

60 GHz AiP Gesture & Presence Radar Module Development Kit

57–64 GHz FMCW radar with antenna-in-package, 2T2R, 42 × 8 mm

Development board. Development kit edition: the board plus a configuration GUI, application firmware builds, a flashing guide, and light engineering changes for your setup. Embedded firmware and GUI source code are not included in any edition. For source code, custom firmware, or bare modules in volume, use the B2B form at kymopsis.com/b2b/ or email support@kymopsis.com.

Overview

A narrow 60 GHz radar module with the antennas built into the chip package (two transmit, two receive). The strip format fits behind a bezel, lamp cover, or appliance panel. The board ships pre-flashed with the application you choose: gesture recognition (six hand gestures), or presence sensing in a ceiling-mount or wall-mount version.

Applications

- Touch-free control of range hoods, hobs, microwaves, dishwashers
- Mirror lights, ceiling lamps, bathroom heaters, smart toilets
- Car-cabin screens, sunroofs, and shades
- TVs, projectors, kiosks, meeting panels
- Presence and occupancy sensing, ceiling or wall mount (development use)

Specifications

Frequency	57–64 GHz, FMCW
Antenna	Antenna-in-package, 2T2R, 4 dBi typical
Transmit power	12 dBm typical
Field of view	±60° horizontal, ±60° elevation
Gestures	Swipe left, right, up, down; push; pull
Gesture accuracy	≥ 95 % at 0–1.5 m
Interfaces	UART, GPIO output
Supply	3.3 V typical; 600 mA max; average power ≤ 2 W
Operating temperature	–20 °C to 85 °C
Storage temperature	–40 °C to 85 °C
Pre-flashed firmware	Gesture recognition; presence, ceiling mount; or presence, wall mount (chosen at order)

Values are typical figures stated by the module maker, not a Kymopsis lab report. Performance depends on mounting, enclosure, target, and scene.

Pin functions

1 3.3V	3.3 V supply
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2 TX2	GPIO / UART2 TX
3 RX0	UART0 RX
4 TX0	UART0 TX
5 RST	Reset, active low, internal pull-up
6 GND	Ground
7 3.3V	3.3 V supply
8 SWDIO	SWD debug / flashing data
9 SWCLK	SWD debug / flashing clock
10 GND	Ground

Mechanical

Size	42 × 8 × 6.73 mm including connector (±0.15 mm outline)
Antenna area	10 × 5.3 mm on the top side
Board thickness	1.6 mm
Debug / flash holes	4 × Ø0.7 mm plated through-holes

Integration notes

- Keep the antenna area clear of metal; use a thin plastic cover with low loss at 60 GHz.
- Gesture decisions can be extended with your own rules on the host side.
- Presence firmware: use the ceiling-mount build with the antenna facing down over the area, and the wall-mount build with the antenna facing into the room. Wall-mount presence range is up to about 6 m per the chip-platform supplier data; actual range depends on mounting height and the room.

Regulatory status. This board is sold as a development kit for engineers, developers, and integrators. It is not FCC certified, and this datasheet does not claim CE or any other certification. It is not an authorized transmitter for unrestricted installation or operation. A finished product that uses it needs its own equipment authorization; Kymopsis can scope that work through its B2B program but does not issue grants.