

FutureHorizons



The Global Semiconductor Industry Analysts

FH MONDAY

23 January 2023

Skyworks and Semtech Partner

Skyworks Solutions Inc. and Semtech Corp. have partnered on the SKY66423-SX1261 reference design for low-power wide-area networks (LPWAN). The SKY66423-SX1261 combines Semtech's LoRa Connect SX1261 transceiver with Skyworks' SKY66423 front-end module (FEM) for use in a variety of industrial and smart city applications.

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NXP Enables Secure and Scalable AI-enabled Edge Platforms

NXP Semiconductors' i.MX 95 family, the newest addition to its i.MX 9 series of applications processors, combines high-performance compute, immersive Arm Mali-powered 3D graphics, an innovative new NXP accelerator for machine learning, and high-speed data processing.

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Imec Crafting Tools to Treat Cancer. Sequence

LEUVEN, Belgium—Imec, a research center for nanoelectronics and digital technologies based here, is developing tools, modules and nanochips with the goals of advancing cancer treatment, sequencing proteomes and better understanding the brain, Peter Peumans, imec's CTO for health technologies, told EE Times.

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TALK TO US



Micron Pushes DRAM Node for Mobile First

Micron Technology has been setting the pace for DRAM advancement of late. Its 1-beta DRAM technology continues the trend, but other major vendors are keeping up, even as it looks like DRAM prices will be lower in 2023.

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Energous Expands Wireless Power Network Ecosystem

The Internet of Things (IoT) ecosystem is rapidly and incessantly expanding, with an ever-increasing number of connected devices thanks to the diffusion of smart technologies, the transformation and digitization processes created by Industry 4.0, and the innovations introduced in different industrial and commercial sectors, such as retail.

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Skyworks and Semtech Partner on LPWAN Reference Design for Industrial, Smart City Applications

Skyworks Solutions Inc. and Semtech Corp. have partnered on the SKY66423-SX1261 reference design for low-power wide-area networks (LPWAN). The SKY66423-SX1261 combines Semtech's LoRa Connect SX1261 transceiver with Skyworks' SKY66423 front-end module (FEM) for use in a variety of industrial and smart city applications.

The proliferation of wireless devices operating in the industrial, science and medical (ISM) bands contributes to noise interference and creates reliability challenges for long-range and power-sensitive applications. By increasing the transmit output power and reducing the receiver's system noise figure, the SKY66423-SX1261 addresses these challenges and provides an effective solution for industrial IoT deployments using LoRaWAN.

NXP Enables Secure and Scalable AI-enabled Edge Platform

NXP Semiconductors' i.MX 95 family, the newest addition to its i.MX 9 series of applications processors, combines high-performance compute, immersive Arm Mali-powered 3D graphics, an innovative new NXP accelerator for machine learning, and high-speed data processing. Together, this technology enables advanced applications in automotive, industrial, networking, connectivity, advanced human machine interface (HMI), and more.

Additionally, the i.MX 95 family delivers high performance safety and security features, developed in compliance with automotive ASIL-B and industrial SIL-2 functional safety standards and including an integrated EdgeLock secure enclave.

A critical requirement for the next wave of edge applications is advanced processing and machine learning capabilities, combined with high-speed connectivity, in order to better analyze the environment and make intelligent decisions locally.

Imec Crafting Tools to Treat Cancer, Sequence Proteomes

LEUVEN, Belgium—Imec, a research center for nanoelectronics and digital technologies based here, is developing tools, modules and nanochips with the goals of advancing cancer treatment, sequencing proteomes and better understanding the brain, Peter Peumans, imec's CTO for health technologies, told EE Times.

One project focuses on improving the groundbreaking adoptive cell cancer therapy called chimeric antigen receptor (CAR) T-cell therapy, which involves removing a patient's T-cells, reprogramming those cells so they can recognize and kill a cancerous tumor, multiplying the cells and then injecting the modified cells into the patient's body to hunt down and eliminate cancer cells, he said. The treatment is effective with an up to 90% remission rate, but it's also quite expensive: hundreds of thousands of dollars.

Micron Pushes DRAM Node for Mobile First

Micron Technology has been setting the pace for DRAM advancement of late. Its 1-beta DRAM technology continues the trend, but other major vendors are keeping up, even as it looks like DRAM prices will be lower in 2023.

The company said at the beginning of November that it was shipping qualification samples of its 1-beta DRAM to select smartphone customers and that it's ready for mass production. The advanced DRAM technology node, which will be used first on Micron's low-power double data rate 5X (LPDDR5X) mobile memory that delivers speeds of 8.5 Gb/s, follows the company's 1-alpha DRAM that began volume shipment in 2021.

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Energous Corporation developed the WattUp technology, which supports both contact and distance charging in a single ecosystem. Holding over 200 patents, Energous develops silicon-based wireless power transfer (WPT) technology and specialized reference designs for clients, while offering regulatory support, a solid supply chain, quality assurance, and sales and technical support.