NOVELIC

RIOT100 24 GHZ RADAR

Human Presence Detection Sensor

A reliable and cost-competitive alternative to PIR sensors

LIGHTING CONTROL
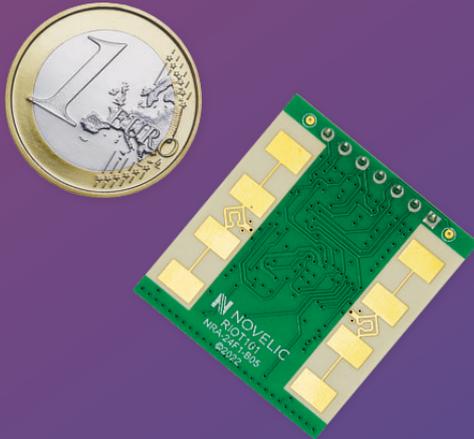
SECURITY SYSTEMS

ESCALATORS

AUTOMATIC DOORS AND ELEVATORS

HOSPITALITY

APPLICATION PARAMETERS

	min	typ	max
Field of view	120° Azimuth, 75° Vertical		
Detection distance		15 m	25 m
Detectable object speed	0.1 m/s		10 m/s
	0.3 km/h		36 km/h
Measurement Update Rate	128 ms		
Operating temperature	-40 °C		85 °C

POWER SUPPLY

Supply Voltage	3.3 V
Supply Current	75 mA

KEY FEATURES

- Senses human motion **up to 25m**
- Determines movement direction
- Simultaneously detects multiple targets
- Lists all detected targets
- Serial communication interfaces
- Digital I/O event trigger interface
- **No external data processing required**
- Extended temperature range, ideal for integration into luminaries

ADVANTAGES OF MMWAVE RADAR SENSORS

Ultra-sensitive to movement

Detects human micromovement, whether people aremoving or standing still.

Maximizes energy saving

Turns the lights/equipment off as soon as the room is empty. No need to set a turn-off timer and waste energy until the time passes.

Seamless integration

Works flawlessly behind materials like glass, plastics, wood, ceramics. Installs invisibly in your interior. Vandal-proof and hard to disable in security breach attempts.

Robustness

For both indoor and outdoor use. Operates in all weather and lighting conditions, as well as extreme temperatures.

Wide custom detection range

Customizable detection range up to 25 meters. Every movement out of range will be ignored.

Multiple Target Detection

Detects motion and presence, shows movement direction and speed, simultaneously detects and tracks multiple targets.

Cross-traffic cancellation

Provides information on target distance, direction, and speed that lets you recognize motion patterns to cancel out cross-traffic or switch appliances off/on.

Internal signal processing

No radar knowledge required, no need for an external unit, all data is processed internally - on the board.

Privacy-friendly

Full privacy protection, ideal for for hospitality or security applications, or to preserve privacy in areas where cameras are not an option.

Evaluation kits available!

Order your **RIOT100EK Evaluation Kit** and see if mmWave radar technology is right for your application.

You will receive the latest firmware, a GUI for configuration, and a USB dock for connecting the RIOT100 sensor to a PC.

RIOT100 Sensor   RIOT100 USB Dock

MicroUSB cable

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