

FutureHorizons



The Global Semiconductor Industry Analysts

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Infinion Leads Intelligent Power Electronics Research Initiative

Over 100 representatives from 39 companies and 23 research institutions kicked off PowerizedD, a European research initiative focusing on intelligence in power electronics and decarbonizing European society. PowerizedD is to take the sustainability and resilience of the European energy chain, from generation to application, to a new level and strengthen Europe's technological sovereignty

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Single-chip Antenna-matching ICs Simplify RF Circuit Design

STMicroelectronics has extended its range of single-chip antenna-matching ICs that simplify RF-circuit design with two new devices optimized for BlueNRG-LPS system-on-chip ICs (SoCs) and STM32WB1x and STM32WB5x wireless microcontrollers.

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Bosch to invest \$1 billion in Chinese R&D and manufacturing

Bosch plans to expand its presence in China by enhancing its local R&D and manufacturing capabilities in electrified and intelligent mobility.

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TALK TO US



Wireless SoCs Solve Connectivity Challenges

Wireless systems-on-chip (SoCs) are favored by IoT system designers for their high functionality, low power consumption and space savings. These devices are comprised of a number of key components, including the processors, radios, power management, memory, interfaces and peripherals.

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EVENTS

[Silicon Chip Industry Seminar](#)

-March 2023- London UK

[Industry Forecast Briefing](#)

- September 2023- London UK

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Diodes Launches First SiC SBDs

Diodes Inc. has released its first silicon carbide (SiC) Schottky barrier diodes (SBD). The portfolio includes the DIODES DSCxxA065 series with 11 products rated at 650V (4A, 6A, 8A, and 10A) and the DIODES DSCxx120 series with eight products rated at 1.2kV (2A, 5A, and 10A).

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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

Infineon Leads Intelligent Power Electronics Research Initiative

Over 100 representatives from 39 companies and 23 research institutions kicked off PowerizedD, a European research initiative focusing on intelligence in power electronics and decarbonizing European society.

PowerizedD is to take the sustainability and resilience of the European energy chain, from generation to application, to a new level and strengthen Europe's technological sovereignty. Sixty-two research partners from 13 European countries are involved in the major European project with an overall volume of 72 million euros. PowerizedD addresses a new level of technology and relies increasingly on the digitalization of power applications. Infineon Technologies AG initiated the project, is an active participant with several corporate divisions and is also the overall project coordinator.

Single-Chip Antenna-Matching ICs Simplify RF Circuit Design

STMicroelectronics has extended its range of single-chip antenna-matching ICs that simplify RF-circuit design with two new devices optimized for BlueNRG-LPS system-on-chip ICs (SoCs) and STM32WB1x and STM32WB5x wireless microcontrollers.

The MLPF-NRG-01D3 for BlueNRG-LPS and MLPF-WB-02D3 for STM32WB integrate the complete filtering and impedance-matching network needed for best RF output power and receiver sensitivity with an external antenna. Each has 50Ω nominal impedance on the antenna side. The chip-scale package has a minuscule footprint, 0.4mm bump pitch, and a profile of only 630µm after reflow soldering. Also featuring a 2.4GHz low-pass filter, ST's new antenna-matching ICs ease compliance with worldwide radio regulations including FCC, ETSI, and ARIB specifications.

Bosch To Invest \$1 Billion In Chinese R&D And Manufacturing

Bosch plans to expand its presence in China by enhancing its local R&D and manufacturing capabilities in electrified and intelligent mobility.

Bosch Automotive Products (Suzhou) has signed an investment agreement with Suzhou Industrial Park Administrative Committee (SIP) to set up an R&D and Manufacturing base for New Energy Vehicles Core Components and Automated Driving.

Bosch plans to complete phase one of the project by mid-2024. In total, the German company plans to invest around USD 1 billion to realise the project over the next years, ramping up its new energy vehicle and automated driving-related businesses.

Wireless SoCs Solve Connectivity Challenges

Wireless systems-on-chip (SoCs) are favored by IoT system designers for their high functionality, low power consumption and space savings. These devices are comprised of a number of key components, including the processors, radios, power management, memory, interfaces and peripherals.

One of the biggest drivers in wireless SoCs is the growing need for multi-protocol support to meet the requirements of different IoT devices. Chipmakers need to keep up with existing standards that continue to evolve as well as new wireless standards. These include Wi-Fi, Bluetooth LE, Bluetooth classic, 802.15.4, ZigBee, Thread, Z-Wave, Matter, cellular and other proprietary wireless protocols.

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These wide-bandgap SBDs bring the benefits of significantly improved efficiency and high-temperature reliability, while also responding to market demands for reduced system running costs and low maintenance. The devices are suitable for AC-DC, DC-DC, and DC-AC switching converters, photovoltaic inverters, uninterruptible power supplies, and industrial motor drive applications. These devices can also be used in a variety of other circuits, such as boost converters for power factor correction.