



# DATASHEET

## RFD77306 Simblee IoT 3D ToF Sensor Shield RFD77804 Simblee Wireless IoT 3D ToF Sensor Kit

A Simblee Sensor Shield that plugs directly into the Simblee Ecosystem.

|  |   |
|--|---|
|  |   |
| <p>RFD77306 Simblee IoT 3D ToF Sensor Shield</p> | <p>Stacks easily onto Simblee Ecosystem</p> |

- Fully Integrated micro module**
- Time of Flight Sensor Technology**
- Accurate distance measurements up to 2 meters**
- Simple to use SimbleeToF Library**
- High accuracy and repeatability**
- I2C interface**
- Low power**

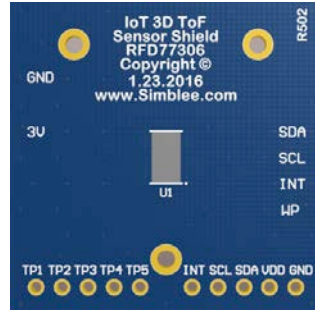
### Typical Applications

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• Smart Industrial Solutions</li> <li>• Predictive Maintenance</li> <li>• Public Spaces</li> <li>• Next Gen Kiosks</li> <li>• Touchless User Interfaces</li> </ul> | <ul style="list-style-type: none"> <li>• Event Triggers</li> <li>• Traffic Flow Monitoring</li> <li>• Work Flows and Processes</li> <li>• Smart Maintenance</li> <li>• Smart Appliances</li> </ul> | <ul style="list-style-type: none"> <li>• Inventory Management</li> <li>• Proximity Detection</li> <li>• Smart Storage</li> <li>• Smart Building</li> <li>• Material Detection</li> </ul> |
|---|--|--|

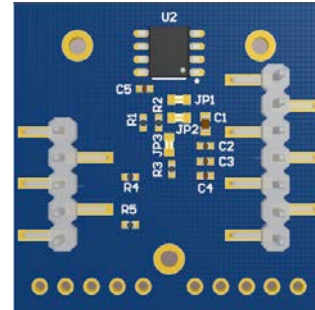


## RFD77306 Simblee IoT 3D ToF Sensor Shield

TOP VIEW



BOTTOM VIEW



**Dimensions:**

**X: 1.2in (30.48mm)**

**Y: 1.2in (30.48mm)**

**Z: 0.45in (11.50mm)**

| Parameters                     | MIN | NOM  | MAX  | Units    | NOTES        |
|--------------------------------|-----|------|------|----------|--------------|
| Measurement Range              | 100 |      | 2000 | mm       |              |
| Maximum Refresh Rate           |     | 10   |      | Hz       |              |
| Standby current                | 9.3 | 9.7  | 15   | μA       |              |
| Current consumption            | -   | 7    | 15   | mA       | @ full range |
| Operating Voltage              | 2.7 | 3.0  | 3.3  | Vdd      |              |
| Pull-up Voltage                | 1.8 | -    | Vdd  | Vpull-up |              |
| Operating Temperature          | -10 | -    | 60   | °C       |              |
| Temperature not to exceed      | -   | -    | 245  | °C       |              |
| <b>I2C: SDA and SCL</b>        |     |      |      |          |              |
| V <sub>IL</sub>                | 0   | -    | 0.9  | V        |              |
| V <sub>IH</sub>                | 1.2 | -    | -    | V        |              |
| V <sub>OL</sub> (@ 3mA)        | -   | 0.02 | -    | V        |              |
| I <sub>OL</sub> (@ VOL = 0.4V) | -   | 8    | -    | mA       |              |
| I2C address                    |     |      |      |          | 0x4C         |



# Rapid Development & Prototyping Kit

### RFD77306 Simblee IoT 3D ToF Sensor Shield

**Includes**  
RFD77306 IoT 3D ToF Sensor Shield

**Featuring**  
RFD77402 IoT 3D ToF Sensor

**Easily Add Sensors to Your IoT Designs:**

- Accurate Distance Measurements up to 2 Meters
- Time of Flight Sensor Technology
- Great Performance in Normal Lighting Conditions
- Simple to Use SimbleeToF Library

See It In Action! [www.simblee.com](http://www.simblee.com)

### RFD77804 Simblee IoT 3D ToF Sensor Kit

**Kit includes**

- 2x RFD77306 Simblee IoT 3D ToF Shield
- 2x RFD22121 USB Programming Shield
- 2x RFD22122 RGB LED/Button Shield
- 2x RFD22126 2xAAA Battery Shield
- 2x RFD77201 Simblee RFDuino Adapter

**Featuring**  
RFD77402 IoT 3D ToF Sensor

**A True End-to-End IoT 3D ToF System At The Tip Of Your Fingers:**

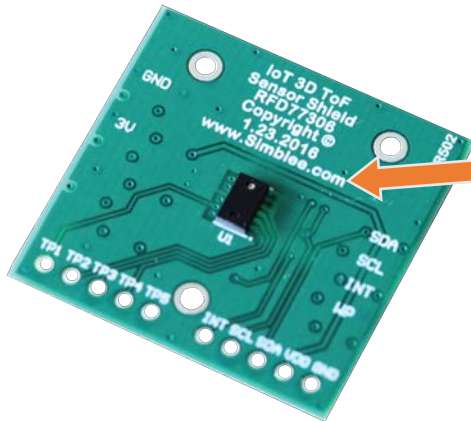
- Ultra Fast 3mS Latency, 10µS Accuracy, Encrypted, Multi-Channel Interference Immune Wireless Communication Using SimbleeCOM
- Unparalleled User Phone and Tablet Experience with Simblee For Mobile
- Bluetooth® Smart and Mesh Networking
- Speedy Cloud Enabled Data Handling
- Arduino Programmable, OTA Updatable
- Ready to Run with Pre-loaded Application
- Accurate Distance Measurements up to 2 Meters
- Time of Flight (ToF) Sensor Technology
- Designed and Manufactured in the USA
- ETSI, CE, IC, FCC Approved, Integrated Antenna and More...

See It In Action! [www.simblee.com](http://www.simblee.com)



## RFD77306 IoT 3D ToF Shield is based on RFD77402 Sensor Module

RFD77306 IoT 3D ToF Sensor Shield



RFD77402 IoT 3D ToF Sensor Module



See RFD77402 datasheet at:

<https://www.Simblee.com/RFD77402>

## RoHS & REACH Compliance

The RFD77402 module is compliant with the European RoHS Directive 2002/95/EC (Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) and REACH (Registration, Authorization and Restriction of Chemicals, European Union Regulation (EC) 1907/2006).

## Eye Safety

The RFD77402 module contains a laser emitter and corresponding drive circuitry. The laser output is Class 1 laser safety under all reasonably foreseeable conditions including single faults in compliance with IEC 60825-1:2014. The laser output will remain within Class 1 limits as long as the Simblee recommended device settings are used and the operating conditions specified in this datasheet are respected. The laser output power must not be increased by any means and no optics should be used with the intention of focusing the laser beam.

