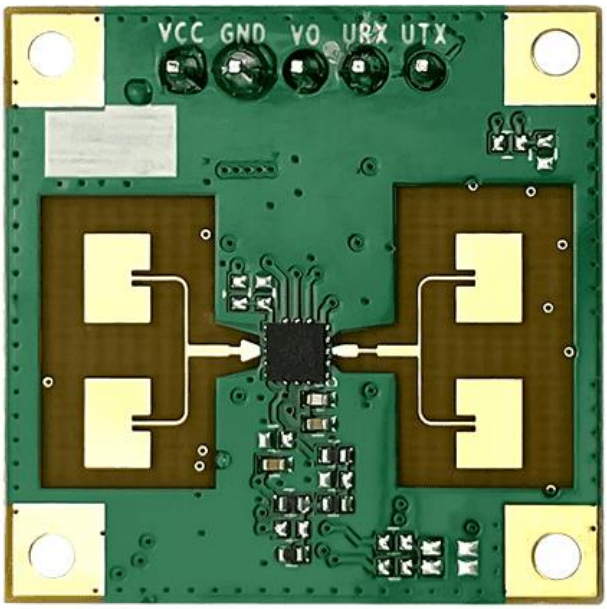
HLK-LD1115H

Human Presence Sensor Radar Module

24GHz mm Wave/ Human Presense/ Object Movement



Introduction

HLK-LD1115H is a high sensitivity 24GHz millimeter wave human presence detection radar module. The main feature of this module is that on the basis of the function of the traditional human body induction radar, it also has the function of judging the existence of the human body by detecting and accumulating small movements such as human breathing. Therefore, the presence detection within a certain range has higher accuracy and is not easy to miss

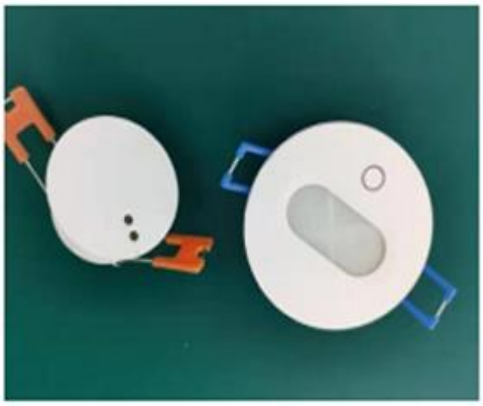
▲ Indoor human presence detection

▲ Slight move detection

Warmly notes:

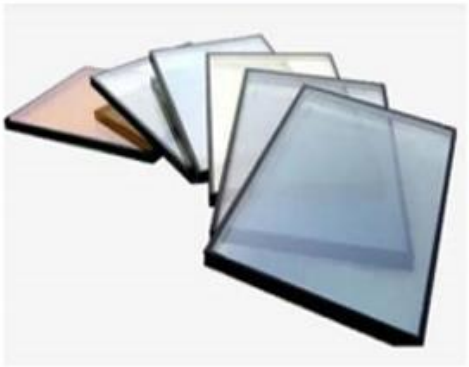
Modules can penetrate non-metallic enclosures without openings. Common materials include plastic, glass, wood, ceramic, and more. Especially for human presence detection applications, wall-mounted plastic 86-box panels and ceiling-mounted ceiling buckle enclosures are recommended.

plastic 86-box panels(recommended)



Embedded ceiling buckle shell(recommended)

Colorful acrylic boards



Glass shell

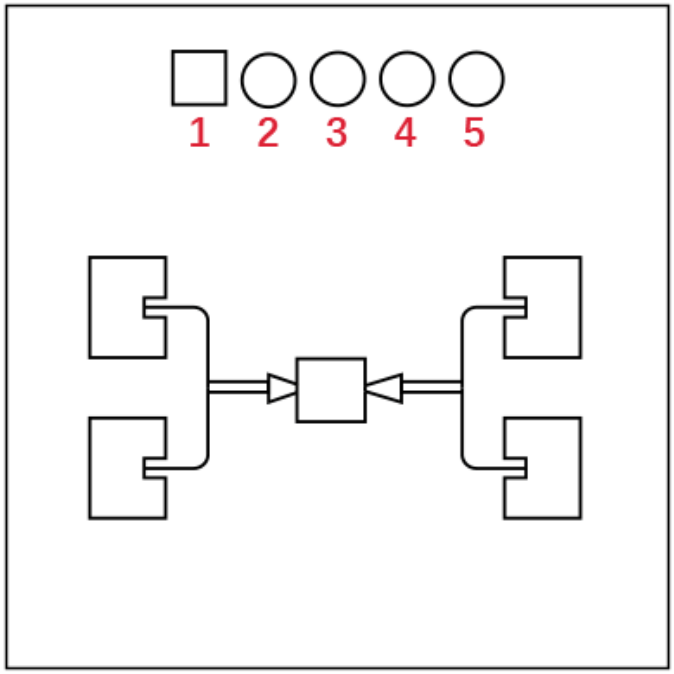
Specifications

Frequency	24G-24.5GHz
Modulation method	CW
Detection distance	> 4m static human presence detection, > 16m motion detection
Range	hanging height 3m, static body detection coverage radius 2m, mobile detection radius> 5m
Power supply	3.6-5V
Current	70mA
Output serial level	3.3V
Detection cycle	adaptive
Antenna half power angle	horizontal ±57°, vertical ±24° (see the figure below for the definition of antenna horizontal/vertical direction)
Data format	Serial port ASCII output/high and low level
Startup time	about 15 seconds

Configure

Product Schematic

Detect Static Exeistense/Moving Target is Serial Output



Interface: (2.54mm × 5PIN)

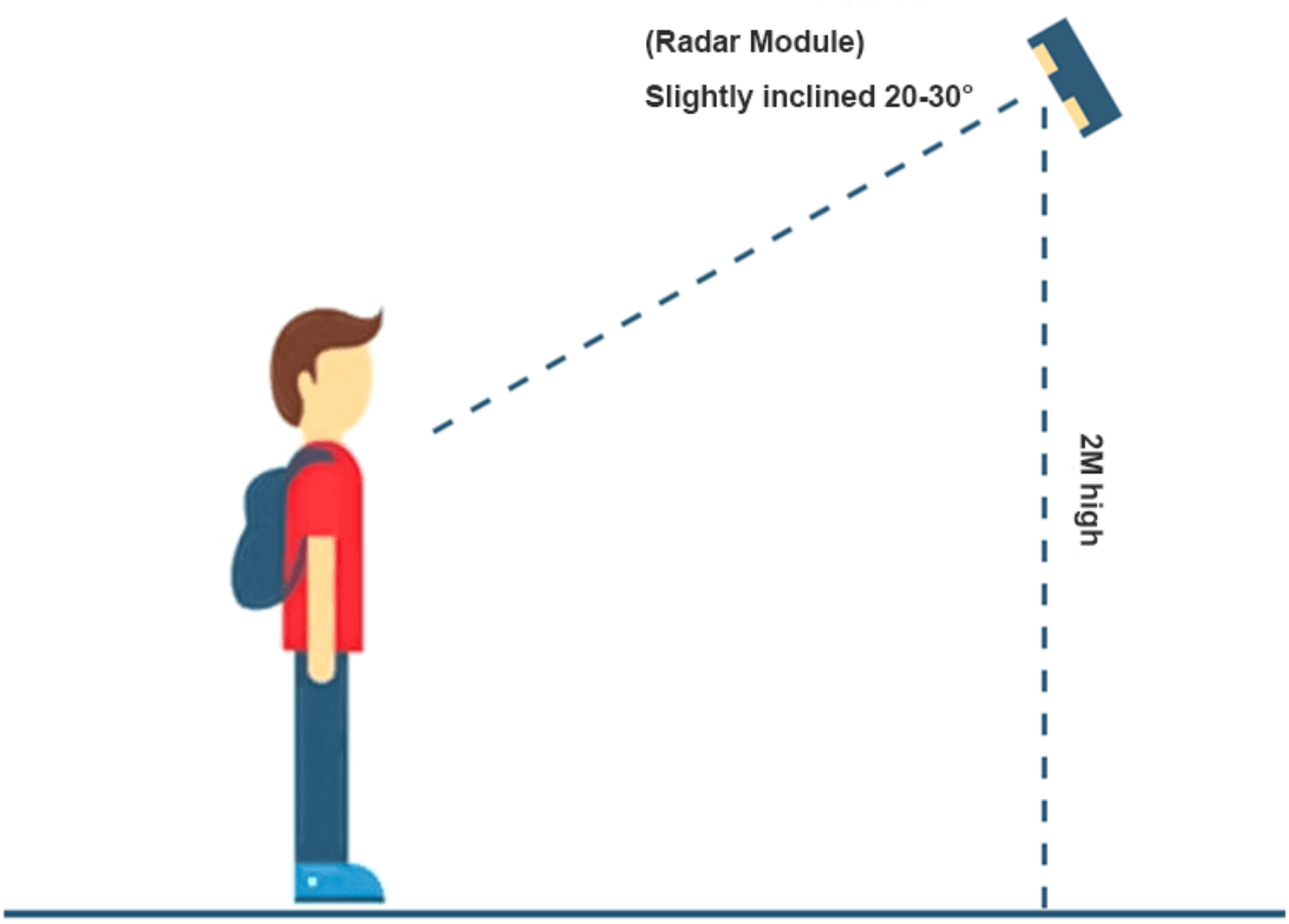
1: VCC 5V Power Supply　　2: GND, Ground Connect

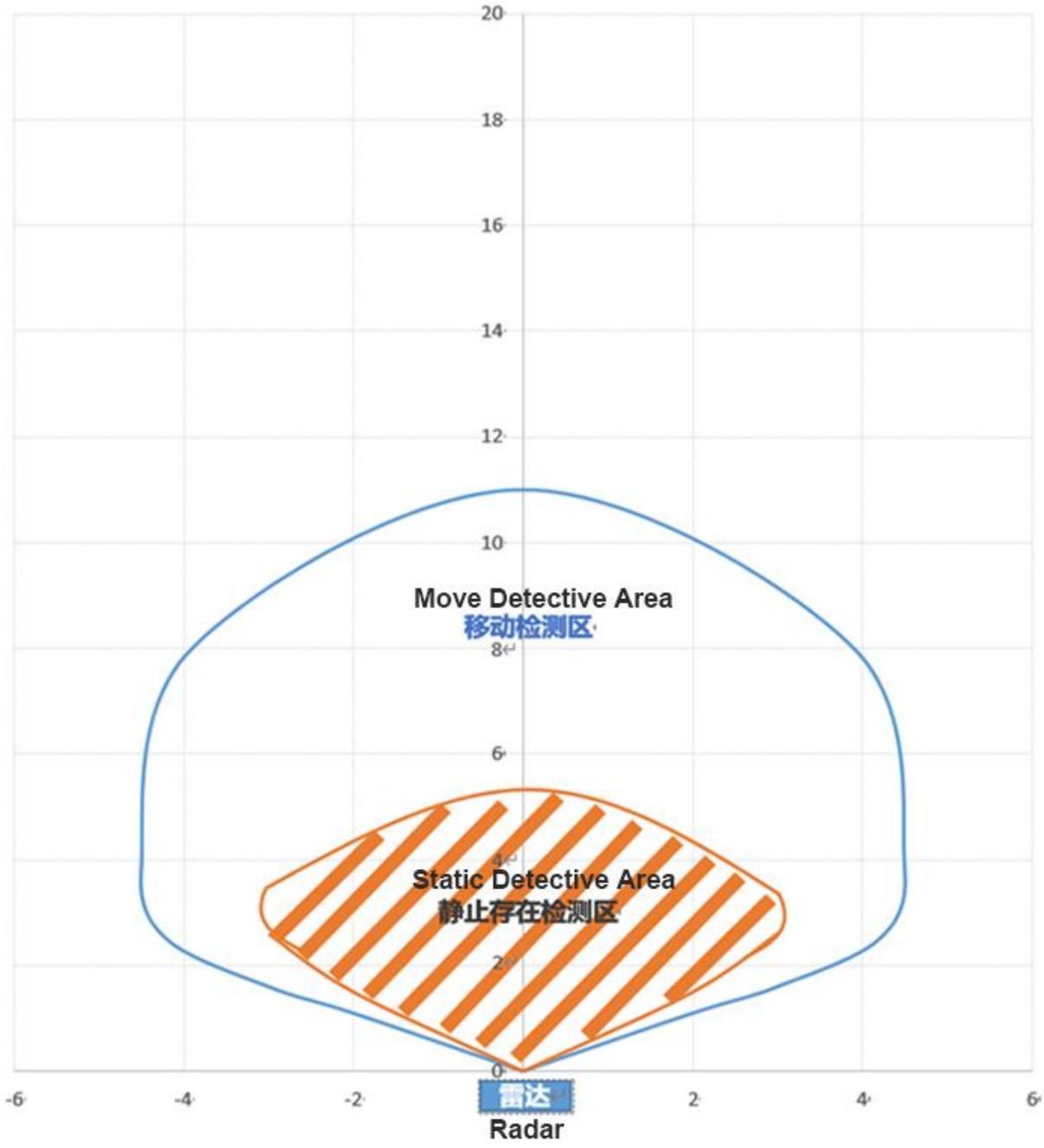
3: Vo, sensor output(Optional)　4:URX,TTL Serial receive

5: UTX,TTL Serial send

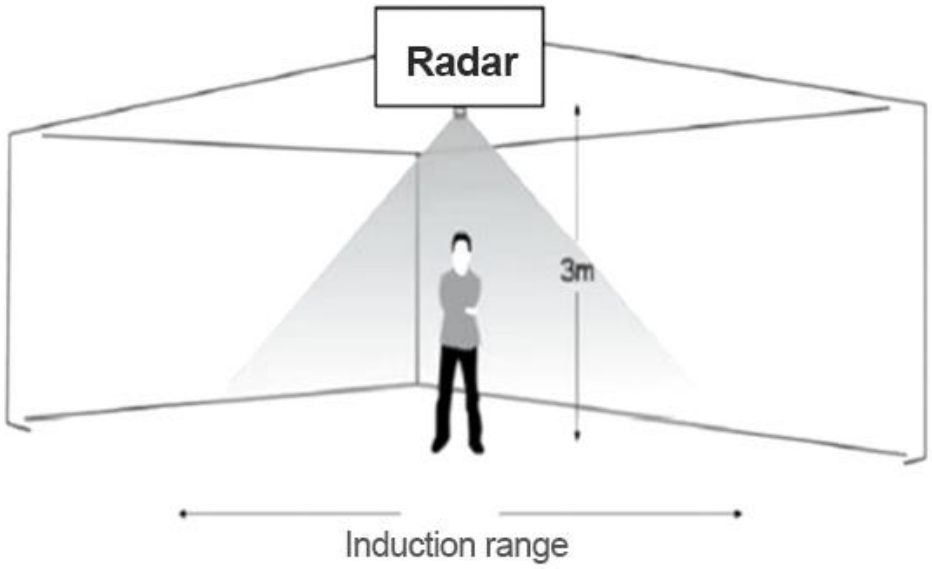
Sensing Range Diagram

Test application Scenario 1: Wall-mounted linear test




20
18
16
14
12
10
8
6
4
2
0
-6
-4
-2
2
4
6
Move Detective Area
移动检测区
Static Detective Area
静止存在检测区
雷达
Radar

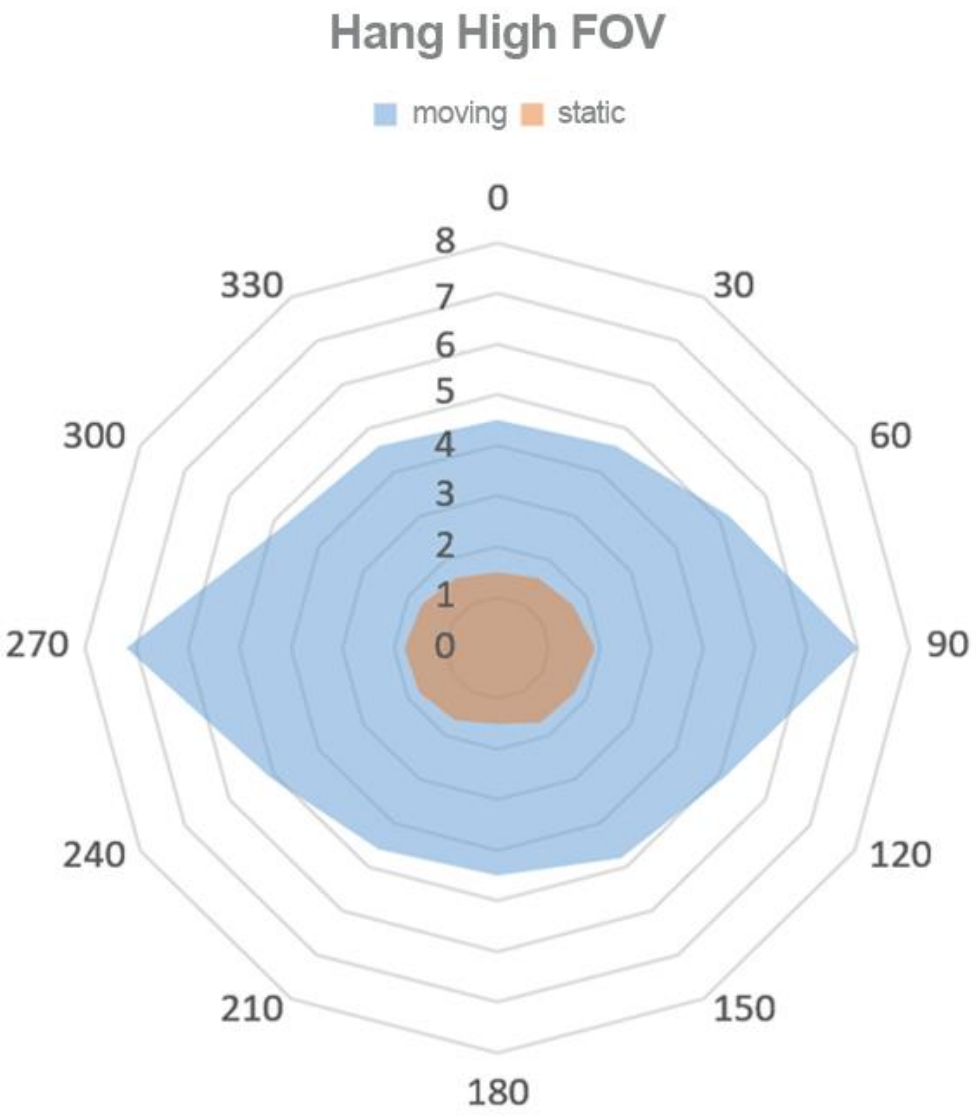
Test Application Scenario 2: Hanging Height Vertical Test



Reference Sensitivity Configuration 1

th1=120 (corresponding to motion detection sensitivity)

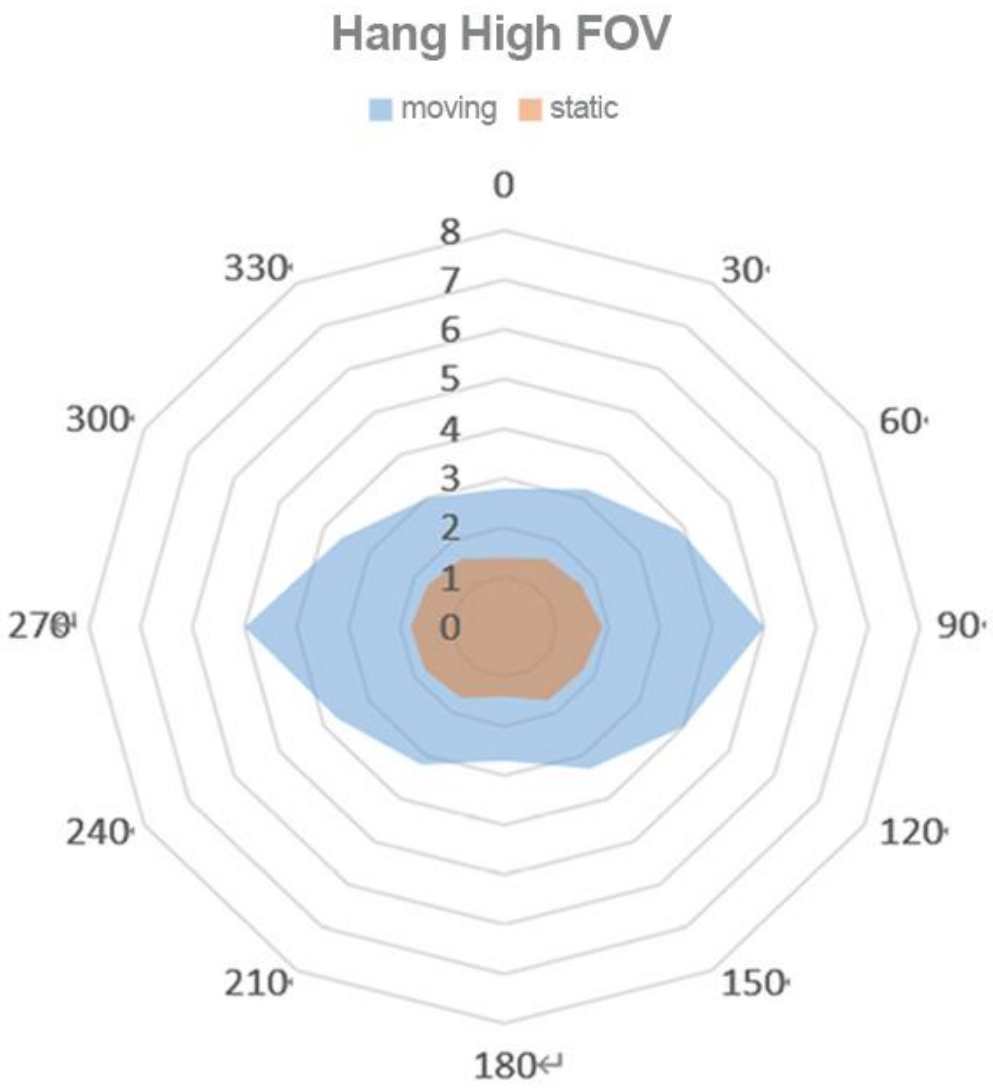
th2=250 (corresponding to presence detection sensitivity)



Reference Sensitivity Configuration 2

th1=200(corresponding to motion detection sensitivity)

th2=250 (corresponding to presence detection sensitivity)



Reference Sensitivity Configuration 3

th1=300(corresponding to motion detection sensitivity)

th2=250 (corresponding to presence detection sensitivity)