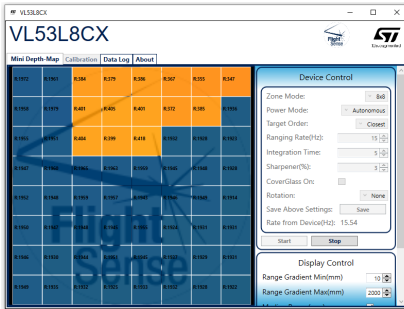


P-NUCLEO-53L8A1 pack graphical user interface (GUI)



Features

- Live display of:
 - ranging distance in mm
 - signal strength in kcps/SPAD
 - ambient light in kcps/SPAD
 - status of the ranging
- Calibration procedure
- Data log outputs
- I2C transaction recording

Description

The STSW-IMG041 is a GUI for Windows 10. The GUI controls the P-NUCLEO-53L8A1 pack, which consists of the X-NUCLEO-53L8A1 expansion board connected to the NUCLEO-F401RE Nucleo board.

It is possible to control one VL53L8CX external breakout board when it is connected to the X-NUCLEO-53L8A1 expansion board through one of the dedicated connectors.

To install the STSW-IMG041 GUI, refer to the X-NUCLEO-53L8A1 quick start guide.

The VL53L8CX is an 8x8 multizone ToF (Time-of-Flight) ranging sensor, based on STMicroelectronics FlightSense technology. It integrates a new generation of powerful VCSEL laser emitter, and two advanced meta-surface lenses. This sensor has a 65° diagonal FoV, designed to provide accurate ranging up to 400 cm. It provides enhanced performance under ambient light reduced low power consumption. The combination of new lenses and lasers in an innovative “all in one” module enables a wider variety of high performance use-cases and more performant use-cases. Examples include low-power system activation, gesture recognition, SLAMs for robotics, liquid level control, and many more.

Thanks to STMicroelectronics patented algorithms, the VL53L8CX can detect and track multiple targets within the FoV with a 64-zone depth measurement. The STMicroelectronics histograms ensure cover glass crosstalk immunity above 60 cm. Like all ToF sensors based on STMicroelectronics' FlightSense technology, the VL53L8CX measures an absolute distance regardless of the target color and reflectance.

The VL53L8CX supports SPI and I²C interfaces for high frequency framerate and short boot time.

Product status link

[STSW-IMG041](#)

Revision history

Table 1. Document revision history

Date	Version	Changes
17-Jan-2023	1	Initial release

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