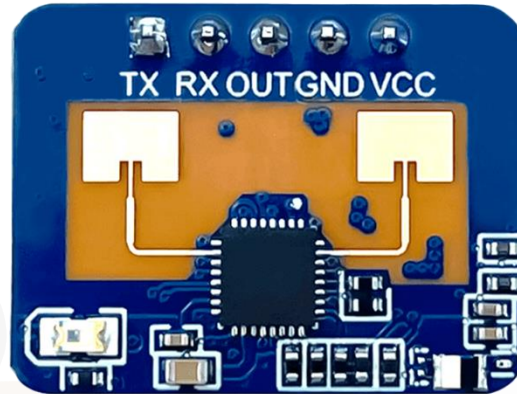




HLK-LD2410C-24G

Human Presence Sensing Radar Module



24Ghz Human Presence Body Induction Distance Detection Radar Sensor Module support GPIO and UART ports

Description:

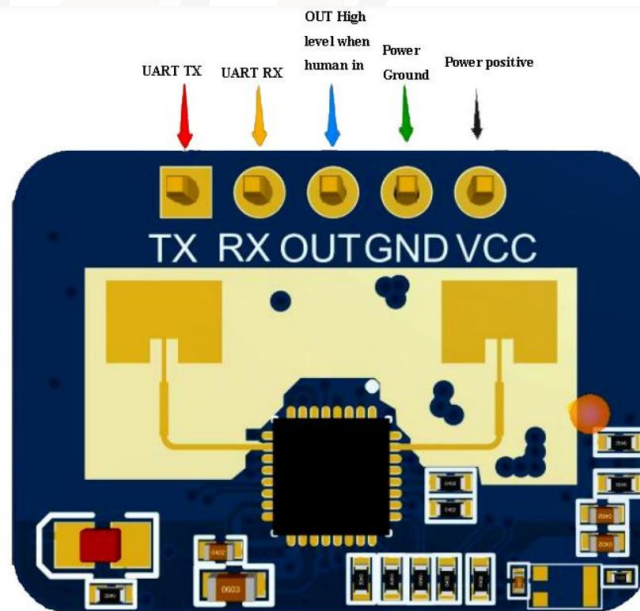
LD2410C is a high-sensitivity 24GHz human presence status sensing module developed by Hi-link. Its working principle is to use FMCW frequency-modulated continuous waves to detect human targets in the set space. Combined with radar signal processing and precise human body sensing algorithms, it realizes high-sensitivity human presence status sensing, and can identify human bodies in motion and stationary states. And auxiliary information such as the distance of the target can be calculated.

This product is mainly used in indoor scenes to sense whether there is a moving or micro-moving human body in the area and output the detection results in real time. The farthest sensing distance can reach 5 meters, and the distance resolution is 0.75m. Provides a visual configuration tool, which can easily configure the sensing distance range, sensing sensitivity in different intervals and unmanned delay time, etc., to adapt to different specific application needs. Support GPIO and UART output, plug and play, and can be flexibly applied to different smart scenarios and terminal products.

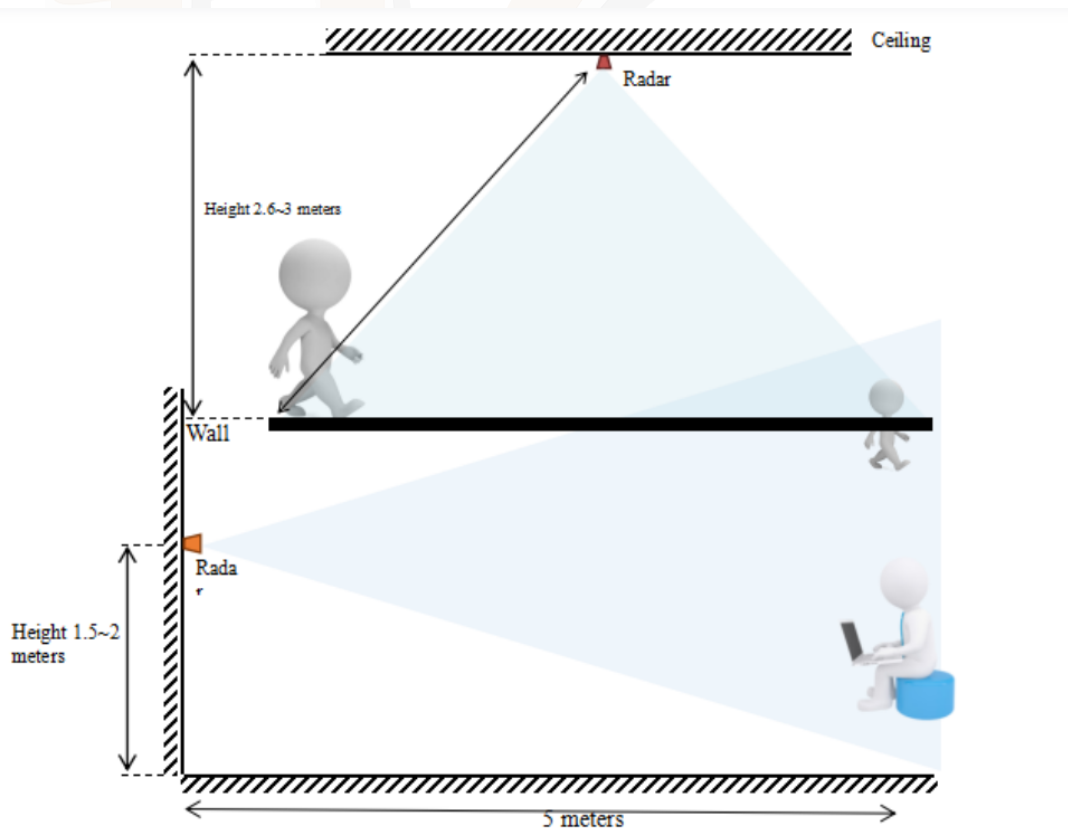
Features:

- Plug and play, easy assembly
- The longest sensing distance is up to 5 meters
- Large detection angle, coverage up to ± 60 degrees
- Accurate identification within the interval, support the division of the sensing range, and shield the interference outside the interval
- Multi-level intelligent parameter adjustment to meet the needs of scene changes
- Visual debugging and configuration tools
- Small and simplified, the minimum size is only 16mmx22mm
- Supports various installation methods such as ceiling hanging and wall hanging
- 24GHz ISM band, compliant with FCC and CE spectrum regulations
- 5~12V wide voltage power supply
- The ultimate cost-effective choice

Pin Configuration:



Pin	Symbol	Items	Function
1	UART_Tx	Serial Tx	Serial Tx pin
2	UART_Rx	Serial Rx	Serial Rx pin
3	OUT	Target status output	Human presence detected: output high level No human presence: output
4	GND	Power ground	Power ground
5	VCC	Power Input	Power input 5~12V (advise 5V)



Dimensions:

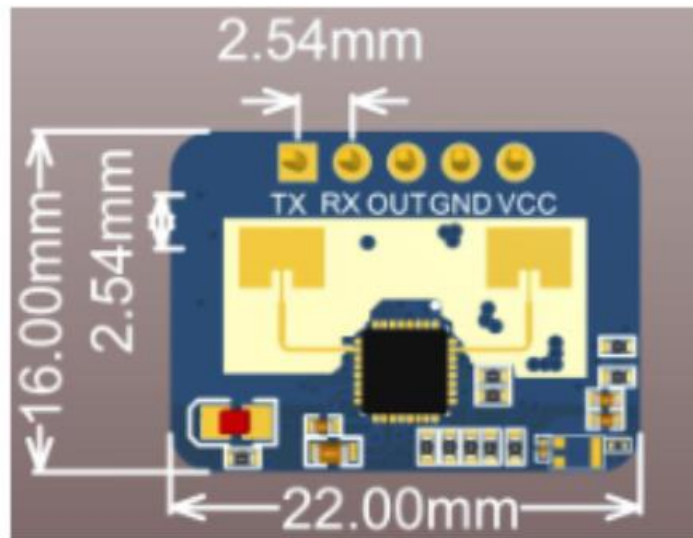


Figure 5 Module Dimensions

Module size: 16mmx22mm, 5 pin holes are reserved in the hardware (the factory default does not match the pins)

The pin hole diameter is 0.9mm, and the pin spacing is 2.54mm.

Applications:

- **Human body sensor light control:**

It senses whether there is someone in the space, and automatically controls lights, such as lighting equipment in public places, various sensor lights, bulb lights, etc.

- **Human body induction wake-up of advertising screen and other equipment:**

Automatically turn on when people come, and automatically sleep when no one comes to save power, information delivery is more accurate and efficient.

- **Life safety protection:**

UV lamp works protection, to prevent the UV lamp from being turned on when there are people around and causing personal injury.

Automatic detection and alarm of dangerous places to prevent people from entering specific high-risk spaces, such as high-risk places entered by personnel from coal mine blasting.

- **Smart home appliances:**

When there is no one in the room for a long time, the TV, air conditioner and other electrical appliances are automatically turned off, saving energy and safety.

- **Intelligent security:**

Detection and identification of people intruding, staying, etc. within the specified range.

Advantages:

LD2410C human body sensing module adopts 24GHz millimeter wave radar sensor technology. Compared with other solutions, it has obvious advantages in human body sensing applications:

1. In addition to being sensitive to the moving human body, it can also sensitively sense the static, fretting, and sitting and lying movements of the human body that cannot be recognized by traditional solutions.
2. It has good environmental adaptability, and the sensing effect is not affected by the surrounding environment such as temperature, brightness, humidity, and light fluctuations.
3. With good shell penetration and can be hidden in the shell to work without opening holes on the surface of the product, which improves the aesthetics of the product.
4. Flexible configuration of the farthest sensing distance and the sensitivity on each distance door for flexible and fine-tuned personalization