

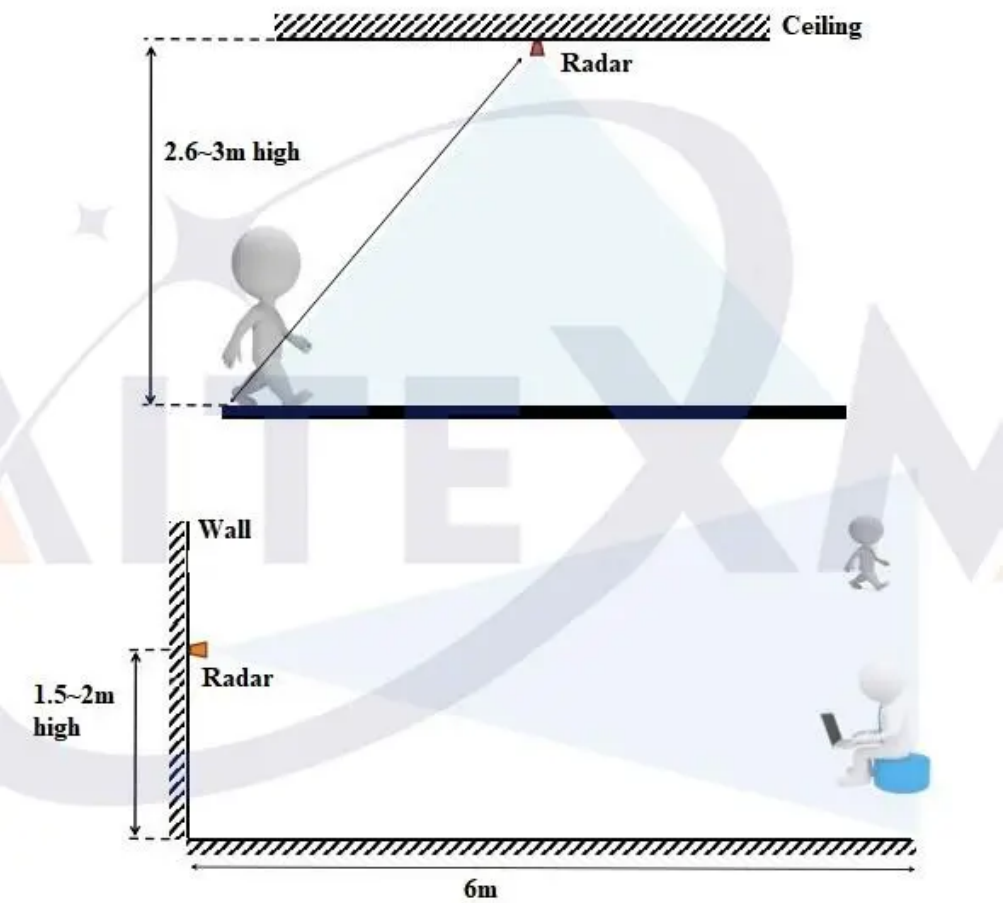
Please note that the print on the back of the version with Bluetooth is also 2410

1. Product introduction

HLK-LD2410 is a high-sensitivity 24GHz human presence status sensing module developed by Hilink Electronics. Its working principle is to use FMCW frequency-modulated continuous wave, to detect human targets in the set space, combined with radar signal processing, accurate human body induction algorithm, to achieve high sensitive human presence status sensing, which can identify the human body in motion and stationary state, and can calculate auxiliary information such as the distance to the target.

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. Farthest sensing distance up to 6 meters, distance resolution 0.75m. Provides a visual configuration tool, which can easily configure the sensing distance range and sensing in different intervals sensitivity 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.



2. Product Features and Benefits

2.1 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 7mmx35mm
- 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

2.2 Benefits

LD2410 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 moving human bodies, it can also sensitively sense static, micro-moving, sitting and lying human bodies that cannot be identified 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. It has 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. It can flexibly configure the farthest sensing distance and the sensitivity on each distance door to achieve flexible and fine personalized configuration.

3. Application scenarios

The LD2410 human body sensing module can detect and identify the human body in motion, fretting, standing, sitting and lying down. It supports multi-level parameter adjustment and can be widely used in various scenarios of AIoT. The common types are as follows

- 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 work 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

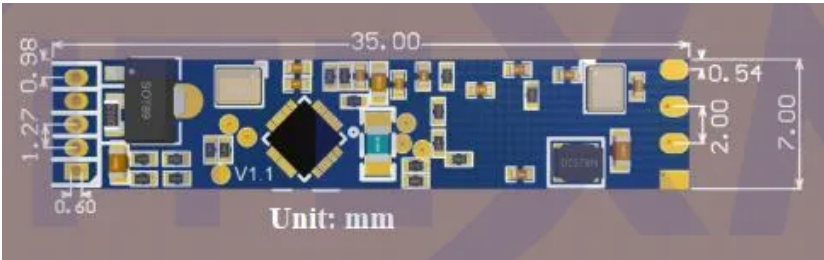
- Intelligent security

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



4. Hardware Description

4.1 Features



Module size: 7mmx35mm, 5 pin holes are reserved in the hardware (the factory default does not match the pins)
The pin hole diameter is 0.6mm, and the pin spacing is 1.27mm.

4.2 Pin definition



1. Connect the module serial port correctly with the USB to serial port tool;
 2. Select the corresponding serial port number in the upper computer tool, set the baud rate of 25600, select the engineering mode, and click to connect the device;
 3. After the connection is successful, click the Start button, and the graphic interface on the right will display the test results and data
 4. After connecting, if you do not click the start button, or click stop after starting, you can read or set the mode parameter information
- Note: You cannot read and configure parameters after clicking Start. You can only configure parameters after stopping. 360 ° sensing, intelligent navigation planning and accurate obstacle crossing

Specifications

is_customized	Yes	Model Number	HLK-LD2410 HLK-LD2410B
Operating Temperature	-40-+85℃	Dissipation Power	80mA
Supply Voltage	DC 5V	Condition	New
Type	Logic ICs	Brand Name	AITEXM ROBOT
Origin	Mainland China	Smart Electronics	Switch And Sensor For Arduino STM
HLK-LD2410	LD2410		