

# Linux driver for the VL53L7CX Time-of-Flight 8x8 multizone ranging sensor with 90° FoV

## Features

- Linux® driver
- based on the VL53L5CX ultra lite driver (ULD)

## Description

The STSW-IMG038 contains a driver running under Linux®. It is based on the VL53L7CX ULD. 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.

Specially designed for applications requiring an ultrawide field of view (FoV), the VL53L7CX Time-of-Flight sensor offers a 90° diagonal FoV. Based on ST's FlightSense technology, the VL53L7CX incorporates an efficient metasurface lens (DOE) placed on the laser emitter. This enables the projection of a 60° x 60° square FoV onto the scene.

Its multizone capability provides a matrix of 8x8 zones (64 zones) and can work at fast speeds (60 Hz) up to 350 cm.

Thanks to the autonomous mode with programmable distance threshold combined to the ultrawide FoV, the VL53L7CX is perfect for any application requiring low-power user detection. ST's patented algorithms and innovative module construction allow the VL53L7CX to detect, in each zone, multiple objects within the FoV with depth understanding. ST histogram algorithms ensure cover glass crosstalk immunity beyond 60 cm.

The VL53L7CX is the perfect sensor for any application requiring ultrawide FoV like robotics, smart speakers, video projectors, and content management. The combination of the multizone capability and the 90° FoV can enhance new use-cases like gesture recognition, SLAM for robotics, and low power system activation for smart building.



Product status link

[STSW-IMG038](#)

## Revision history

**Table 1. Document revision history**

Date	Version	Changes
16-Sep-2022	1	Initial release
19-Sep-2022	2	Replaced wrong source file in previous version

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