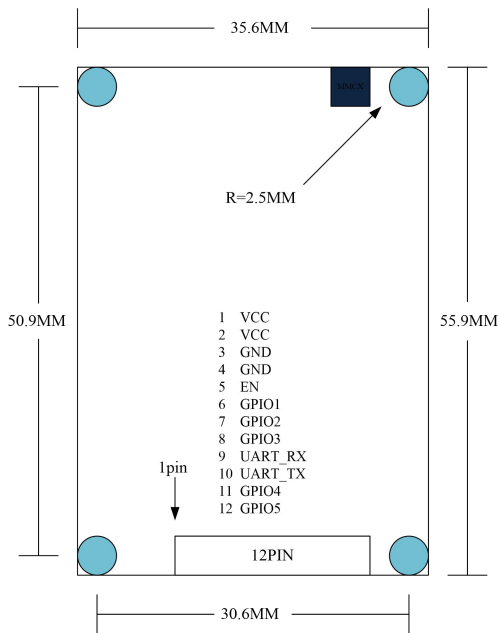
Item	Technical data	Remark
Max current	1300mA	Max power output@5V
Average current	≤300mA	power saving mode
Standby current	≤1mA	EN pin low level
Frequency range	840MHz~960MHz	
Default working frequency	Frequency hopping	Frequency interval 250KHz
Frequency hopping speed	≤2s	
Fixed power	33dBm	
Stepping interval	1dB	5~33dBm adjustable by software
Label protocol	EPC C1G2 /ISO18000-6C	
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	>30m	8dBi antenna
Multi-tags	>1000/s	

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	

Appearance and structure

- Size (L×W×H) : 55.9mm×35.6mm×7.5mm
(Thickness Tolerance±0.3mm)
- Weight: 13g(±2g)



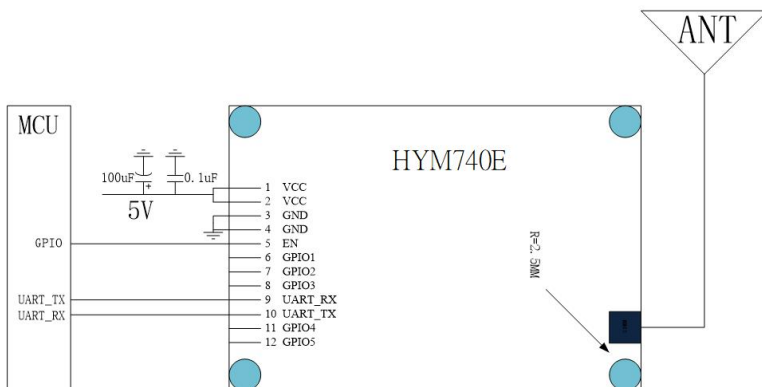
Drawing1 Front view of the module

6Pin debug interface

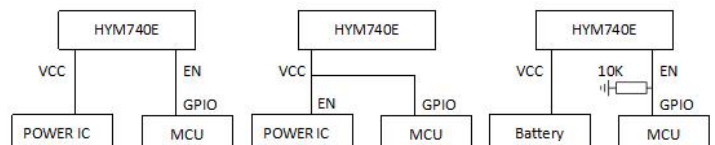
Pin	Signal name	Signal direction	Function/compatibility description
1	VCC	Input	Module supplying power
2	GND		Module connecting ground
3	EN	-	Enable, High Level Effective
4	GPIO1	-	Generic port
5	UART_RX	Input	TTL serial interface receiving
6	UART_TX	Output	TTL serial interface sending

Remark: This interface is reserved for user debugging.

Reference design

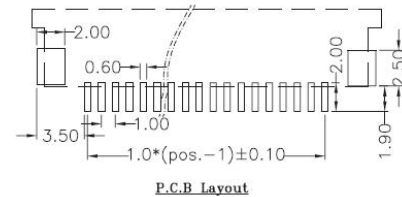
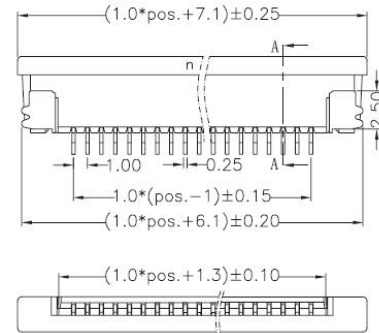


Note: When the module is powered directly by the battery, the EN pin needs to be connected to a 10K resistor pull-down.



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} ≥2V



Drawing2 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

Winnix Technologies Co., Limited

Address: Room 635, MingYou Industrial products exhibition center B, No.168, Baoyuan Road, Xixiang, Bao'an District, Shenzhen, 518101, China.
Tel: (0086)-755-27387953 Email: sales@winnix.net Web: www.winnix.net