GARMIN®

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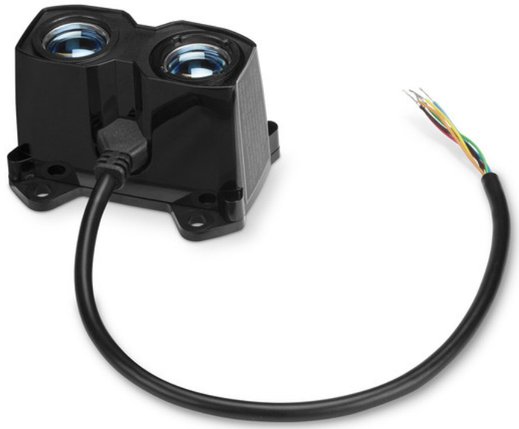
Technology

LIDAR-Lite



- Technology is processing not hardware based.
- Highly Configurable; adjust between accuracy, operating range or measurement speed
- Core hardware shared across all platforms
- Reduced hardware complexity reduces size, power consumption and cost
- Higher performance from a given set of optics and opto-electronics than conventional technologies.

Garmin Uses

…and ????

The Concept – ANT Enabled LIDAR-Lite

- LIDAR-Lite sensors are used in applications where the need for a compact, very low power non-contact ranging sensor is required to measure distance, speed or proximity.
- ANT is already used in a broad array of wireless sensing applications where small size and Ultra Low Power consumption are key requirements.
- Adding an ANT enabled Micro (i.e. Nordic nRF52 series) to a LIDAR-Lite sensor creates a new category of intelligent, low-power wireless ranging sensor that can be easily integrated into the ANT ecosystem.
- ANT+ Blaze networking enables LIDAR-Lite sensors to become part of a wireless network of many sensors.
- The internal micro, supporting a variety of development environments, further enhances the configurability of the sensor allowing developers of all skill levels the ability to create custom sensor applications that are run locally in the sensor rather than on an external micro.
- Connect IQ Developers have access to a powerful new sensor technology for their applications.

The First Product - LLv4 LED

- A compact, short-range (10m), low power, ANT enabled, LED based LIDAR-Lite sensor, utilizing the nRF52840 processor.
- Provisioned with I2C, PWM or GPIO interfaces in addition to ANT. 5Vdc operation.
- Bluetooth for OTA updates.
- Q2 Release date (subject to micro availability). Beta units available for evaluation EOY 2018

Applications

- Hobbyist (Makers) and OEM markets – Robotics, Unmanned Aerial or Ground vehicles for situational awareness and altimetry.
- Industrial Sensing, Security, Environmental Monitoring - Process Equipment Monitoring. Securing Work Sites, Equipment Areas and Warehouses. Space Utilization.
- Transportation – Vehicle Profiling, Freight Load Monitoring, Parking Lot Space Utilization.
- IoT - Replacement of a proximity sensor with an intelligent ranging sensor elevates sensing from simply knowing that “something is there” to knowing distance, motion, speed and direction.
- Sports Performance – How Far, How Fast, How High

Thanks!