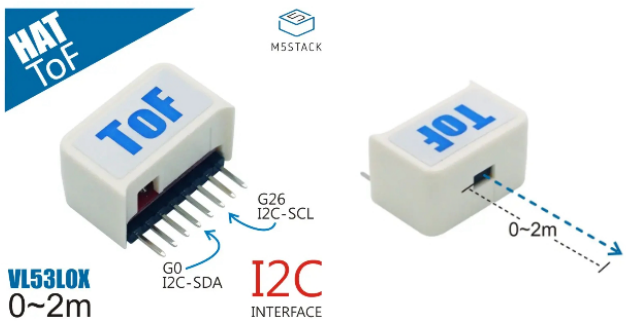
ToF HAT SKU:U072



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 IEC60825-1: 2014 - 3rd edition
Dimension：24mm x 20.3mm x 13.8mm
Weight：3g

Include

1x ToF HAT

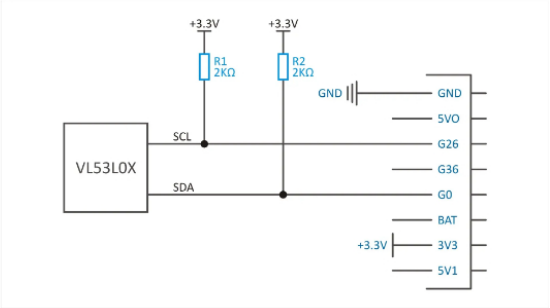
Applications

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

Links

VL53L0XDatasheet

Schematic



EasyLoader

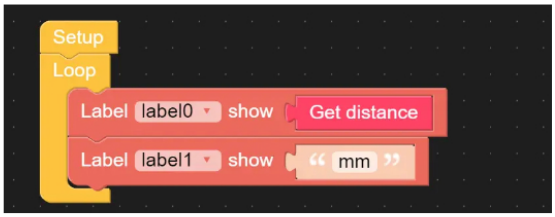
click to download EasyLoader

1.EasyLoader is a simple and fast program burner. Every product page in EasyLoader provides a product-related case program. It can be burned to the master through simple steps, and a series of function verification can be performed. (Currently, EasyLoader is only available for Windows OS)

After downloading the software, double -click to run the application, connect the M5 device to the computer through the data cable, select the port parameters, click **"Burn"** to start burning. (**For M5StickC burning, please Set the baud rate to 750000 or 115200**)

Example

UIFlow



Arduino

To get complete code, please click here

Pin Map

M5StickC	GPIO0	GPIO26	3.3V	GND
ToF HAT	SDA	SCL	3.3V	GND