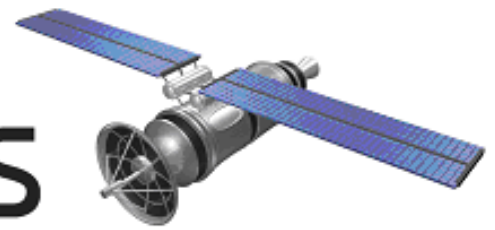


FutureHorizons



The Global Semiconductor Industry Analysts

FH MONDAY

27 March 2023

BMW Taps onsemi SiC Technology for Next-generation EVs

onsemi has inked a long-term supply agreement (LTSA) with BMW AG (BMW) for its EliteSiC technology in the German premium car manufacturer's electric drivetrains for 400V DC bus. onsemi's latest EliteSiC 750V M3 die is used in a full bridge power module delivering several hundred kW of power.

[read more](#)

Microchip SPE Devices Reduce Cost and Complexity of IIoT Edge Devices

Single Pair Ethernet (SPE) technology is setting the stage for all-Ethernet IIoT and industrial operational technology (OT) networks that are built with a new class of synchronized low-speed Ethernet edge devices and a simplified cabling infrastructure for latency-sensitive traffic streams.

[read more](#)

Renesas to Acquire Pantronics

Renesas Electronics Corp.'s wholly owned subsidiary has entered into a definitive agreement with the shareholders of Pantronics AG, a fabless semiconductor company specializing in high-performance wireless products, under which Renesas will acquire Pantronics in an all-cash transaction.

[read more](#)

FutureHorizons



TALK TO US



Nvidia Brings GPU Acceleration to Computational Lithography

Nvidia has built a software library for the acceleration of computational lithography workloads, enabling order-of-magnitude speedups for these workloads when combined with the latest GPU hardware. The library, CuLitho, will be used at Taiwan Semiconductor Manufacturing Co. (TSMC) beginning in June..

[read more](#)

EVENTS

[Silicon Chip Industry Seminar](#)

-March 2023- London UK

[Industry Forecast Briefing](#)

- September 2023- London UK

**DON'T MISS OUT.-
BOOK NOW BY
CALLING**

+44 1732 740440

**OR EMAIL
mail@futurehorizons.com**

Pattern-Shaping System Speeds Up Chip Production

Applied Materials has introduced its new Centura Sculpta pattern-shaping system that promises to provide a cost-effective alternative to extreme ultraviolet (EUV) lithography double patterning used to print dense interconnect lines and vias

[read more](#)

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

BMW Taps onsemi SiC Technology for Next-generation EVs

onsemi has inked a long-term supply agreement (LTSA) with BMW AG (BMW) for its EliteSiC technology in the German premium car manufacturer's electric drivetrains for 400V DC bus. onsemi's latest EliteSiC 750V M3 die is used in a full bridge power module delivering several hundred kW of power.

The companies' strategic collaboration during the development and integration of the electric drivetrain enabled onsemi to provide differentiated and application-specific die solutions, including optimized size and layout as well as high performance and reliability. Enhanced electrical and mechanical characteristics produce high efficiency and lower overall losses while delivering the highest system-level performance.

Microchip SPE Devices Reduce Cost and Complexity of IIoT Edge Devices

Single Pair Ethernet (SPE) technology is setting the stage for all-Ethernet IIoT and industrial operational technology (OT) networks that are built with a new class of synchronized low-speed Ethernet edge devices and a simplified cabling infrastructure for latency-sensitive traffic streams.

Microchip Technology Inc. has launched new industrial-grade SPE products that will help fulfill SPE's promise, from 10BASE-T1S MAC-PHYs that more easily connect edge IIoT devices to the cloud, to industrial versions of its 100BASE-T1 Time Sensitive Networking (TSN) Ethernet PHY transceivers and switches that enable higher-speed applications across far-reaching Ethernet networks.

Renesas to Acquire Panthronics

Renesas Electronics Corp.'s wholly owned subsidiary has entered into a definitive agreement with the shareholders of Panthronics AG, a fabless semiconductor company specializing in high-performance wireless products, under which Renesas will acquire Panthronics in an all-cash transaction.

The acquisition will enrich Renesas' portfolio of connectivity technology, extending its reach into high-demand near-field communication (NFC) applications in fintech, IoT, asset tracking, wireless charging, and automotive applications.

NFC has emerged as a de facto standard in the digital economy and touches many aspects of daily life. Fintech, such as mobile point-of-sale (mPoS) terminals and contactless payment, IoT, asset tracking, and wireless charging are highlights of NFC's increasing presence.

Nvidia Brings GPU Acceleration to Computational Lithography

Nvidia has built a software library for the acceleration of computational lithography workloads, enabling order-of-magnitude speedups for these workloads when combined with the latest GPU hardware. The library, CuLitho, will be used at Taiwan Semiconductor Manufacturing Co. (TSMC) beginning in June. Accelerating computational lithography has the potential to improve yield, thereby reducing cost per chip. Other benefits include reducing the carbon footprint associated with this workload, faster turnaround and enabling advanced process nodes with tiny feature sizes.

"CuLitho will accelerate not just mask making but the entire development cycle type for any foundry that uses it," said Vivek Singh, VP of accelerated computing at Nvidia. "The second benefit of CuLitho is even more profound... the current calculations of computational lithography, large as they are, may not actually be good enough to make the chips of tomorrow. Those chips will require new technologies, which could require 10 times more computation."

Pattern-Shaping System Speeds Up Chip Production

Applied Materials has introduced its new Centura Sculpta pattern-shaping system that promises to provide a cost-effective alternative to extreme ultraviolet (EUV) lithography double patterning used to print dense interconnect lines and vias. As a result, the solution can reduce the number of EUV steps, production complexity and costs while potentially improving yields.

By now, all three leading chipmakers—Intel, Samsung and Taiwan Semiconductor Manufacturing Co. (TSMC)—have either started to use EUV lithography tools for mass production or are about to. Lithography scanners are certainly the rockstars of wafer fab equipment, and EUV lithography tools are set to be instrumental for chipmakers for years to come. But there are other tools that are vital to continuously shrinking transistor dimensions, increasing performance and reducing power consumption, such as Applied Materials' Centura Sculpta pattern-shaping system.