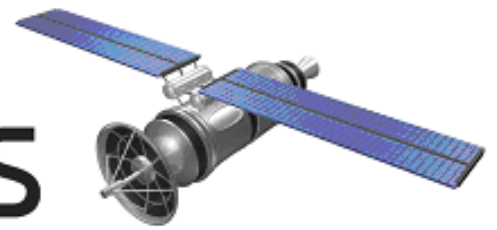


# FutureHorizons



The Global Semiconductor Industry Analysts

## FH MONDAY

22 June 2020

### 3D Ultrasonic Sensor Can See with Sound

Munich-based Toposens has developed a 3D ultrasonic sensor technology that perceives its environment via the principle of echolocation – just like a bat.

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### NXP to Jump to TSMC's 5nm for Next-Gen Auto SoC Platform

NXP Semiconductors announced Friday that it will become the first automotive chip company to jump to TSMC's 5nm process technology for the next generation "high-performance safe compute" automotive platform. NXP and TSMC expect to deliver the first sample devices to NXP's key customers toward the fall of 2021.

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### Intel's 10nm Node: Past, Present, and Future

When you are the world's largest supplier of microprocessors and one of the largest makers of semiconductor in the world, you tend to set ambitious targets in a bid to retain your position and stay ahead of the competition.

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### TALK TO US



### Ultrasonic for Social Distancing Tags

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### EVENTS

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-9 November 2020– London UK

#### [Industry Forecast Briefing](#)

– 15 Sept 2020 – London UK

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### Qualcomm Launches 5G and AI Robotics Platform

Qualcomm Technologies launched Wednesday a premium 5G and AI-enabled robotics platform with advanced high-performance edge computing and computer vision capability. The move follows the company's launch of its entry-level robotics platform just over a year ago

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### **3D Ultrasonic Sensor Can See With Sound**

Munich-based Toposens has developed a 3D ultrasonic sensor technology that perceives its environment via the principle of echolocation – just like a bat.

Founded in 2015, Toposens has developed 3D ultrasound sensor vision that uses sound to support robust, low-cost and precise near-field 3D vision for applications such as autonomous driving, robotics and smart buildings. While existing sensor technologies can be negatively impacted by light conditions, reflections, and weather, Toposens claims its sensors use echolocation to generate robust, real-time 3D point clouds to guide autonomous systems, even in the most difficult environments.

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As "massively parallel innovations" happen in the automotive industry, car OEMs must deal with "exploding software, tremendously expensive bill of materials and improved safety" in their vehicle architecture, Henri Ardevol, executive vice president and general manager, Automotive Processing at NXP, told EE Times. With the new automotive processing platform built on N5P, an enhanced version of TSMC's 5nm technology, NXP hopes to move OEMs' "socket-by-socket" discussion to that of "entire vehicles."

### **Intel's 10nm Node: Past, Present, and Future**

When you are the world's largest supplier of microprocessors and one of the largest makers of semiconductor in the world, you tend to set ambitious targets in a bid to retain your position and stay ahead of the competition. With its 10nm manufacturing technology, Intel Corp. set goals so ambitious it had to delay high-volume production using this fabrication process, make changes to its roadmap, and even reconsider some aspects of its strategy. Intel is making progress with its 10nm process, but with TSMC and Samsung working at nodes they've labeled 7nm, 6nm, 5nm, and smaller, where exactly is Intel today?

When a company designs new process technology, it sets certain goals when it comes to performance, power, and area (PPA). Contract makers of semiconductors at times sacrifice one aspect in favor of another because of their very iterative approach to design and because they have to offer a new process every year or so to enable their customers to advance their SoCs on an annual cadence.

### **Ultrasonic For Social Distancing Tags**

Ultrasonic sensors might just be the wireless technology best suited to enabling contact tracing and social distancing. It does so "more accurately, reliably and much more power- and cost-efficiently," claimed Joseph Bousaba, president of Chirp Microsystems, a TDK group company, in an interview with EE Times.

Fortune 500 companies, eager to get employees back to warehouses and manufacturing floors, are looking for apps and wearable devices that can alert workers when they violate social distancing precautions and come too close to one another. The companies also want these wearable devices to keep track of which workers have come into close contact with whom, when and for how long.

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Qualcomm Technologies launched Wednesday a premium 5G and AI-enabled robotics platform with advanced high-performance edge computing and computer vision capability. The move follows the company's launch of its entry-level robotics platform just over a year ago

The new Qualcomm Robotics RB5 platform is its most advanced, integrated, comprehensive offering designed specifically for robotics. Building on the Qualcomm Robotics RB3 platform and its broad adoption in a wide array of robotics and drone products, the RB5 platform is comprised of hardware, software and development tools, which can be configured with multiple options for vision, sensors, communications, and motor control to address a wide range of industrial grade and commercial robotics applications.