

Features

- Two way monitor HOST:
 - > Over 40 billion unique HOST ID
 - > Compatible with FAVEPC RC Air interface protocol
 - > RFID pairing mode(optional)

- One way control HOST:
 - >Compatible with FAVEPC RC Air interface protocol
 - >Unique ID for RC
 - >RFID pairing mode(optional)



GENERAL DESCRIPTION

ECF2100 is designed as RFID smart gateway for home automation control system, usually controlled by Smart phone, Tablet PC and notebook using WIFI technique. Our advance technology delivers small, reliable, easy to design and cost-effective Home automation solution. This smart hub is not only support uni-direction system but also support bi-direction system.

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Conditions
Max storage temperature	$T_{STOREmax}$	+120°C
Min storage temperature	$T_{STOREmin}$	-60°C
Power supply voltage	V_{IN}	-0.1V to +5.5V
Electrostatic discharge	V_{ESD}	1KV

Recommend Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power Supply voltage	V_{IN}		5		V
Operating Temperature	T_a	0	-	+40	°C
Storage Temperature	T_s	-40		+85	°C

ELECTRICAL CHARACTERISTICS

→ AC Electrical Characteristics for Receiver (Ta =25°C, VIN =5V, VSS = 0V)

Parameter	Symbol	Min.	Typ.	Max.	Unit
RF Input frequency	F_C		433.92		MHz
Sensitivity	Pref		-105		dBm
Receiver Set up Time	T_{RF_OUT}		0.02		ms
Receiver Bandwidth	F_{BW}		0.05		MHz
Receiver data rate	DRate		5K		bps
Modulation	ASK				

→ AC Electrical Characteristics for Transmitter (Ta =25°C, VIN =5V, VSS = 0V)

Parameter	Symbol	Min.	Typ.	Max.	Unit
RF Output Frequency	F_C	-	433.92	-	Mhz
RF Output Power	Pout	-8	-	6	dbm
RF Transmission setup time	T_{RF_OUT}	-	-	0.5	ms
RF Frequency error	Ferror	-	-	1000	ppm
Interrogator Transmit Spurious Emissions, In-Band	In accordance with local regulations				-
Interrogator Transmit Spurious Emissions, Out of-Band	In accordance with local regulations				-
RF Bandwidth	In accordance with local regulations				-
Transmit data rate for one way	O_DRate	-	1: 2K 0: 1K	-	bps
Transmit data rate for two way	T_DRate	-	1: 4K 0: 2K	-	bps
Modulation	ASK				
Modulation Type	PULSE MODULATION				

→DC Electrical Characteristics (VIN =5V, VSS= 0V)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Average operating current	I _{oc}	-	400	-	mA
Standby current	I _{SB}	-	160		mA
Peak current	I _{peak}		-	800	mA

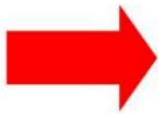
→WIFI Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
RF Output Frequency	F _c	2402		2483	MHz
RF port output Power	P _{out}	13	-		dbm
Receiver Sensitivity				-70	dbm
RF frequency Calibration				10	KHz
Number of channel	CH_America CH_Europe		11 13		
Modulation Type	M _{type}	802.11b:DSSS 802.11g:OFDM			
ANT Type		1 PCB ANT			
ANT Gain		Peak : 2.13 dbi			
Security		WEP 64/128 、 WPA 、 WPA2 、 WAPI			

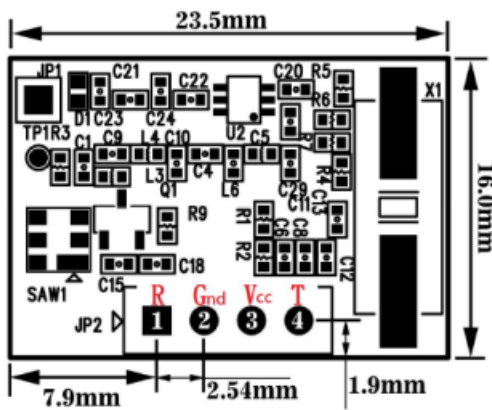
→System Characteristics

Parameter	Description
Interface	IEEE 802.11b/g/n
OS system	Android/iOS
WIFI link range	10 meter base on free space
Control range	20 meter base on free space
RF regulations	FCC, NCC, CE
Input Power	5V micro USB

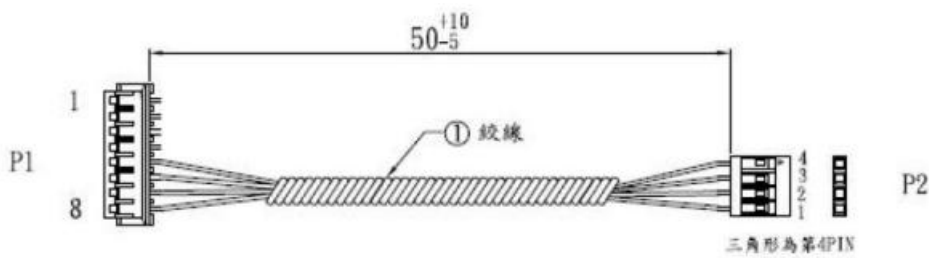
OUTLINE DESCRIPTION



PIN	Description	I/O
1		
2		
3		
4		
5	GND	
6	TXD	OUT
7	RXD	IN
8	DC +3.3v out	OUT



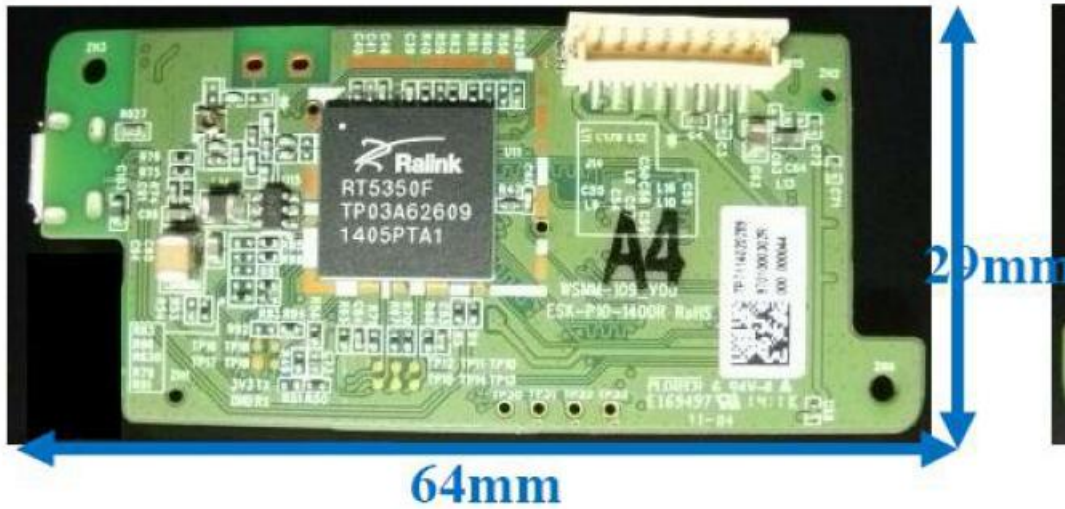
PIN	Description	I/O
1	R	IN
2	GND	
3	VCC 3.3V	IN
4	T	OUT



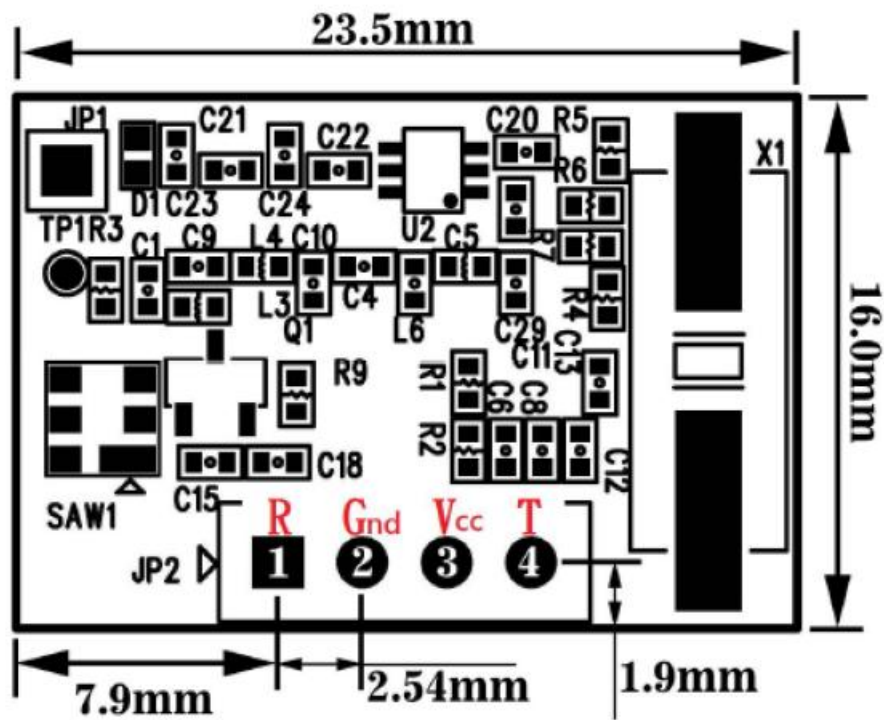
接點圖

P1		P2
5	黃	2
6	綠	1
7	藍	4
8	紫	3

Mechanical Characteristics



WiFi Board



RFID TRX module