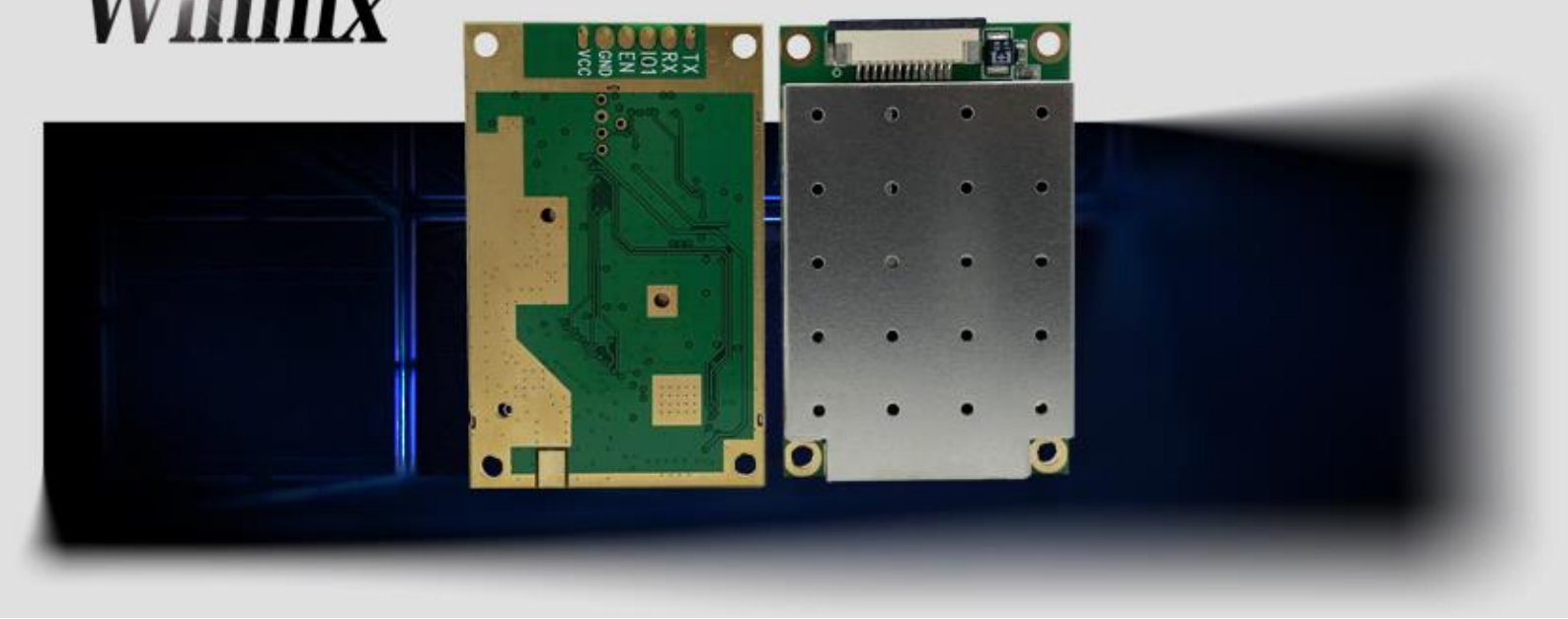
Winnix



HYM610

UHF RFID Reader Module

- Support EPC C1Gen2V2.0 and EPC C1Gen2V1.2;
- Support ISO18000-6C;
- The maximum output power 32dBm, and reading distance can reach more than 15 meters;
- 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 degrees Celsius), it will automatically stop working, if the temperature is lower than (85 degrees Celsius), the device will automatically resume work;
- Antenna fault detection;
- The power-on startup time is less than 200ms;
- 7*24 hours continuous trouble-free work;
- Ultra-fast label writing mode, 12-byte EPC can be written within 100ms;
- Applicable to clothing, retail, electricity, books, warehousing, industrial automation and other industries;

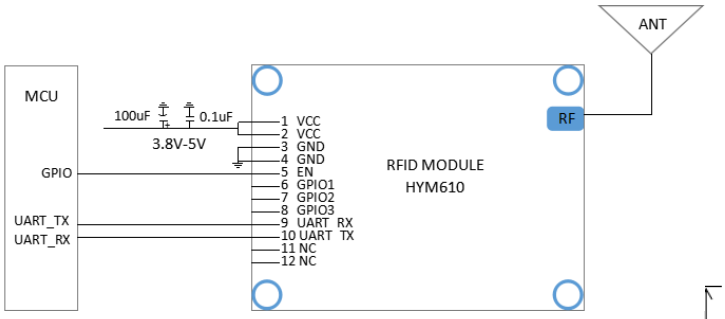
Technical Data

No	Item	Technical data	Remark
1	Fixed current	1450mA	Max power output@5V
2	Average current	≤300mA	Power saving mode
3	Standby current	≤1mA	EN pin low level
4	Frequency range	840MHz～960MHz	
5	Default working frequency	Frequency hopping	Frequency interval 250KHz
6	Frequency hopping speed	≤2s	
7	Fixed power	32dBm	
8	Stepping interval	1dB	5~32dBm,adjustable by software
9	Max reading speed	250pcs/sec	
10	Label protocol	EPC C1G2 /ISO18000-6C	
11	Communication protocol	Asynchronous serial ports protocol	
12	Starting time	≤200ms	
13	Radio-frequency power rising time	≤500μs	
14	Radio-frequency power dropping time	≤500μs	
15	Max reading range	15m	

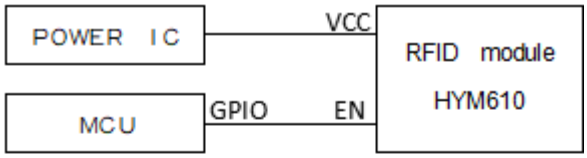
Environment Requirement

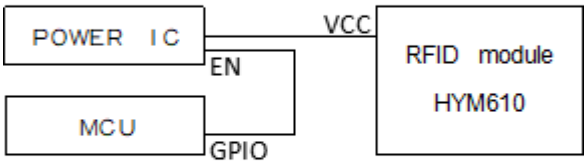
No	Item	Technical data	Remark
1	Working temperature	-20℃～+70℃	
2	Storage temperature	-20℃～+85℃	
3	Relative humidity	10%RH～90%RH	

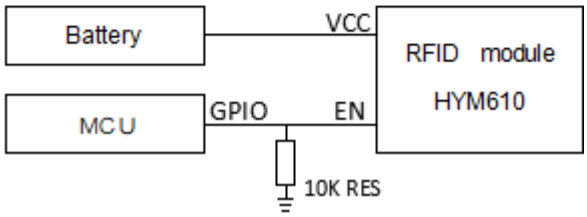
Design Reference



When module working with battery directly, set EN pin to connect with pull-down 10k resistor







Characteristics of DC

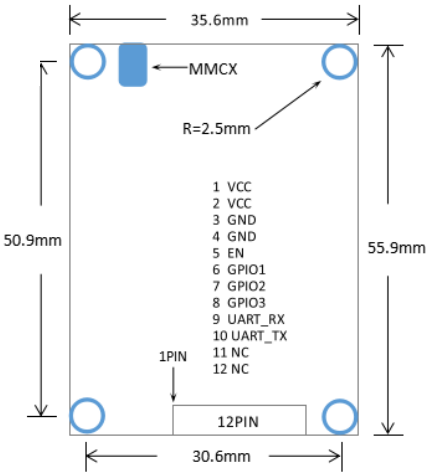
Data	Mini valu e	Typical value	Max value	Remark
Voltage of power	3.8V	5	5.5V	Direct current
Input high level	2V	3.3V	3.5V	GPIO
	2V	3.3V	3.5V	EN
Input low level	-0.5V	0V	0.5V	GPIO
	-	-	0.18V	EN
Output high level	2.3V	-	3.3V	GPIO
Output low level	0V	-	1V	GPIO
Enable current	2uA	5uA	25uA	V_{EN}≥2V

Requirement on Antenna

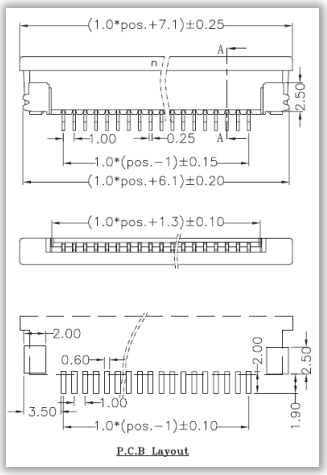
No	Item	Technical data	Remark
1	SWR	≤1.5	

Appearance and Structure

- Dimensions:55.9mm×35.6mm×4.5mm
- Weight：15g



Front view of the reader module



12Pin Connector Drawing

Interface Definition

- Front Interface:

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	Bidirection	Generic port
7	GPIO2	Bidirection	Generic port
8	GPIO3	Bidirection	Generic port
9	UART_RX	Input	Asynchronous serial interface receiving
10	UART_TX	Output	Asynchronous serial interface sending
11	NC	-	
12	NC	-	

- 6PIN Back Interface:

Pin	Signal name	Signal direction	Function/compatibility description
1	VCC	Input	Module supplying power
4	GND	-	Module connecting ground
5	EN	-	Module enabling，highly effective
6	GPIO1	-	Generic port
9	UART_RX	Input	Asynchronous serial interface receiving
10	UART_TX	Output	Asynchronous serial interface sending

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