
5.8GHz Wireless High Frequency Radar Module



* This module can declare other functions externally, please contact us if necessary.



Data Sheet Revision History

Version	Date	Changes
V1.01	2022/11/29	1 st Edition

WENSHING Electronics release the [RADAR5.8GATO](#) (Doppler effect) long-distance power-saving human body motion detection module series in November 2022. The [RADAR5.8GATO](#) is in the 5.8GHz legal ISM band. This is to use the principle of radio wave reflection to design human body detection. The Doppler intermediate frequency effect is generated due to human body movement. The intermediate frequency is selected in the circuit design, and the intermediate frequency is detected through DSP to know whether there is any Triggered by object movement. It is saving the user's cost. The detection distance is up to 40 meters, the minimum operating voltage is 2.1V, and the power consumption current only 90uA.

➤ Features

- Detect people moving distance 35 meters
- Low operating current: 90uA
- Small size: 2X3.3cm
- Built-in light sensor CDS
- Comply with CE/FCC regulations
- I2c communication interface
- Work independently, no need to add MCU
- Low working voltage: 2.1V
- Multi-channel

➤ Applications

- Anti-theft device
- Billboard power saving detection
- Deportation of agricultural birds
- Person approaching detection
- Pet detection
- Remote control aircraft ground detection
- Smart Street Light
- Intelligent light control
- Smart toilet
- Long-term care
- Fall detection

➤ DC Electrical Characteristics

Parameter	Specification			Unit
	Min.	Typ.	Max.	
Frequency Range	5725	5800	5875	MHz
IF Frequency Range	1		40	Hz
Transmit power	-20		-5	dBm
Supply Voltage, VDD	2.1		5.5	V
Current			110	uA

➤ Model

RADAR5.8GATO-X-XX LIST

Model	LDO/LED Function
RADAR5.8GATO-1-XX	LDO 3.3V, with LED light (standard)
RADAR5.8GATO-2-XX	LDO 3.3V, no LED signal
RADAR5.8GATO-3-XX	No LDO, no lights
RADAR5.8GATO-5-XX	With light sensor LDO 3.3V, with LED light (standard)
RADAR5.8GATO-6-XX	With light sensor LDO 3.3V, without LED light signal
RADAR5.8GATO-7-XX	With light sensor LDO, no light signal

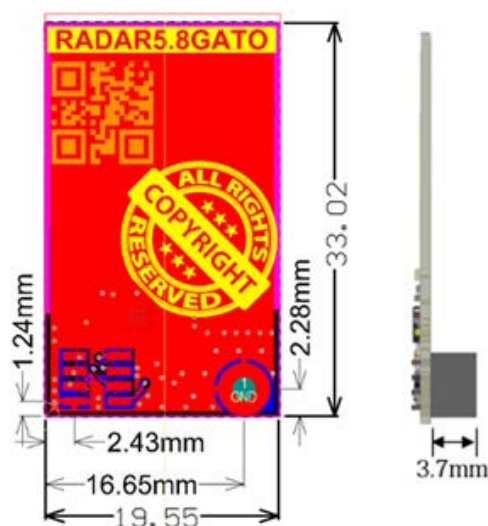
Hardware trigger delay options

Model	Tigger off-delay time
RADAR5.8GATO-X-01	The trigger is HI, and it is LOW after 1 second (standard)
RADAR5.8GATO-X-15	The trigger is HI, LOW after 15 seconds
RADAR5.8GATO-X-30	The trigger is HI, LOW after 30 seconds
RADAR5.8GATO-X-60	The trigger is HI, LOW after 60 seconds

PS. If the post-trigger delay time process is triggered again, its time will continue to be extended accordingly.

➤ Dimensions

(unit : mm)



➤ Pin Assignment



Pin	Name	Function	Description
1	VDD	POWER	Power Supply 2.1~5.5V
2	IF	O	IF Export
3	ENABLE	I	Control LDO HI actions
4	SDA	I/O	I2c communication interface
5	INT	O	There is a trigger output HI when moving
6	SCL		I2c communication interface
7	GND	GND	Power GND
8	VCC	O	Internal LDO output 3.3V