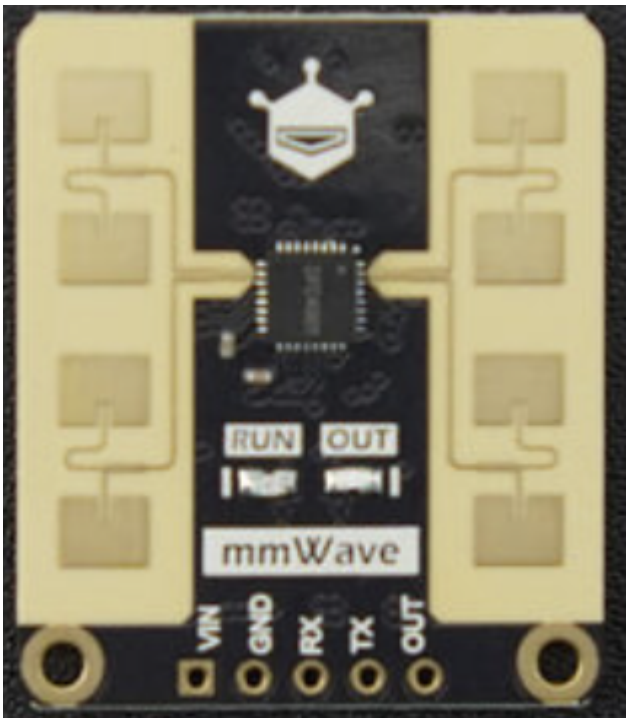
A Comparison of Common ESPHome-Compatible MMWave Prescence Sensors

Models

DFRobot C4001 (SEN0609 Variant)

Not personally evaluated, but seems to be a strong contender, especially for larger spaces

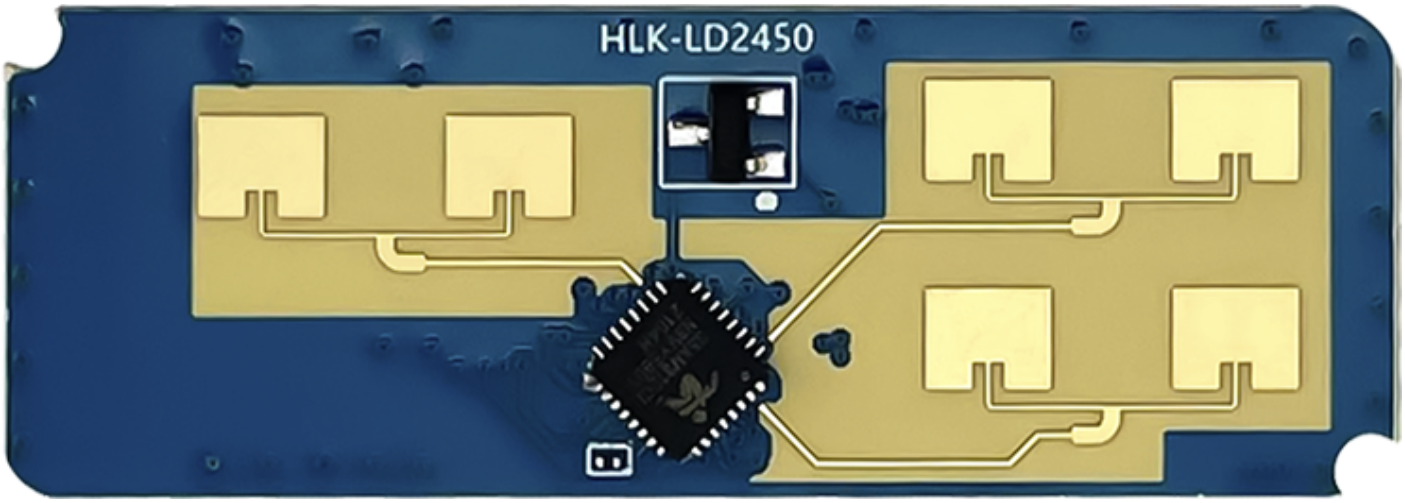


- Amazon: Unavailable ("Gravity" SKU SEN0610 listed, but lacks the 8 antenna panels, using 2 instead. Limited feature set and some poor reviews)
    - DFRobot: https://www.dfrobot.com/product-2793.html

    - Digikey: https://www.digikey.com/en/products/detail/dfrobot/SEN0609/23028638?s=N4IgTCBcDaIMoFEByAGAbCgnCAugXyA
    - Mouser: https://www.mouser.com/ProductDetail/DFRobot/SEN0609?qs=HFfMDpzxxd21aKNJkzimmg%3D%3D
- Cost: $14
- Features:
    - Prescence Detection up to 16m (52ft)
    - Motion Detection up to 25m (82ft)
    - Horizontal Detection Angle of 100°
    - Vertical Detection Angle of 40°

LD2450

AKA: HLK-LD2450

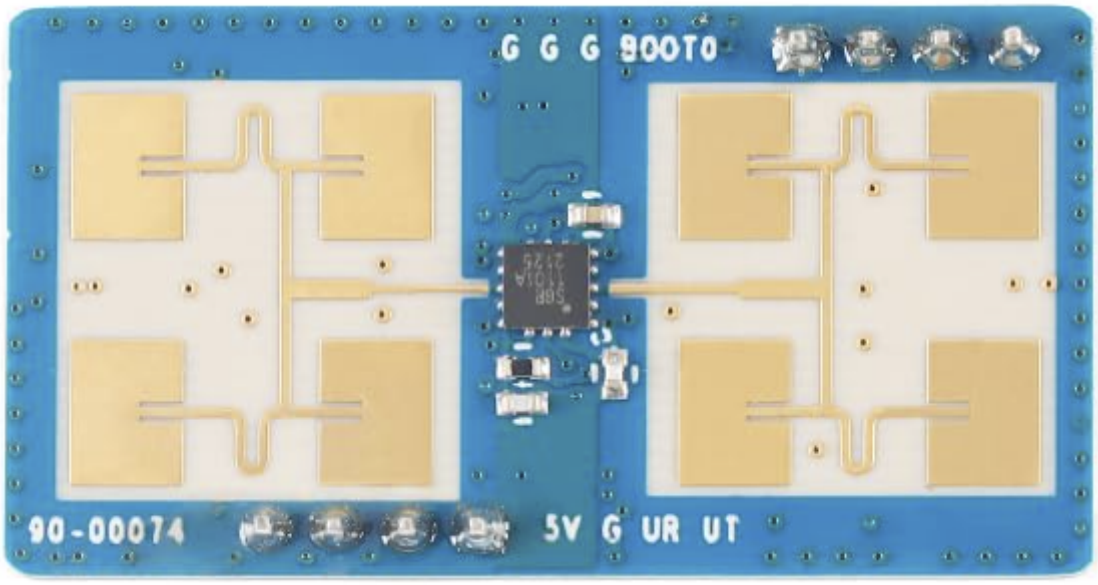


- Amazon: https://www.amazon.com/gp/product/B0CGNM1VLM/
- Cost ($): $9 ea. @ $45 for 5
- Features
    - Prescence Detection up to 6m (19ft)
    - Azimuth (L/R): ±60° (120?)
    - Pitch (Up/Dn): ±35° (70?)
    - Track up to 3 targets*
    - Define up to 3 zones*
    - 2 sensors might cover the same area and more effectively than an LD1125H, for less cost

* May be an ESPHome implementation-specific limitation that can be overcome by tweaking the lambdas

LD1125H

AKA: HLK-LD1125H-24G



- Amazon: https://www.amazon.com/EC-Buying-HLK-LD1125H-24G-Millimeter-Respiratory/dp/B0C743T4H9/
- Cost ($$$): ~$25 ea. (Might be able to be sourced cheaper via AliExpress, etc)
- Features
  - Moving Body Detection up to 8m (26ft)
  - Stationary Body Detection up to 4m (13ft)
  - Ceiling Mounted Body Detection 2m (6.5ft) radius @ 3m (10ft) height
- Limitations
  - Not cost-effective when an LD2450's range will do
  - No target tracking or zones
  - Movement filtering, such as for a fan, must be done by a radius range with an implementation-specific lambdaSEN0610

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