

**Type: ASK/OOK/FSK Super-Heterodyne Receiver Module****Model: CY120****1. Description:**

The CY120 is an ASK/OOK/FSK compatible super heterodyne wireless receiving module with high performance for ISM frequency band. With the adoption of European brand RF wireless data transferring/receiver chipsets, the module has advantages at high receiving sensitivity, small size and low cost. It solves the problem on space for the small-sized product. From wireless signal input to data output can be done without any electrical circuit. User only use extra simple data decode circuit can achieve wireless products development.

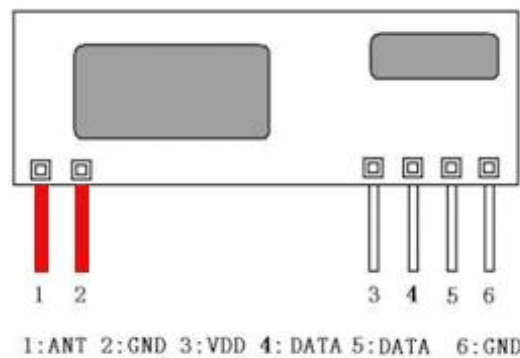
**2. Features:**

- Frequency: 300M – 960M (ASK/FSK);
- High sensitivity -109dBm;
- Supply voltage: 1.8V - 3.6V;
- Data Rate: 2.4Kbps;
- Low power consumption:
ASK @ 3.3V: 868.325MHz-5.2mA; 433.92MHz-3.8mA; 315M-3.5mA ;
FSK @ 3.3V: 868.325MHz-5.7mA; 433.92MHz-4.3mA; 315M-4.0mA ;
- Operating temperature: -20°C ~ 70°C , work normally even in the severe temperature environment;
- Excellent inhibiting ability for local oscillator radiation: multiple receivers receive signals from one transmitter simultaneously without any mutual interference and influence on range;
- 30*7.7*5mm;

3. Application

- Remote door openers
- Remote keyless entry
- Wireless security systems
- Remote control
- Wireless door ring
- Wireless data transmission

4. Pin Description



CY120 Shape & Pin

Please note: CY120 is come with standard 4 PINs (without the red colored pins). Please notify us if you would like 6 PINs.

Pin Name	Pin Definition
ANT	Antenna In
GND	Connect to negative power supply
VDD	Connect to positive power supply
DATA	Data Output
DATA	Data Output
GND	Connect to negative power supply

Note 1: ANT pin is a 50 ohm antenna input. The length is about:

23cm for 315MHz

17cm for 433.92MHz

8.6cm for 868.325 MHz

8.2cm for 915 MHz



5. Electrical Characteristics:

Condition: Ta=25°C Vcc=3.3V Frequency=315MHz FSK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		315		MHz	
Modulation	FSK				
RF Sensitivity		-108		dBm	50Ohm antenna input directly/1K Kbps
Receiving Bandwidth		25		KHz	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	3.5	4.0	4.5	mA	
Image Rejection		35		dB	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	

Condition: Ta=25°C Vcc=3.3V Frequency=315MHz ASK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		315		MHz	
Modulation	ASK				
RF Sensitivity		-109		dBm	50Ohm antenna input directly/1K Kbps
Receiving Bandwidth		160		KHz	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	3.5	4.0	4.5	mA	
Image Rejection		35		dB	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	



Condition: Ta=25°C Vcc=5.0V Frequency=433.92MHz FSK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		433.92		MHz	
Modulation	FSK				
RF Sensitivity		-108		dBm	50Ohm antenna input directly/1K Kbps
Receiving Bandwidth		60		KHz	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	3.8	4.3	4.8	mA	
Image Rejection		35		dB	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	

Condition: Ta=25°C Vcc=5.0V Frequency=433.92MHz ASK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		433.92		MHz	
Modulation	ASK				
RF Sensitivity		-109		dBm	50Ohm antenna input directly/1K Kbps
Receiving Bandwidth		160		KHz	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	3.8	4.3	4.8	mA	
Image Rejection		35		dB	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	



Condition: Ta=25°C Vcc=5.0V Frequency=868.325MHz FSK

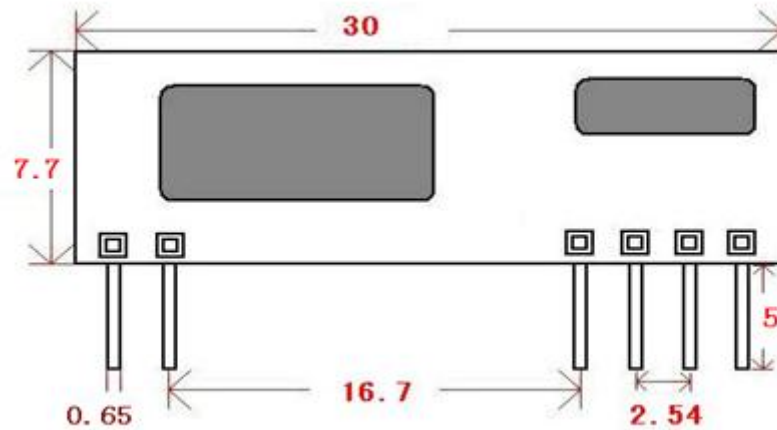
Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		868.325		MHz	
Modulation	FSK				
RF Sensitivity		-108		dBm	50Ohm antenna input directly/1K Kbps
Receiving Bandwidth		60		KHz	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	5.2	5.7	6.2	mA	
Image Rejection		35		dB	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	

Condition: Ta=25°C Vcc=5.0V Frequency=868.325MHz ASK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		868.325		MHz	
Modulation	ASK				
RF Sensitivity		-109		dBm	50Ohm antenna input directly/1K Kbps
Receiving Bandwidth		160		KHz	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	5.2	5.7	6.2	mA	
Image Rejection		35		dB	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	



6. Mechanical Size: (Unit: MM)



CY120 Dimension

For more information and assistance, please contact us as follows:

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