ToF SKU:U010

DISTANCE SENSOR

VI53L0X
GROVE/I2C

Description

ToF that employs time-of-flight techniques to resolve distance between the emit point and the reach point of a subject, measuring the round trip time of an artificial light signal provided by a laser.

This unit integrated a distance measuring sensor VL53L0x providing accurate distance measurement whatever the target reflectance, unlike conventional technologies. It can measure absolute distances up to 2m in less than 30ms.

This unit comunicates with M5Core via I2C(0x29).

In this case, make sure you use the 3.3V on SDA and SCL, M5Core GROVE provide 3.3V to data pins, 5V to power pin. only 3.3v allowed on VL53L0x.

Product Features

High precision
Measure absolute distances   up to 2m
The wavelength   of laser: 940nm
Program Platform: Arduino, UIFlow(Blockly, Python)
Two Lego - compatible   holes

Include

1x ToF Unit
1x Grove Cable

Applications

1D gesture   recognition
Laser Ranging
3D structured light imaging （3D sensing）
Camera assist (ultra fast autofocus and depth of field)

Specification

| Resources	Parameter
net weight	4g
Gross weight	17g
Product Size	32*24*8mm
Package Size	67*53*12mm

Related Link

VL53L0X Datasheet

EasyLoader

EasyLoader is a concise and fast program writer, which has a built-in case program related to the product. It can be burned to the main control by simple steps to perform a series of function verification. Please install the corresponding driver according to the device type. M5Core host Please click here to view the CP210X driver installation tutorial, M5StickC/V/T/ATOM series can be used without driver)

Schematic

ToF Schematic
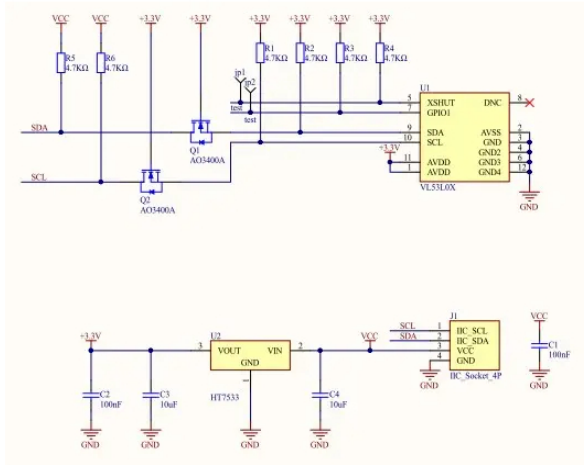
PinMap

M5Core(GROVE A)	GPIO22	GPIO21	5V	GND
ToF Unit	SCL	SDA	5V	GND

Example

1. Arduino IDE

The below code is incomplete(just for usage). If you want the complete code, please click here

2. UIFlow

If you want the complete code, please click here