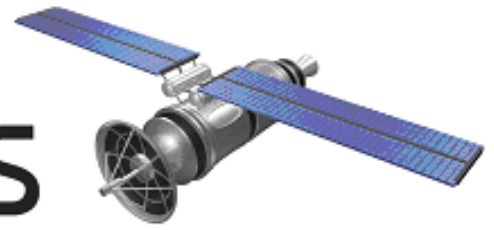


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The Global Semiconductor Industry Analysts

FH MONDAY

12 October 2020

GaN-on-Silicon nanowire LEDs to address the LED display market

Aledia was spun off from Cea-Leti in 2011 to develop a disruptive 3D LED technology based on the standard 200-mm Si platform, which would shrink the cost per chip in comparison with the conventional 2D LED technology.

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Cloud-based Platform to Democratize Car Data

Otonomo, an Israeli startup that collects car data generated by more than 22 million connected vehicles around the world, rolled out this week a cloud-based platform whose data layer is now exposed to its customers via API...

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ST Enabling Automotive Growth with Latest MEMS

STMicroelectronics discusses the different levels of vehicle automation, and how they are enabling the industry on its journey towards autonomous driving.

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TALK TO US



First 4D Imaging Radar for Autonomous Driving to Deploy in 2021

Continental announced it is using Xilinx FPGAs to deploy the automotive industry's first production-ready 4D imaging radar, expected to ship in passenger vehicles in 2021. Continental's new advanced radar sensor (ARS) 540 will use the Zynq UltraScale+ MPSoC platform, enabling vehicles equipped with the sensor to realize SAE J3016 Level 2 functionalities, paving the way

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EVENTS

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Thanks to CoolSiC™ from Infineon

The trend of digitalization has accelerated. Consequently, the number of server farms has risen and with it the power demand. Driven by the phenomenon of global warming, the importance of higher energy efficiency of operations is therefore increasing.....

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Gan-On-Silicon Nanowire LEDs To Address The LED Display Market

Aledia was spun off from Cea-Leti in 2011 to develop a disruptive 3D LED technology based on the standard 200-mm Si platform, which would shrink the cost per chip in comparison with the conventional 2D LED technology. Earlier this year, the startup announced its plan to build a first manufacturing facility in the Grenoble area, France, to address a market estimated to be worth around 120 billion dollars and related to displays for computers, tablets, smartphones and AR glasses. Aledia plans to enter mass production of micro-displays by 2022.

Jointly with Cea-Leti, Aledia has developed the fabrication of 3D LEDs based on GaN nanowires grown on large-area Si substrates, leading to the filing of more than 100 patent families (single inventions filed in multiple countries) since 2012, grouping more than 440 patents and pending patent applications worldwide. "Interestingly, more than 180 patent applications have already been granted, putting the emphasis on Europe (90+ patents) and the USA (50+ patents), although a significant number of patents were also granted in Asia (China: 19, Japan: 10, South Korea: 4 and Taiwan: 4)," says Remi Comyn, PhD, Technology and Patent Analyst Compound Semiconductors and Electronics at Knowmade

Cloud-based Platform to Democratize Car Data

Otonomo, an Israeli startup that collects car data generated by more than 22 million connected vehicles around the world, this week rolled out a cloud-based platform whose data layer is now exposed to its customers via API.

Matan Tessler, product vice president at Otonomo, called the platform "a neutral place" designed to "democratize [car] data sets." The self-serve cloud data platform lets users — ranging from car OEMs, AV startups and fleet managers to service [app] developers, insurance companies, city planners and data consumers — extract the data they need and pay for it. The data available includes not only historical aggregated data, but also real-time data.

Otonomo, which has raised \$82 million, expects hundreds of app and service developers to spring up and build a large ecosystem around its car-data platform.

ST Enabling Automotive Growth with Latest MEMS and Sensors

There continues to be a strong acceleration in transitioning to serve new mobility trends, including increasing vehicle electrification, connectivity, advanced driver assistance systems (ADAS), networking, and autonomous driving, to name a few.

According to a recent presentation by STMicroelectronics, the total addressable market for automotive electronics is worth \$35.3 billion in 2019. Today, around 65% of the total electronics in vehicles comprise traditional automotive core electronics, while digitalization and electrification systems account for the remaining 35%.

"Ten to 20 years ago, it would probably take 15, 20 years, or even more, to change this partitioning," says Davide Bruno, Head of Marketing and Application for MEMS Analog, MEMS and Sensors Group (AMS), Asia Pacific, at STMicroelectronics. "With the current speed of new projects, new developments and new technologies, we will move to more than 60% of digitalization and electrification, and less than 40% will be for the traditional automotive core electronics. This will happen in just three to five years from now."

First 4D Imaging Radar for Autonomous Driving to Deploy in 2021

Continental announced it is using Xilinx FPGAs to deploy the automotive industry's first production-ready 4D imaging radar, expected to ship in passenger vehicles in 2021. Continental's new advanced radar sensor (ARS) 540 will use the Zynq UltraScale+ MPSoC platform, enabling vehicles equipped with the sensor to realize SAE J3016 Level 2 functionalities, paving the way toward eventual Level 5 autonomous driving systems.

The various scenarios where radar comes in useful in automated driving (Image: Xilinx)

Continental's ARS540 is a long-range 4D imaging radar with high resolution and 300-meter range. Its $\pm 60^\circ$ field-of-view enables multi-hypothesis tracking for prediction while driving, which is critical for managing complex driving scenarios, such as the detection of a traffic jam under a bridge.

Thanks to CoolSiC™ from Infineon, Lite-on delivers SMPS with 80 PLUS Titanium certificate

Munich, Germany, and Taipei, Taiwan – 24 September 2020 – The trend of digitalization has accelerated. Consequently, the number of server farms has risen and with it the power demand. Driven by the phenomenon of global warming, the importance of higher energy efficiency of operations is therefore increasing. Introduced in 2004, the measurement standards defined by the North American 80 PLUS initiative can be used to evaluate and certify the efficiency of switched-mode power supplies (SMPS). A certificate is granted if the SMPS achieves at least 80 percent at defined load conditions. Solutions bearing the 80 PLUS certificate thus help in reducing the power demand of digitalization.

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