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The Global Semiconductor Industry Analysts

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Combating Relay Car Theft Through UWB Technology

NXP Semiconductors N.V. and Volkswagen have unveiled their first concept car utilizing ultra-wideband (UWB) technology, showing off what is considered one of the major benefits of the technology — the ability to combat relay theft protection, one of the biggest problems with keyless entry systems in modern cars.

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TALK TO US

Is 5G the Enabler for a 'Connected World'?

With the dominoes falling into place, 5G services are going live around the world and Keysight has taken this opportunity to 'set their stall out' in what they believe will be a transformative era.

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EVENTS

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Industry Forecast Briefing

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New VIPer Converter from STMicroelectronics

The STMicroelectronics VIPer26K high-voltage converter integrates a 1050V avalanche-rugged N-channel power MOSFET that enables offline power supplies to combine a wide input-voltage range with the advantages of a simplified design.

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Future Horizons Ltd, • 44 Bethel Road • Sevenoaks • Kent TN13 3UE • England
Tel: +44 1732 740440 • Fax: +44 1732 740442
e-mail: mail@futurehorizons.com• http://www.futurehorizons.com/
Affiliates in Europe, India, Israel, Japan, Russian, San Jose California, USA

Combating Relay Car Theft Through UWB Technology

HAMBURG, Germany — NXP Semiconductors N.V. and Volkswagen have unveiled their first concept car utilizing ultra-wideband (UWB) technology, showing off what is considered one of the major benefits of the technology — the ability to combat relay theft protection, one of the biggest problems with keyless entry systems in modern cars.

As indicated earlier this month when the FiRa consortium was launched, the ability to precisely determine spatial information with extremely high accuracy down to just a few centimeters and with low latency makes UWB, or fine ranging technology, ideal for security and especially keyless access systems.

At the launch this week, Lars Reger, chief technology officer for NXP, explained this further. “We use UWB to measure the time of flight. So, if you have a key in your pocket and you are approaching your car, the car can exactly measure the travelling time of a signal between the key and the car, and therefore determine how far away you are.

GlobalFoundries/TSMC Spat Hurts the Industry

The legal tiff that GlobalFoundries (GF) initiated with TSMC yesterday is yet another factor likely to impede growth and profitability in the semiconductor industry during the foreseeable future, according to analysts.

“The big impact will be if GF gets an injunction that stops customer imports into the EU and U.S.,” VLSI Research CEO Dan Hutcheson told EE Times. “This alone would prevent the industry’s recovery in 2020.”

GlobalFoundries filed 25 lawsuits in the U.S. and Germany against 20 major companies alleging patent infringement of 16 of its semiconductor device and manufacturing technologies used by TSMC.

Breakthrough Flexible Actuator Technology Unveiled

Creating a new category of flexible electronics, Senseg has unveiled the industry’s first family of flexible actuators, manufactured on newly developed roll-to-roll manufacturing technology, delivering advantages in scalability, size, weight, and cost. The new Senseg elastomeric film actuator, or ELFIAC, can be used as a replacement for traditional actuators, including piezoelectric devices. It also opens up new opportunities for haptic technologies in applications, such as wearables, soft robotics, and virtual reality/augmented reality (VR/AR) devices.

The flexible actuator is composed of insulated electrode films separated by silicone elastomer spacers, or pillars. The silicon micro pillars work like springs. An electrostatic force compresses the layers and provides the actuation. The key enablers are the mechanical properties of the liquid silicon rubber used in the elastomer pillars, micromachining technologies, other new manufacturing methods which enable scaling to very large sizes, and a new high-voltage driver.

Is 5G the Enabler for a 'Connected World'?

With the dominoes falling into place, 5G services are going live around the world and Keysight has taken this opportunity to ‘set their stall out’ in what they believe will be a transformative era.

I’m sure by now that you’ve heard all about the speeds on offer with 5G and you’re quite possibly drooling over the prospect of buying a 5G enabled handset. But as expressed at this years Keysight World, 5G means far more than just high streaming speeds.

5G is being labelled as the technology with the capability to truly disrupt and transform our daily lives, but what does this actually mean?

New VIPer Converter from STMicroelectronics

The STMicroelectronics VIPer26K high-voltage converter integrates a 1050V avalanche-rugged N-channel power MOSFET that enables offline power supplies to combine a wide input-voltage range with the advantages of a simplified design.

The extremely high voltage rating of the VIPer26K MOSFET eliminates the need for conventional stacked FETs and associated passive components to achieve similar voltage capability, and smaller external snubber components can be adopted. Drain current-limit protection is built-in and the MOSFET includes a senseFET connection for over-temperature protection.