

Linux driver for the VL53L1 Time-of-Flight long ranging sensor with programmable Field of View and multiobject detection



Features

- Linux driver
- Based on VL53L1 bare driver

Description

The STSW-IMG022 contains a driver running under Linux®. It is based on the VL53L1 bare driver. The user integrates the Linux device driver into the Linux as a specific implementation. Then, the Linux device driver implements the sequencing of actions, execution/threading of models, platform adaptations, and device structure allocations, according to standard Linux device driver models. The software is validated using Raspberry Pi 3. The driver can be used in User Space or Kernel thanks to compilation keys.

The VL53L1 bare driver is a set of C functions controlling the VL53L1 device (e.g. init and ranging) to enable the development of end-user applications.

The VL53L1 is a state-of-the-art, Time-of-Flight (ToF), laser-ranging, miniature sensor enhancing STMicroelectronics' FlightSense product family. Housed in a miniature and reflowable package, it integrates a single photon avalanche diode (SPAD) array, physical infrared filters and optics to achieve the best ranging performance in various ambient lighting conditions, with a wide range of cover windows. It provides accurate ranging up to 8 m and can work at fast speed (60 Hz).

With patented algorithms and ingenious module construction, the VL53L1 is also able to detect different objects within a field of view with depth understanding at 60 Hz. The ST histogram algorithms allow cover glass crosstalk immunity beyond 80 cm, and dynamic smudge compensation.

Product status link

STSW-IMG022

Revision history

Table 1. Document revision history

Date	Version	Changes
18-Dec-2020	1	Initial release

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