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The Global Semiconductor Industry Analysts

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Why Apple 'iCar' Won't Be Self-Driving

Do you have an iPhone? Ever tried to unlock it using Face ID while wearing any kind of face covering? It doesn't work, because the software is too brittle for a real-world application. Apple declares that Face ID is designed to work with hats, scarves, glasses, contact lenses and many sunglasses, but didn't train its algorithms to work with face masks, let alone full-face respirators. Why would it?

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As Thermal Imaging Heats Up, Owl Joins the Fray

Teledyne's announcement Monday to acquire Flir Systems, a thermal imaging sensor company, in a \$8 billion cash and stock deal, signaled a clear message to automotive technology suppliers: Thermal imaging is on the rise.

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TI GaN FETs Enable EVs and Industrial Power

Texas Instruments has announced its next generation of 600-V and 650-V gallium nitride (GaN) field-effect transistors (FETs) for automotive and industrial applications. Leveraging GaN-on-Si technology and an integrated fast-switching 2.2-MHz gate driver, the new GaN FET families achieve 99% efficiency as per data sheet specifications.

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TALK TO US



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5G Advocates Renew Attempts to Poach Wi-Fi's 6GHz

One of the key themes in the mobile communications sector over the coming year will focus on whether cellular or Wi-Fi would — should — dominate access to the mid-band 6 GHz spectrum.

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In consumer electronics, brittle software has been a fact of life for decades. If you are over forty you will have experienced the horrors of the Blue Screen of Death. If you are younger and have never heard that name before, this is what it looks like.

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The year 2020 taught us that neither autonomous vehicles (currently in road tests) nor consumer vehicles with advanced driver-assistance systems possess a level of "eyesight" that works in all weather conditions on all terrain all day long and in the dark.

On one hand, AV developers have logged hours of driverless vehicles picking up and dropping off passengers in sunny Arizona, test-driving in Florida or tooling around downtown San Francisco (often limited to certain areas of the city at certain hours). On the other hand, conspicuously absent from the show are video clips of robocars braving fog, rain, snow, blizzards, low light and no light.

TI GaN FETs Enable EVs and Industrial Power Designs

Texas Instruments has announced its next generation of 600-V and 650-V gallium nitride (GaN) field-effect transistors (FETs) for automotive and industrial applications. Leveraging GaN-on-Si technology and an integrated fast-switching 2.2-MHz gate driver, the new GaN FET families achieve 99% efficiency as per data sheet specifications.

Increasing sales of electric vehicles (EV) is creating a strong demand for compact and lightweight power management solutions. Simultaneously, the availability of more efficient and cost-effective industrial solutions will reduce emissions, contributing to a cleaner environment.

In an interview with Power/EE Times, Steve Lambouses, vice president for high voltage power, and Steve Tom, GaN product line manager, at Texas Instruments, highlighted how the use of new GaN FETs can reduce the size of power management solutions in industrial environments, especially chargers and DC/DC converters in electric vehicles (EVs) where they will contribute to longer battery life.

Teledyne Acquires Flir in \$8 Billion Cash and Stock Deal

In a move to bolster its imaging sensor portfolio, Teledyne Technologies Monday announced that it will acquire Flir Systems, a thermal imaging sensor company, in a cash and stock deal estimated at about \$8 billion.

Armed with a spectrum of sensor technologies, Teledyne's capabilities in X-rays, ultra violet, microwave and radio cover numerous specialty applications.

Phil Magney, founder and president of VSI Labs, told EE Times, "It appears that Flir fills a gap in the Teledyne portfolio especially when it comes to low cost thermal detectors."

5G Advocates Renew Attempts to Poach Wi-Fi's 6GHz Spectrum

One of the key themes in the mobile communications sector over the coming year will focus on whether cellular or Wi-Fi would — should — dominate access to the mid-band 6 GHz spectrum.

The issue has already been a long-running bone of contention between those who consider that 5G (or more specifically 5G New Radio) should be allocated the important frequencies so that users can gain the full benefits of the next generation of cellular, and those who have assumed that the issue had already been settled in favor of the providers of unlicensed Wi-Fi networks.

Late December, a group of 23 operators and cellular infrastructure providers, cheer-led by the GSMA, made what amounts to a power-grab for the crucial 5925 MHz to 7125 MHz portion of the 6GHz spectrum