FlightSense™

Low Power Detection

Ranging & Proximity

Applications

life.augmented

Low-Power Detection

- **FlightSense allows low-power detection**
  - All-in-one solution
  - Immune to color, texture, and material
  - Detection to distances of 120cm
  - Down to 175uW at 1Hz

  ➔ **Unlocking battery-operated, high-performance applications!**

Complete Product Range

•	**VL6180X**	100fps, up to 40cm prox & ALS	Mass Production
•	**VL53L0X**	50fps, up to 200cm	Mass Production
•	**VL53L1X**	50fps, up to 400cm	Mass Production

life.augmented

Ranging & Proximity

- **FlightSense enables outstanding performance**
  - Full range of products up to 400cm !
  - Works behind many types of cover-glass materials
  - Performance proven even for challenging industrial design
  - ➔ **Unlocking multiple applications & use-cases !**

Complete Product Range

VL6180X	100fps, up to 40cm prox & ALS	Mass Production
VL53L0X	30fps, up to 200cm	Mass Production
VL53L1X	60fps, up to 400cm	Mass Production

Android 7 Nougat ready

life.augmented

FlightSense Breakthrough Technology

FlightSense Principle

Measured distance = Photon travel time / 2 x Speed of light

Fully Integrated Time of Flight Module

True distance measurement

Independent of target size, color & reflectance

Very fast (few ms)

Low power

Measurement at the speed of light ! 1cm round-trip in 67ps

FlightSense Highlights

ST is World Wide #1 Time-of-Flight supplier

Over 5 years of proven track record in manufacturing
>> 450M products shipped
> 300% AAGR

FlightSense Laser AF camera assist in >85 phones

Endless applications on the market: Robots, Drones, Smart-home sensors, Faucets, Toys…

New Generation Ready: Unique Direct ToF features

…and a complete roadmap under development

life.augmented

Key Target Applications

Flight Sense

Presence: User Detection
Security
Power saving

Ranging & Proximity
True distance
Ranging up-to 4m

Camera AF Assist
Instant focus
Scene understanding

Presence

Immediate detection of user

Accurate distance measurement

Security

Fast screen -lock / un-lock when user detected

Power saving

Very fast power-on / off

life.augmented

Camera Assist

- **Autofocus Camera Assist (front or rear camera)**
  - Instant Focus over entire camera focal range
  - Fast & Robust solution for low light & low contrast
  - Adjustable Region of Interest
- **New innovative use cases**
  - Dual-camera depth-map assist
  - Flash-power adaptation versus distance to object

Complete Product Range

- **VL6180X** 100fps, up to 40cm prox + ALS — Mass Production
- **VL53L0X** 50fps, up-to 200cm — Mass Production
- **VL53L1X** 50fps, up-to 400cm — Mass Production

life.augmented