

KEYWAVE KW007

Motion sensor modules

Reliable motion sensing — beyond PIR, without radar complexity.

*Lowest Power
No need MCU
Work with AI
Simple, compact*

Core sensing value:

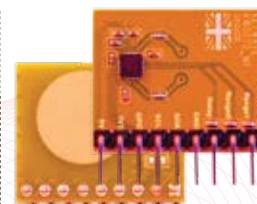
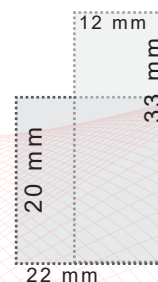
- A simple, accurate, and compact motion sensor
- Reduces false triggers compared to PIR

Deployment / business value

- Works through non-metal covers
- Enables energy-saving applications

System / integration value

- Plug-and-play integration (MCU optional), AI Ready



Keywave KW007
Sensor Module Size

Applications



Smart Lighting



wake on
Display / Kiosks



Interactive toys



wake on
Security / Bell



close range switches
All kind electronics

- Adjustable Range
- Adjustable Pulse Duration
- Works well without MCU
- Very low power consumption
- Very compact

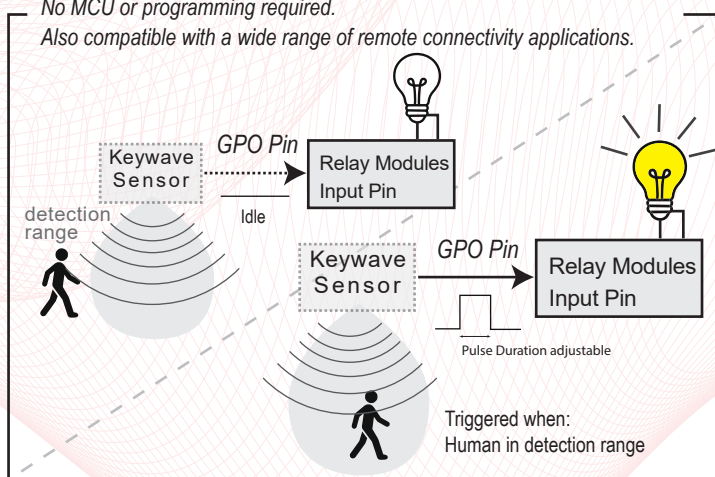
KW007 outputs motion trigger and direction data via GPIO or I²C, enabling a wide range of applications using MCU, AI, and IoT platforms. Ideal for smart buildings, public spaces, and industrial environments where PIR reliability is insufficient.

Connection example *Higher reliability than PIR, Differentiated sensing performance*

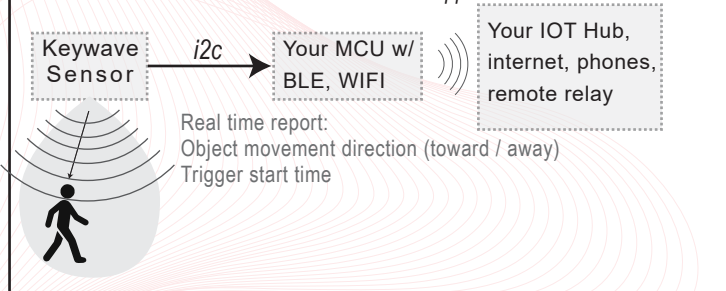
Trigger your application using a simple GPIO pin —

No MCU or programming required.

Also compatible with a wide range of remote connectivity applications.



Also Works with all kind of remote connection applications —



Data supports condition-based programming for data collection, triggers, wake-on events, time logging, directional triggers, event logging, energy savings, and smart control logic.

Reliable Motion sensing — beyond PIR, without radar complexity.

Streamlined Integration: No Radar Expert Needed

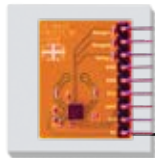
Competitor Approach

*Bulky (usually 15-20 cm³),
Requires continuous power,
high power consumption*



KW007 Our way

*Sense through non-metal
Sensor size only ~2cm x 2cm x 1.4 mm
Battery-operable, with multi-year operating life.*



Output: Trigger signal, Direction of object toward or away to the sensor

Plug & Play:
No Complex configuration required,
low power, compact, simple

Your application Pin
or MCU Pin

Keywave KW007 motion does delivery more than PIR

Category	PIR Sensor	Keywave KW007 (S, SE, L)
Detection principle	Infrared heat change	RF movement in range (motion presence)
False trigger rate	High (heat, sunlight, airflow)	Low (robust to temperature & airflow&vibration)
Detection reliability	Motion-dependent	Motion
Detection through covers	x No	Yes (non-metal)
Environment sensitivity	High	Low (temperature / light independent)
Integration complexity	Very simple	Simple (GPO) to advanced (I ² C)
Data output	Trigger only	Trigger + Signal strength, direction data
Typical use cases	Basic lighting, alarms	Smart lighting, HVAC, switches
Power consumption	Very low	Low (< 30 µA system)
Cost	Very low	Higher unit cost, enables BOM reduction and premium product differentiation

KW007 Specification

Methodology	Doppler motion detection
System Current	< 30 µA
Detect Motion Range	10 cm to 12 meters (dynamic adjustable)
Interference immunity	Interference immunity tested against Wi-Fi, BLE, vibration, and temperature variations
Detection angle	Approximately ±55° Degrees in the forward direction

NRE packages: Our silicon is production-ready.

Our NRE packages are not for chip development — they are for tailoring a production-ready sensor solution to your product and accelerating your time-to-market.

- Tier 1 — Configuration NRE
- Tier 2 — Integration & Module NRE
- Tier 3 — Strategic Partner NRE

Please contact our sales for the details.