

Distance Sensor Breakout Board

SEN-18993

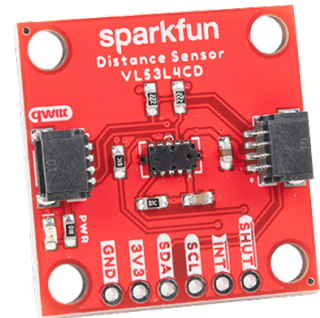
Product Overview

09/26/2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

SparkFun Distance Sensor Breakout Board utilizes the VL53L4CD next-generation Time of Flight (ToF) sensor module to provide highly accurate measurements at short ranges. The VL53L4CD uses a Vertical Cavity Surface Emitting Laser (VCSEL) to emit an infrared laser to time the reflection to the target. This helps to measure the distance to an object from 1mm to 1300mm away with millimeter resolution. The distance sensor communicates exclusively via I2C and utilizes the Qwiic system so no soldering is required to connect the board to the rest of the system. Each VL53L4CD sensor features a precision to be 1mm with an accuracy of around ± 7 mm and a minimum read distance of this sensor is 1mm. The field of view for this little breakout has a typical full field of view of 18° with a read rate of up to 100Hz.



The Qwiic Connect System is an ecosystem of I²C sensors, actuators, shields, and cables that make prototyping faster and less prone to error. All Qwiic-enabled boards use a common 1mm pitch, 4-pin JST connector. This feature reduces the required PCB space, and the connectors are polarized to ensure a correct hookup.

Features

- VL53L4CD ToF sensor module
- Operating voltage:
 - 2.6V to 3.5V
 - 3.3V typical via Qwiic cable
- Average current consumption:
 - 22mA typically
 - 24mA maximum
 - 40mA peak current (including VCSEL)
- 1mm to 1300mm measurement range
- ± 1 mm resolution
- Light source:
 - Class 1 940nm VCSEL
- 18° Field of View (FoV)
- Max Read Rate: 100Hz
- 2x Qwiic Connectors

Specifications

- 7-bit unshifted I2C Address: 0x29
- Operating temperature range:
 - -30°C to +85°C
- Power LED
- Jumpers
- Pull-up Resistors
- LED

Mouser Part Number

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To learn more, visit <https://www.mouser.com/new/sparkfun/sparkfun-sen18993-distance-sensor/>