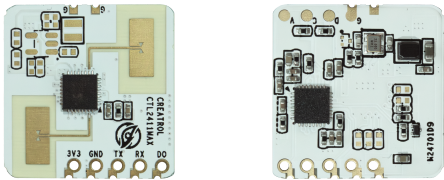


M260

The M260 (CTL-SEN-M/260) is a cost-effective 24GHz mmWave radar module featuring an industrial-grade SoC and an optimized 1T1R antenna array for reliable motion and presence detection. It offers superior environmental adaptability, functioning effectively in smoke, dust, and darkness without interference from light or temperature. With factory-calibrated algorithms and a plug-and-play UART interface, it enables rapid integration and significantly reduces development cycles.



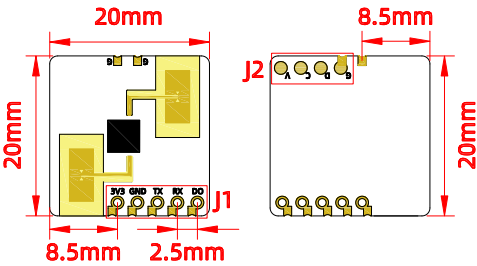
Features

- Operates on the 24GHz ISM band with FMCW modulation for high-precision sensing.
- Provides a ground projection radius of up to 5.0 m for motion detection and 4.0 m for stationary presence sensing (when ceiling-mounted at 2.7 m height).
- Delivers extensive spatial sensing with a ±60° coverage for both azimuth and pitch angles.
- Supports independent adjustment of detection range and sensitivity thresholds via visualization tools.
- Minimal footprint (20 mm x 20 mm) for easy integration into various housing designs.

Specifications

|                         |                                                                |
|-------------------------|----------------------------------------------------------------|
| Detection Technology    | 24GHz mmWave Radar (FMCW)                                      |
| Antenna Configuration   | 1 Transmit, 1 Receive (1T1R)                                   |
| Operating Frequency     | 24.00 to 24.25 GHz                                             |
| Transmit Power          | ≤ 10 dBm                                                       |
| Detection Angle         | 360°                                                           |
| Mounting Method         | Ceiling Mount                                                  |
| Installation Height     | 2.5 to 4.0 meters                                              |
| Detection Range         | Motion: ≤ 14.0 m (Diameter)<br>Stationary: ≤ 10.0 m (Diameter) |
| Communication Interface | UART (TTL)                                                     |
| Power Input             | DC 3.0V to 3.6V (Typ. 3.3V)                                    |
| Dimensions              | 20 mm × 20 mm × 3 mm                                           |
| Weight                  | ≤ 1.5 g                                                        |
| Operating Temperature   | -10°C to +50°C                                                 |

Dimensions

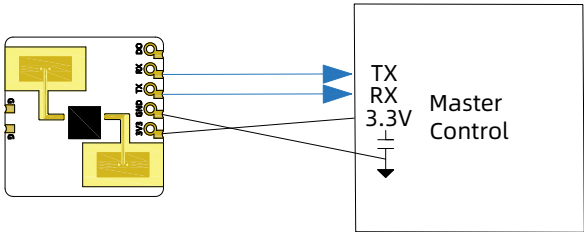


Interface

| J1: Power & Communication |                        |                          |
|---------------------------|------------------------|--------------------------|
| Pin                       | Function               | Description              |
| 3V3                       | Power Supply Input (+) | 3.0V to 3.6V (Typ. 3.3V) |
| GND                       | Power Ground           | -                        |
| TX                        | UART Transmit          | 0 to 3.3 V               |
| RX                        | UART Receive           | 0 to 3.3 V               |
| DO                        | I/O                    | 0 to 3.3 V               |

| J2: Programming & Debug |          |                           |
|-------------------------|----------|---------------------------|
| Pin                     | Function | Description               |
| G                       | Ground   | Ground                    |
| D                       | SWDIO    | SWD Data Line             |
| C                       | SWCLK    | SWD Clock Line            |
| V                       | Power    | Power Input for Debugging |

Connection Method



Detection Range

