



New Offerings from ST Imaging...Making Light work

VL53L5CX FlightSense™ technology



VL53L5CX Applications and key features



VL53L5CX Evaluation and support



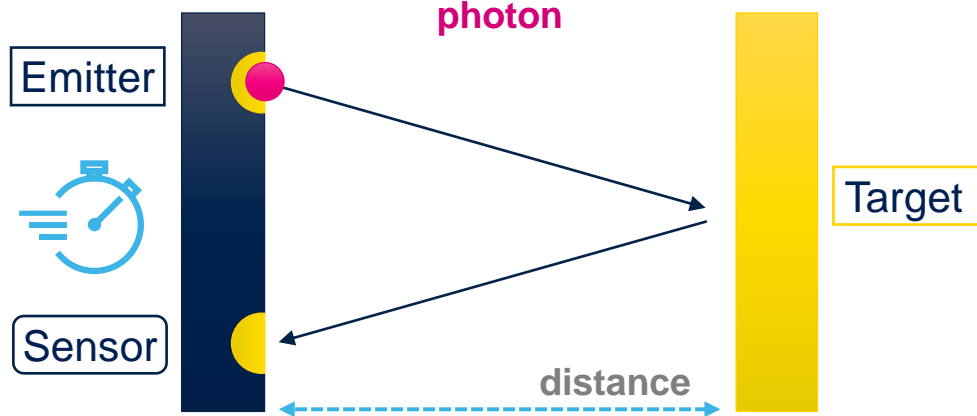


FlightSense™

New VL53L5CX Time-of-Flight 8x8 multi-zone sensor

VL53L5CX Time-of-Flight Sensor

Time-of-Flight Principle



Measured distance

=

Photon travel time / 2

x

Speed of light

1cm round-trip takes 67ps

ST proprietary FlightSense* technology

True distance measurement
Independent of target size, color & reflectance

Fast and low power

Truly invisible 940nm illumination



FlightSense™ ST Pioneer and Leader in Time-of-Flight (ToF)

ST is the #1 Worldwide Time-of-Flight sensor supplier

4 Generations

of all-in-one ToF solutions deployed since 6 years

>50 OEMs

Over 200 phones with ST's Time-of-Flight technology

Several hundreds of non-wireless end products on the market

Unlimited variety of use-cases beyond smartphones

>55,000

Evaluation kits deployed

>1 Billion

ToF units shipped. Mastering end-to-end supply chain



VL53L5CX

4th generation FlightSense™





VL53L5CX most popular applications

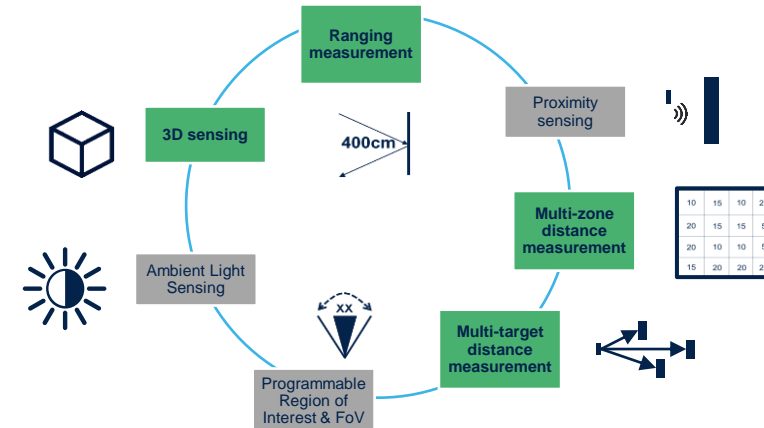
Multi-zone capability enables wide range of applications / use cases

Typical use-cases

- User detection – System activation
- Content analysis
- Load management
- People counting
- Gesture recognition



Features



Applications examples



Robotics



Smart home



Warehouse



Tanks



Industrial



Projectors



Laptops



ATM



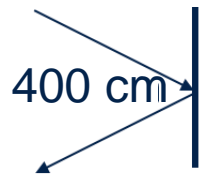


FlightSense™ technology

Key features

High-performance distance measurement

Actual distance measurement
Accurate distance measurement
Immunity to color, texture, and material

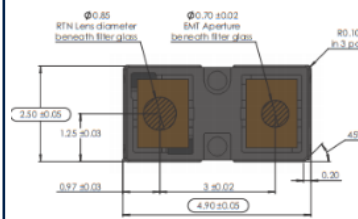


± mm_s



Easy and quick integration

All-in-one with small footprint
Can be hidden behind black cover glass
Full package available for prototyping



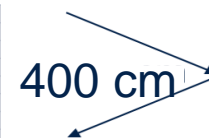
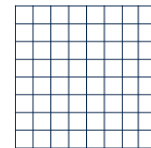
Low power consumption

Can be integrated in battery-powered devices
Autonomous low-power mode available



What's new?

First 8x8 multi-zone sensor
Long distance measurement
Wide field-of-view





VL53L5CX support on st.com

www.st.com/en/imaging-and-photonics-solutions/VL53L5CX

Specs

- Datasheet
 - DS13754
- “Thermal pad “ Application Note
 - AN5657



Software

- API (ULD “Ultra Light Driver”)
 - STSW-IMG023
- GUI for X-NUCLEO expansion board
 - STSW-IMG024
- X-CUBE example
 - **X-CUBE-TOF1 compatible with CubeMX**

User Manuals

- ULD driver User Manual
 - UM2884
- Software integration Guide
 - UM2359
- X-NUCLEO Start Guide
 - Detailed Quick Start Guide for X-NUCLEO-53L5A1

Linux driver

- STSW-IMG025

