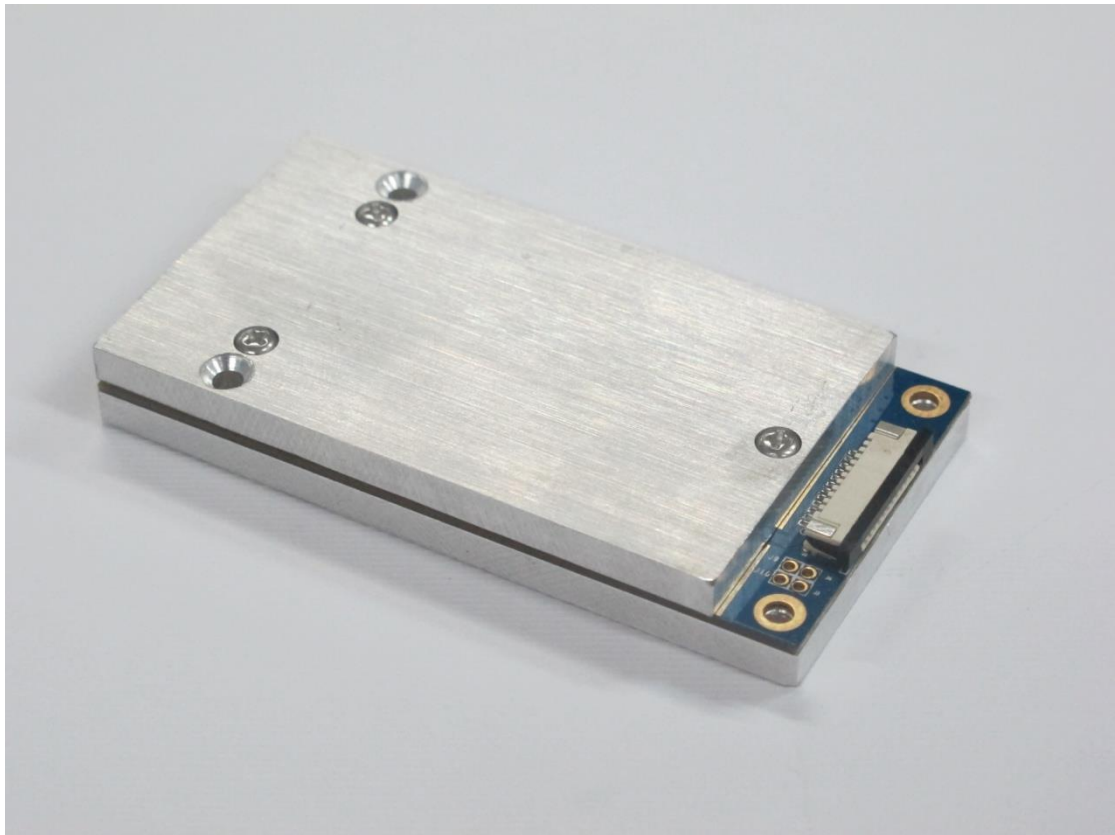


UHF RFID Reader Module

HYM750



Winnix Technologies Co.,Limited

Brief introduction

HYM750 UHF RFID reader uses R2000 chip, which complies with EPC C1G2 protocol, its working frequency is 840~960MHz, with LBT function. It supports dense reader working mode (DRM)。With standard 12dBi antenna, the reading distance can reach 24 meters, maximum identifying speed can reach 400/S; with simple power supply and interface circuit, a high-performance RFID system can be established. It is suitable for logistics, apparel, medical industry, and complex assets management, etc.

Technical data

No	Item	Technical data	Unit	Remark
1	Fixed current	1.2	A	Max power output
2	Standby current	≤1	mA	EN pin low level
3	Frequency range	840~960	MHz	
4	Default working frequency	Frequency hopping	MHz	Frequency interval 250KHz
5	Channel bandwidth	≤250	KHz	
6	Frequency hopping speed	≤2	s	
7	Fixed power	30	dBm	
8	Stepping interval	1~2	dB	5~30dBm, adjustable by software
9	Label protocol	EPC C1G2 /ISO18000-6C		
10	Communication protocol	Asynchronous serial ports protocol		
11	Starting time	≤50	ms	
12	Radio-frequency power rising time	≤500	μs	
13	Radio-frequency power dropping time	≤500	μs	
14	Adjacent channel power leaking ratio	≤-40	dB	±1CH
		≤-60	dB	±2CH
15	Frequency stabilizing ratio	±10	ppm	-25℃ ~ +40℃
		±20	ppm	-40℃ ~ +60℃
16	Max reading range	24	m	12dBi antenna
17	Multi-tags	>400/s		

Characteristics of DC

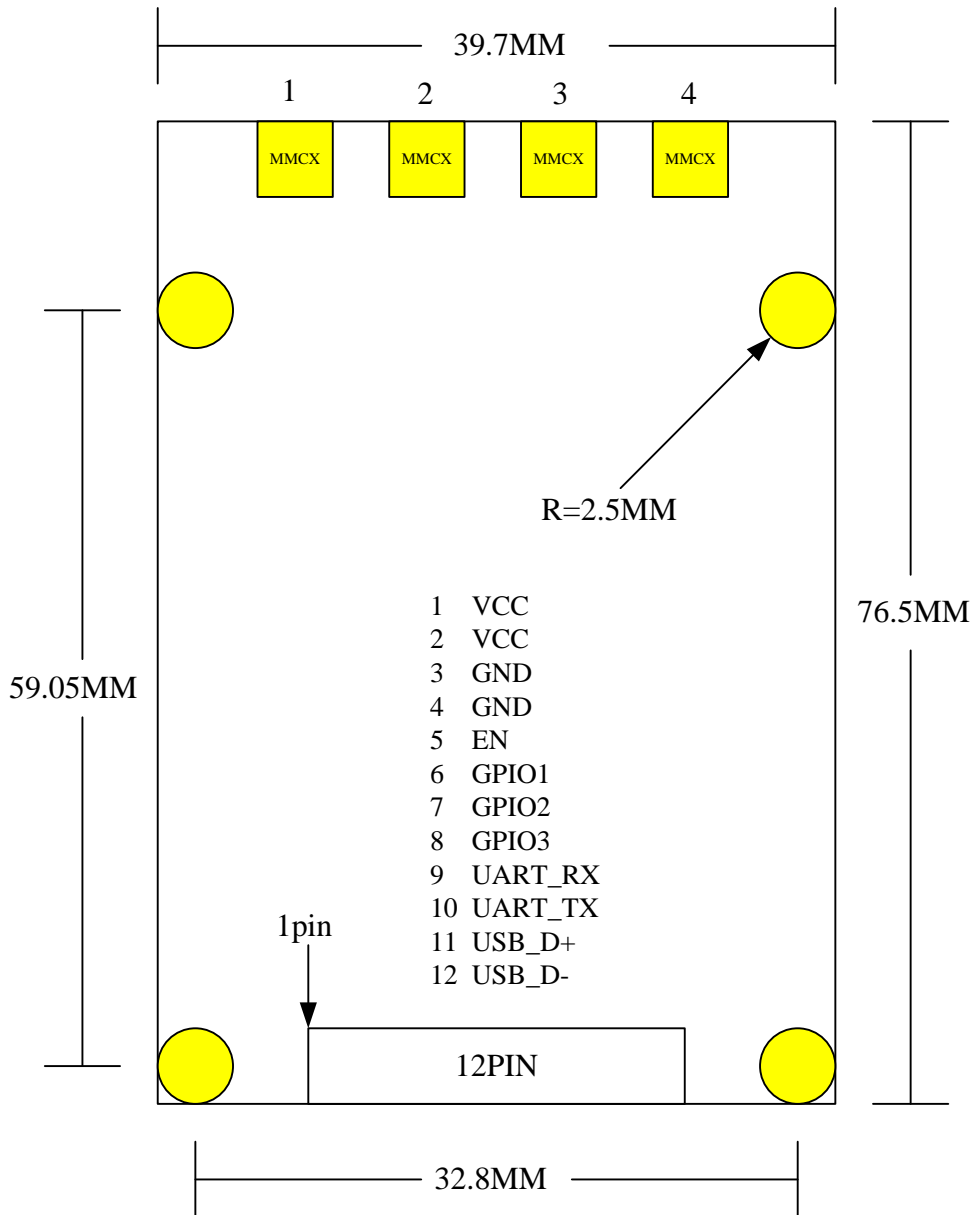
Data	Mini value	Typical value	Max value	Unit	Remark
Voltage of power	4.5	5	5.5	V	Direct current
Input high level	2	3.3	5.5	V	GPIO
	2	-	5	V	EN
Input low level	-0.3	0	0.8	V	GPIO
	-	-	0.18	V	EN
Output high level	2.9	-	-	V	GPIO
Output low level	-	0	0.1	V	GPIO
Enable current	2	5	25	uA	$V_{EN} \geq 2V$

Requirement on antenna

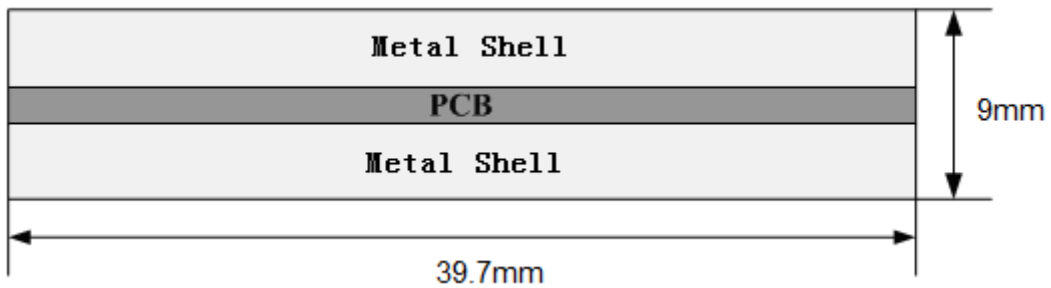
No	Item	Technical data	Unit	Remark
1	Standing wave ratio	≤ 1.5		

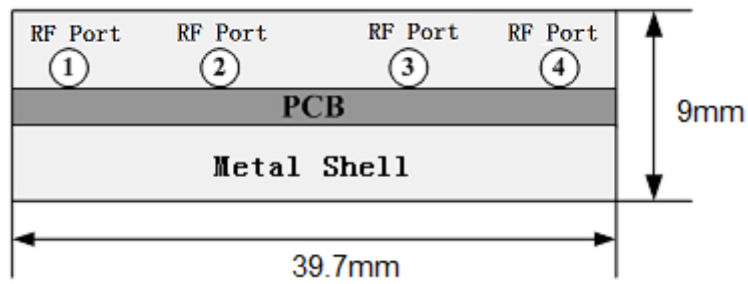
Appearance and structure

- Size: 76.5×39.7×9mm
- Weight: 50g

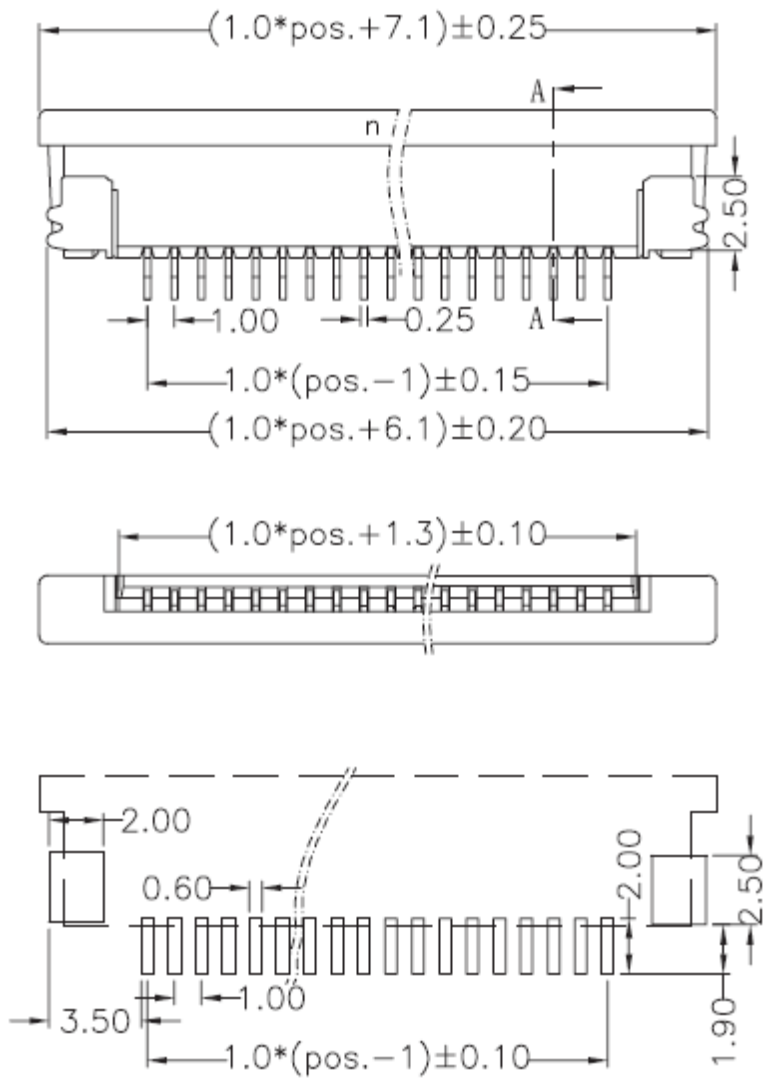


Drawing 1 Front view of the reader





Drawing 2 Side view of the reader



P.C.B Layout

Drawing3 Pin connector

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	GPIO	Bidirection	Generic port
7	GPIO	Bidirection	Generic port
8	GPIO	Bidirection	Generic port
9	UART_RX	Input	Asynchronous serial interface receiving
10	UART_TX	Output	Asynchronous serial interface sending
11	DBG_RX	-	Test port
12	DBG_TX	-	Test port

Environment requirement

No	Item	Technical data	Unit	Remark
1	Working temperature	-25~+75	°C	
2	Storage temperature	-40~+85	°C	
3	Relative humidity	10%~90%	RH	

Certification

FCC ID: RVZHYM750

CE: ETSI EN 302 208

ETSI EN 301 489

ETSI EN50364