STSW-IMG005

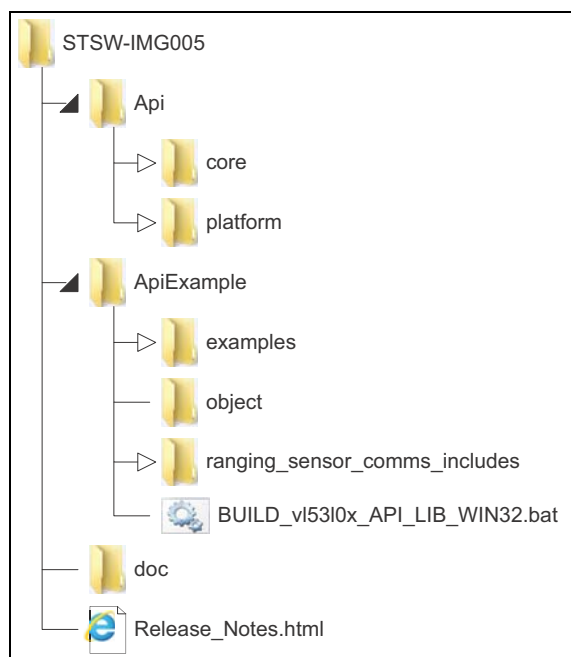## VL53L0X Time-of-Flight (TOF) ranging and gesture detection sensor application programming interface (API)

Data brief

```
STSW-IMG005
    Api
        core
        platform
    ApiExample
        examples
        object
        ranging_sensor_comms_includes
        BUILD_vl53l0x_API_LIB_WIN32.bat
    doc
    Release_Notes.html
```

Features

- VL53L0X application programming interface (API) source code (C language).

- Full ranging features control.

- API structured in a way it can be easily ported/compiled on any micro-controller platform.

- Several examples (running on the PC) showing how to use API to perform ranging measurements with Nucleo F401 and VL53L0X expansion boards.

- API documentation (.chm and .html).

Description

The VL53L0X API is a set of C functions controlling the VL53L0X (init, ranging,…) to enable the development of end-user applications. This API is structured in a way it can be compiled on any kind of platform through a well isolated platform layer (mainly for low level I2C access). Several code examples are provided to show how to use the API and perform ranging measurements.

The VL53L0X is the latest product based on ST's patented FlightSense™ technology. This is a ground-breaking technology allowing absolute distance to be measured independent of target reflectance. Instead of estimating the distance by measuring the amount of light reflected back from the object (which is significantly influenced by color and surface), the VL53L0X precisely measures the time the light takes to travel to the nearest object and reflect back to the sensor (Time-of-Flight).

Combining an IR emitter and a range sensor in a two-in-one ready-to-use reflowable package.

Figure 1. VL53L0X module

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Revision history

Table 1. Document revision history

Date	Revision	Changes
11-May-2016	1	Initial release.

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