M5StickC ToF HAT(VL53L0X)
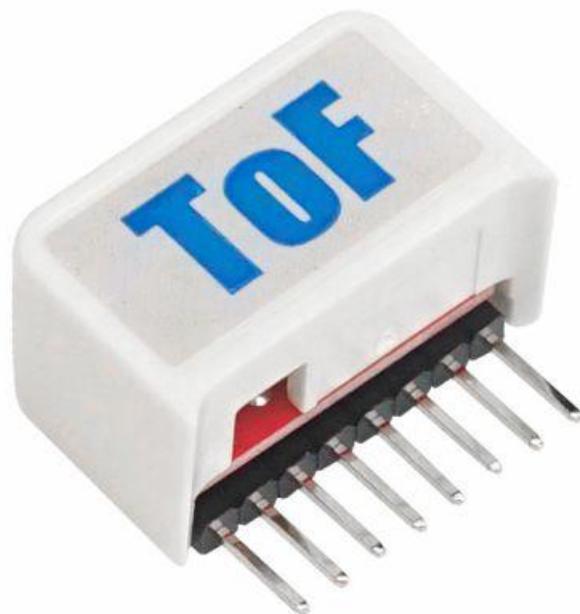
Description

ToF HAT is a high precision laser-ranging sensor specifically designed for M5StickC. Integrated with **VL53L0X** and **940nm VCSEL** emitter. It can provide high precision and low latency performance on object distance detection. The VL53L0X is a new generation Time-of-Flight (ToF) laser-ranging module housed in the smallest package on the market today, providing accurate distance measurement whatever the target reflectances, unlike conventional technologies. It can measure absolute distances up to 2m, setting a new benchmark in ranging performance levels, opening the door to various new applications. The VL53L0X integrates a leading-edge SPAD array (Single Photon Avalanche Diodes) and embeds ST's second generation FlightSenseTM patented technology. The VL53L0X's 940 nm VCSEL emitter (Vertical-Cavity Surface-Emitting

Laser), is invisible to the human eye, coupled with internal physical infrared filters, it enables longer ranging distances, higher immunity to ambient light, and better robustness to cover glass optical crosstalk.

Communication Info: I2C, **0x29**, GPIO0/26.

Product Features

- High precision
- Maximum measuring distance 2m
- 940nm laser VCSEL
- Development platform: Arduino, UIFlow(Blockly, Python)
- Security:
    - Class 1 laser equipment meeting the latest standards
    - Standard IEC 60825-1: 2014 - 3rd edition

Include

1x ToF HAT

Applications

- Obstacle recognition
- Gesture Recognition
- Laser Ranging
- 3D structured light imaging (3D sensing)
- Camera assist (super fast auto focus and depth of field map)

Specification

Resources	Parameter
net weight	4g
Gross weight	8g
Product Size	24*20.3*13.8mm
Package Size	37*35*18mm