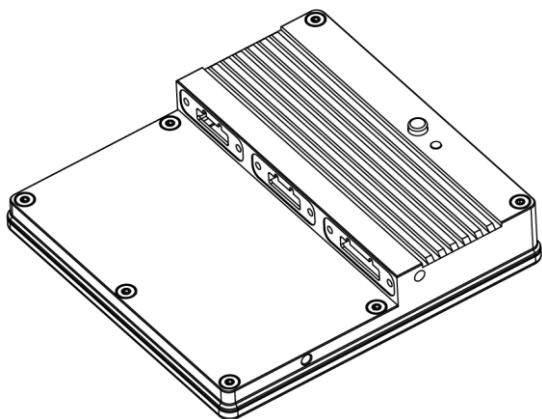


# High-Precision Microwave Radar

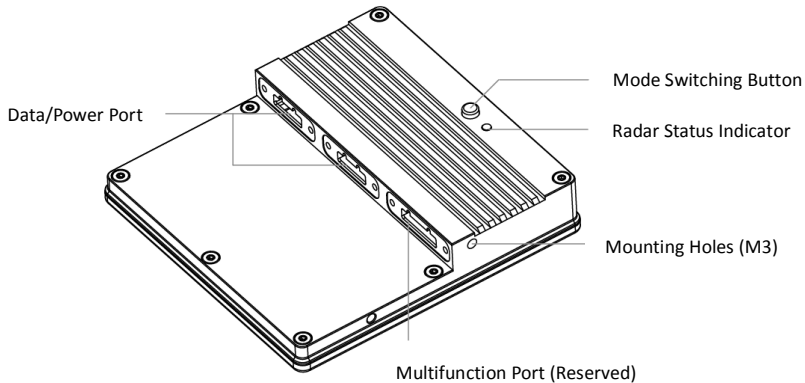
## User Guide

V1.0 2017.1



## Introduction

High-Precision Microwave Radar can be mounted onto any side of the carrier for distance and angle measurement.



## Warning

1. Ensure that the radar module is working within its detection range.
2. Observe the carrier's distance from the surface at all times.
3. Operate with extra caution when flying over inclined surfaces.
4. Obey local radio transmission laws and regulations.

## Installation

1. Mount the radar module to the carrier using M3 screws.
  2. Connect the radar data cable to a control unit which has data processing functions.
- Connect the radar power cable to the power supply (direct-current voltage 12 to 20 V).

## Mode Switch

The radar should work in a corresponding operating mode when it is mounted onto different sides of the carrier. The operating mode must be set correctly through the Mode Switching Button on the module.

Instructions: Ensure that the radar module is powered off. Press the Mode Switching Button and hold, and then power on the module (the button cannot be released at this moment). A white light after blinking several seconds from the Radar Status Indicator means that it is in mode switch process and you can release the button. Press it the button to switch the operating mode. The operating mode is displayed by the Radar Status Indicator:

| Indicator | Operating Mode |
|-----------|----------------|
| Yellow    | Downward mode  |
| Blue      | Forward mode   |
| Green     | Backward mode  |

After switching to the desired mode, press the Mode Switching Button and hold for at least 3 seconds until the indicator blinks in a corresponding color, which indicates operating mode has been switched.

## Radar Status Display

The radar status is displayed by the Radar Status Indicator as shown below:

| Indicator | Description   |
|-----------|---------------|
| Solid     | Warming up.   |
| Blinking  | Working.      |
| Off       | Disconnected. |

## Specifications

|                           |                                            |
|---------------------------|--------------------------------------------|
| Detection Range           | Distance: 1 to 40 m<br>Angle: -25° to 25°  |
| Detection Accuracy        | Distance: < 10 cm<br>Angle: < 0.5°         |
| Operating Temperature     | -10° to 45° C                              |
| Input Voltage             | 12 - 20 V                                  |
| Operating Frequency       | 24.050 GHz to 24.250 GHz                   |
| Signal Bandwidth          | 200 MHz                                    |
| Antennas                  | 1T2R (1 Transmit and 2 Receive)            |
| Ingress Protection Rating | IP45 (IEC standard 60529)                  |
| Measurement Principle     | Frequency Modulated Continuous Wave (FMCW) |
|                           |                                            |

## **FCC Compliance Notice**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

## KCC Warning Message

“해당무선설비는 운용 중 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다.”

“해당 무선설비는 운용 중 전파혼신 가능성이 있음”



인증받은자의 상호 : SZ DJI TECHNOLOGY CO., LTD

제품명 / 모델명 : High-Precision Microwave Radar / RD2412F

제조사 및 제조국가 : SZ DJI TECHNOLOGY CO., LTD

제조년월 : 2017.01

인증번호 : MSIP-CRM-dji-RD2412F

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**EU Compliance Statement:** SZ DJI TECHNOLOGY CO., LTD. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of the R&TTE Directive.

A copy of the EU Declaration of Conformity is available online at [www.dji.com/euro-compliance](http://www.dji.com/euro-compliance)

