

Ultra lite driver (ULD) application programming interface (API) for the VL53L5CX 8x8 multizone ranging sensor with wide field of view



Features

- VL53L5CX_ULD API is source code written in C language
- API provides control over full range of features
- API is structured in a way it can be easily ported/compiled on any microcontroller platform
- Several example codes showing how to use the API
- API documentation VL53L5CX_ULD API user manual (UM2884) included

Description

The VL53L5CX_ULD API is a set of C functions controlling the VL53L5CX device (e.g. init and ranging) to enable the development of end-user applications. The VL53L5CX ULD is an optimized driver with only three files required for basic ranging. More features can be added with plug-in systems. The API is structured in a way that it can be compiled on any kind of platform through a well isolated platform layer (mainly for low-level I2C access). One example code is provided to show how to use the API and perform ranging measurements.

The VL53L5CX is a state of the art, ToF, laser-ranging sensor enhancing the ST FlightSense product family. Housed in a miniature reflowable package, it integrates a SPAD array, physical infrared filters, and diffractive optics (DOE) to achieve the best ranging performance in various ambient lighting conditions with a range of cover glass materials.

Unlike conventional IR sensors, the VL53L5CX uses ST's latest generation, direct ToF technology which allows absolute distance measurement whatever the target color and reflectance. It provides accurate ranging up to 400 cm and can work at fast speeds (60 Hz), which makes it the fastest, multizone, miniature ToF sensor on the market.

Multizone distance measurements are possible up to 8x8 zones with a wide 61° diagonal FoV which can be reduced by software.

Product status link

[STSW-IMG023](#)

Revision history

Table 1. Document revision history

Date	Version	Changes
25-May-2021	1	Initial release

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