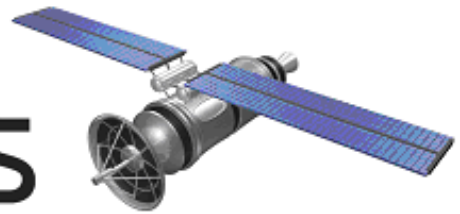# FutureHorizons
The Global Semiconductor Industry Analysts

FH MONDAY

4 July 2016

BLE chip solution extends battery life

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Multiband SoCs support 2.4GHz, sub-GHz connectivity

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Graphene e-paper promises brighter display

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TALK TO US

Dongbu provides iPDK support for Synopsys

Dongbu HiTek and Synopsys recently unveiled the interoperable Process Design Kits (iPDKs) that enable Dongbu HiTek foundry customers using Synopsys' Custom Compiler solution to design specialised targets analogue/power and mixed-signal chips.

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Intel Xeon Phi Solos

LAKE WALES. Fla.—Intel's 72-processor Xeon Phi now boots stand-alone, rather than as a coprocessor, to tackle any multiprocessing task—especially brain-like deep learning and artificial intelligence (AI).

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BLE Chip Solution Extends Battery Life

STMicroelectronics has designed its new BlueNRG-1 programmable System-on-Chip (SoC) to satisfy high-volume opportunities in the growing Bluetooth Low Energy market through the combination of superior energy efficiency and strong radio performance.

Shipments of IoT products that support Bluetooth Low Energy should increase 34% to 2021 (CAGR), reaching close to 1.4 billion units, according to ABI Research, aided by proliferation of Bluetooth-enabled tablets and smartphones that provide a convenient user interface for interacting with Bluetooth Low Energy devices.

Bluetooth Low Energy devices must ensure energy-efficient operation, including extremely low power consumption in sleep and standby modes that are used frequently to maximise battery life. Strong radio performance is also needed to advertise availability and connect reliably.

Multiband SoCs support 2.4GHz, sub-GHz connectivity

Expanding its Wireless Gecko portfolio, Silicon Labs has launched the industry's first multiband, multiprotocol wireless system-on-chip (SoC) devices for the Internet of Things (IoT) market.

The new multiband Wireless Gecko SoCs enable developers to use the same multiprotocol device for operation in 2.4GHz and multiple sub-GHz bands, simplifying connected device designs, reducing cost and complexity, and speeding time to market.

Multiband Wireless Gecko SoCs are ideal for IoT connectivity products in application areas such as building and home automation, smart metering, security, health and fitness monitoring, connected lighting, electronic shelf labels and asset tracking.

Graphene E-Paper Promises Brighter Display

Dubbed as "the world's first graphene electronic paper," Guangzhou OED Technologies, in partnership with a company in Chongqing, has developed a new electronic paper that will take the material to a new level.

Graphene, a material known for its durability and light weight, with its single layer measuring 0.335nm thick, conducts heat and electricity.

The material can be used to create hard or flexible graphene displays, used in electronic products such as e-readers and wearable smart devices.

Dongbu Provides iPDK Support For Synopsys

Dongbu HiTek and Synopsys recently unveiled the interoperable Process Design Kits (iPDKs) that enable Dongbu HiTek foundry customers using Synopsys' Custom Compiler solution to design specialised targets analogue/power and mixed-signal chips.

The new iPDKs initially support Dongbu HiTek's mixed-signal process nodes at 0.11µm as well as BCDMOS technology at 0.18µm node operating at 1.8V/5V and up to 30V with LDMOS. The combination of the iPDKs and Custom Compiler's ability to shorten analogue layout tasks from days to hours will enable mutual customers to design specialised analogue/power and mixed-signal chips that target high-growth markets.

Intel Xeon Phi Solos

Intel's 72-processor Xeon Phi now boots stand-alone, rather than as a coprocessor, to tackle any multiprocessing task—especially brain-like deep learning and artificial intelligence (AI). Intel says the bootable Xeon Phi scales to any number of processors using Intel's scalable-system framework (SSF) with integrated on-chip fabric, Omni-Path fiber and silicon photonics. Speed was bumped to 1.5-GHz for high-performance computing (HPC) orchestration while maintaining its low-power energy budget compared with GPU-based and other competing high-speed multicore arrays tied to PCIe, according to Intel.

"The Xeon Phi is the world's first CPU with integrated fabric in-package," Charles Wuischpard, vice president of the Data Center Group and general manager of the HPC Platform Group told EE Times. "The Xeon Phi is now bootable by itself, has integrated in-package memory and can run on systems as small as developer workstations starting at $5k. It has also achieving a world record one-socket SPECfp benchmark."