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The Global Semiconductor Industry Analysts

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Infineon SoC Now Ready with Bluetooth 5.4 Spec

Infineon Technologies AG's AIROC CYW20829 Bluetooth Low Energy (LE) system on chip (SoC) is ready with the newly released Bluetooth 5.4 specification. With the right combination of low power and high performance, AIROC CYW20829 is designed to support the entire spectrum of Bluetooth LE use cases including smart home, sensors, etc

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Nexperia Launches 650V SiC Diodes for Power Conversion Applications

Nexperia has introduced a 650V silicon carbide (SiC) Schottky diode designed for power applications which require ultra-high performance, low loss, and high efficiency. The 10A, 650V SiC Schottky diode is an industrial-grade part that addresses the challenges of demanding high voltage and high current applications

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Processor Startup Innovates Memory Allocation Management

The leaders of VyperCore, a U.K. processor startup that received £4 million in seed funding this month, told EE Times they believe the firm has developed an innovation in memory allocation management that accelerates high-performance, general-purpose compute workloads by a factor of up to 10x—without modifying the original code.

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TALK TO US



NIO and NXP Collaborate on 4D Imaging Radar Deployment

Electric vehicle (EV) maker NIO Inc. will leverage NXP Semiconductors' automotive radar technology, including its ground-breaking 4D imaging radar solution, to enable significant improvements in front radar performance.

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Nvidia sets up Guardrails to keep Generative AI on track

Generative AI applications have generated many questions about how enablers and users of the technology make these apps comply with privacy regulations, ethics guidelines, and other rules for corporate usage.

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Infineon SoC Now Ready with Bluetooth 5.4 Spec

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Infineon Technologies AG's AIROC CYW20829 Bluetooth Low Energy (LE) system on chip (SoC) is ready with the newly released Bluetooth 5.4 specification. With the right combination of low power and high performance, AIROC CYW20829 is designed to support the entire spectrum of Bluetooth LE use cases including smart home, sensors, medical healthcare, lighting, Bluetooth Mesh networks, remote controls, human interface devices (mouse, keyboard, VR and gaming controllers), industrial automation, and automotive.

The recently released Bluetooth Core Specification 5.4 adds several significant capabilities to the existing specification, including PAwR (Periodic Advertising with Response), Encrypted Advertisement Data (EAD) and LE GATT Security Levels Characteristic. PAwR enables energy-efficient, bi-directional communication in a large-scale one-to-many or star topology. EAD provides a standardized approach to the secure broadcasting of data in advertising packets.

Nexperia Launches 650V SiC Diodes for Power Conversion Applications

Nexperia has introduced a 650V silicon carbide (SiC) Schottky diode designed for power applications which require ultra-high performance, low loss, and high efficiency.

The 10A, 650V SiC Schottky diode is an industrial-grade part that addresses the challenges of demanding high voltage and high current applications. These include switched-mode power supplies, AC-DC and DC-DC converters, battery-charging infrastructure, uninterruptible power supplies, and photovoltaic inverters, and allow for more sustainable operations. Data centers, for example, equipped with power supplies designed using Nexperia's PSC1065K SiC Schottky diode, will be better placed to meet rigorous energy efficiency standards than those using solely silicon-based solutions.

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In a record seed funding round for the U.K., investors believe that the startup, co-founded by Ed Nutting and Russell Haggard, has the potential to deliver significant cost and energy savings in the data center without rewriting existing code bases.

VyperCore's key innovation is its memory-allocation-management technology, which moves away from the processor's traditional view of its memory as being a single linear space.

NIO and NXP Collaborate on 4D Imaging Radar Deployment

Electric vehicle (EV) maker NIO Inc. will leverage NXP Semiconductors' automotive radar technology, including its ground-breaking 4D imaging radar solution, to enable significant improvements in front radar performance. The cars will be able to detect and classify objects such as other vehicles and vulnerable road users in high-way and complex urban scenarios and at distances of up to 300m, bringing more safety to the roads and driving comfort for end users.

OEMs increasingly focus on the introduction of safety and convenience features to take autonomous driving services to the next level. NXP's imaging radar technology expands radar's capabilities from measuring range and speed, to include direction, angle of arrival, and elevation measurement. Fine-resolution point clouds enhance environmental mapping and scene understanding, enabling the detection and classification of objects beyond the range of human eyesight while measuring the objects' velocity under almost all weather and light conditions. The technology is a key step in improving road safety and saving lives, it allows the car to 'see' a motorcycle driving close to a large delivery truck or a child entering a roadway between parked cars.

Nvidia sets up Guardrails to keep Generative AI on track

Generative AI applications have generated many questions about how enablers and users of the technology make these apps comply with privacy regulations, ethics guidelines, and other rules for corporate usage.

That all of this was not apparent earlier reflects just how quickly Generative AI emerged into wide usage. Companies like Nvidia for years have been behind the cause to ensure ethical AI behavior and policies, but the overnight success of ChatGPT did not leave much time for technology companies to demonstrate safety-first and privacy-above-all approaches to Generative AI usage.