

## Graphical user interface (GUI) for X-NUCLEO-53L9A1 working with NUCLEO-H563ZI



### Features

- Complete software framework for building applications using the VL53L9CX high-performance lidar direct Time-of-Flight (dToF) sensor on the X-NUCLEO-53L9A1 with NUCLEO-H563ZI
- Built on top of a capture driver for sensor acquisition and a middleware library for data post-processing
- Several example applications illustrating the procedure to capture and post-process the data coming from the sensor through I3C
- Free, user-friendly license terms

### Description

The STSW-IMG052 is a graphical user interface GUI of X-NUCLEO-53L9A1 with NUCLEO-H563ZI.

The VL53L9CX EVK is a demonstration system from STMicroelectronics. It is based on a dToF (direct Time-of-Flight) sensor that produces depth maps. This GUI embeds the VL53L9 dToF module reflowed on the X-NUCLEO shield board and the NUCLEO-H563ZI board.

This GUI is used to operate the VL53L9CX sensor via the X-NUCLEO-53L9A1 board to demonstrate functional performance, and allows the user to adjust the parameters that control the ranging capabilities and 3D video performances.

The VL53L9CX can range up to 100 FPS using a MIPI interface. As the H5 MCU does not have a MIPI interface, the data are read through the I3C communication interface. This is limiting the maximum frame rate to 30 FPS in full resolution. To achieve higher FPS the user can select another MCU (like the STM32N6) or any platform with a MIPI interface.

To install the STSW-IMG052 GUI, refer to the STSW-IMG052 user manual and X-NUCLEO-53L9A1 user manual.

## Revision history

**Table 1. Document revision history**

Date	Version	Changes
15-Jun-2026	1	Initial release
08-Jul-2026	1	Updated document for publication

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