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Press release

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STMicroelectronics' New Time-of-Flight Ranging Sensor Revolutionizes Mobile-Camera Performance and Unlocks New Applications in Robotics and IoT

- *FlightSense™ low-power, miniature sensors are used for fast autofocus in smartphones, proximity sensing, and object detection for Robotics and IoT devices*
- *Latest product VL53L0 sets new standards in ToF-based ranging performance*

Geneva, January 5, 2016 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, has released its second-generation laser-ranging sensor based on its highly successful FlightSense™ technology. The new sensor, the VL53L0, can range faster, over longer distances, and more accurately, significantly improving smartphone- and tablet-camera performance and opening new possibilities and features in robotics, user detection, drones, IoT, and wearables.

With its small form factor of 4.4 x 2.4 x 1mm, the VL53L0 is the smallest ToF (Time-of-Flight) module in the world, and the first to integrate a 940nm VCSEL[1] light source, a SPAD[2] photon detector, and an advanced microcontroller to manage the complete ranging function. Being the market's first module to use light emitted at 940nm, coupled to leading-edge infrared filters, the VL53L0 delivers best-in-class ambient light immunity and is now invisible to the human eye. The embedded microcontroller and digital algorithms minimize both the host processing and system power consumption in the final application.

"ST technology advancements in Time-of-Flight ranging sensors are enhancing the experience for millions of consumers, revolutionizing the way they take pictures and videos with their smartphones and tablets," said Eric Aussedat, General Manager of

[1] Vertical Cavity Surface-Emitting Laser

[2] Single-Photon Avalanche Diode

ST's Imaging Division. "ST introduced the first fully-integrated Time-of-Flight ranging sensor to the market in 2014, which was then successfully adopted by several leading OEMs for the laser-assisted autofocus function. Today, with the VL53L0, our next generation, ST is redefining the benchmark in ranging performance and creating the opportunity to develop new applications in robotics and the IoT."

The VL53L0 is able to perform a full measurement operation in one image frame, typically less than 30ms, at distances beyond 2m. With such performance levels the camera system can achieve instant focus in both video and burst modes, even in low-light or low-contrast scenes, which are especially challenging for camera-systems not equipped with FlightSense™ technology.

With superior accuracy, the VL53L0 also enhances smartphone applications including dual-camera-based depth-mapping and offers exciting opportunities in robotics, user detection, drones, IoT, and wearables.

ST's VL53L0 module is simple to use (6 effective pins), is I^2C based, and comes with a full package of API drivers and documentation for fast and simple integration. The module package is reflowable, RoHS compliant, and fully compatible with a large selection of cover glass and design artworks.

The VL53L0 is in production and available now, priced from $1.75 at the minimum order quantity of 5,000 units.

About STMicroelectronics

ST is a global leader in the semiconductor market serving customers across the spectrum of sense and power and automotive products and embedded processing solutions. From energy management and savings to trust and data security, from healthcare and wellness to smart consumer devices, in the home, car and office, at work and at play, ST is found everywhere microelectronics make a positive and innovative contribution to people's life. By getting more from technology to get more from life, ST stands for life.augmented.

In 2014, the Company's net revenues were $7.40 billion. Further information on ST can be found at www.st.com.

For Press Information Contact:

Michael Markowitz
Director Technical Media Relations
STMicroelectronics
Tel: +1 781 591 0354
Email: michael.markowitz@st.com