FutureHorizons

The Global Semiconductor Industry Analysts

Future Horizons Newsletter

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Industry News By Company

Apple Inc A9 Chips To Be Built By Samsung Electronics

In 2014, it was speculated that South Korean tech giant, Samsung Electronics Co. Ltd (OTCMKTS:SSNLF) would be returning to manufacturing Apple Inc's (NASDAQ:AAPL) next A9 chip in regards to the 14nm FinFET process. In the events ensuing the speculation, it was circulated that Samsung had lost the majority of Apple's A9 orders and that Taiwan Semiconductor Mfg. Co (ADR) (NYSE:TSM) would be manufacturing the bulk of the A9 chips.

A report released by Bloomberg states that Apple has decided to utilize Samsung's fabs to build the entire lot order of the required A9 chips. The decision was made after TSMC allocated approximately $12 billion to propel its newly designed 16 nm FinFET processing technology. The Apple A9 chips are set to be built in South Korea, at Samsung's Giheung plant.

Avago Technologies Demonstrates Next Generation Data Center Technologies At OFC 2015

Avago Technologies (NASDAQ: AVGO), a leading supplier of analog interface components for wireless, wireline, storage and industrial applications, today announced it will demonstrate its latest optical transceiver technologies for next generation data center and enterprise storage applications. The live demonstrations of new technologies will be in the Avago booth 1567 at the Optical Fiber Communication (OFC) 2015 exhibition in Los Angeles, California from March 24th to 26th.

As data center networks transition to 100G speeds to support higher bandwidth demands, technical challenges emerge across various levels of the network from storage endpoints to servers to top-of-rack (ToR) and core switches.

CMOS Chip Offers Two-Fold Increase In Cellular Speed

A team of researchers from Columbia University has unveiled a complementary metal oxide semiconductor (CMOS) chip called CoSMIC (Columbia high-speed and mm-wave IC) that can perform full-duplex on the same frequency at the same time, which according to them doubles the wireless communication's speed.

In electrical engineering school you were taught that full-duplex (sending and receiving) had to be done on different frequencies or at different times (technically half-duplex). That is, either transmitting and receiving at the same time, but on different frequencies, or at different times on the same frequency. But that is a lie, according to researchers at Columbia University in New York City.

Dialog Semiconductor Plc.: Dialog Semiconductor Launches the World's First Bluetooth(R) Smart Wearable-on-Chip(TM) (news with additional features)

LONDON--(BUSINESS WIRE)--Dialog Semiconductor plc (FWB:DLG), a provider of highly integrated power management, AC/DC power conversion, solid state lighting (SSL) and Bluetooth Smart wireless technology, has released details of its DA14680 'Wearable-on-Chip' Bluetooth Smart (v4.2) device. The small, ultra-low power integrated circuit includes the key functionality to create a fully hosted wearable computing product. It features flexible processing power, flash memory for virtually unlimited execution space, dedicated circuitry for sensor control, analogue and digital peripherals optimised for wearable products, and an advanced power management unit. This DA14680 eliminates several external chips from wearable product design, facilitating smaller form factors, lower system cost and lowest power consumption.

"With its feature-rich functionality, smallest size and lowest power, the DA14680 will also address other emerging IoT applications"

Addressing the wearable market predicted to reach approximately 170 million units by 2019,(1) the DA14680's ultra-low power 30uA/MHz ARM(R) Cortex(TM)-M0 application processor may be programmed to a maximum clock frequency of 96 MHz. Security features include a dedicated hardware crypto engine with elliptic curve cryptology (ECC), delivering end-to-end banking-level encryption, ensuring personal data security. The device integrates 8 Mbit flash memory, audio support with PDM and I2S/PCM interfaces, two separate I2C and SPI buses, three white LED drivers, a temperature sensor, multi-channel DMA, and an 8-channel, 10-bit ADC. Intelligent power management, including system power rails and a Li-ion/LiPo battery charger and fuel gauge are also on-chip

Imec And Surecore Collaborate On SRAM Design IP

Sheffield, England and Leuven, Belgium – 27 March 2015 – sureCore Ltd., the low power SRAM IP company and nanoelectronics R&D center imec today announced that they are collaborating on low-power SRAM IP. The collaboration includes the licensing of a set of imec SRAM design IP to sureCore to expand sureCore's IP portfolio and a participation in sureCore. Moreover, sureCore will establish a branch in Leuven to tap into the design ecosystem around imec. The Leuven-based sureCore team will consist of highly experienced designers who built up their expertise at imec and who will be instrumental in the collaboration between sureCore and imec.

"This collaboration is strategically very significant for us," explained Paul Wells, sureCore's CEO. "This will enable expertise to be pooled and shared to drive forward the development of low power SRAM IP solutions. Imec has world renowned silicon process expertise and an extensive IP portfolio that we will access."

Intel, Samsung Leave Albany Semiconductor Consortium

Intel and Samsung are no longer listed as International Sematech members on the semiconductor consortium's website.

Sematech is a consortium of computer chip makers and suppliers based in Albany, New York that design and manufacture computer chips used in devices such as cell phones and calculators.

The consortium's members and researchers collaborate to develop technology to drive down production costs. Members include some of the world's largest contract chip makers, including Taiwan Semiconductor Manufacturing Corp., GlobalFoundries, IBM Corp. and Advanced Micro Devices.

Lantiq Announces Carrier-Class Network Processing for Home Gateway

Multi-Gigabit Routing Enables Unmatched QoS, Paired with Dedicated Security and Hardware-Enforced Virtualization to Deliver True Digital Home Experience

Munich/Neubiberg, Germany – March 16, 2015 – Lantiq , a leading supplier of broadband access and home networking technologies, today introduced the industry's most integrated home gateway network processor. The new GRX350 combines unsurpassed routing performance and bi-directional packet classification to provide True Quality of Service (TrueQoS™), along with a dedicated Trusted Execution Processor (TrustWorld™) and hardware-enforced virtualization (TrueVirtualization™). This virtualization isolates concurrent applications so that networking functionality executes separately from non-networking applications, such as smart home services. One benefit of this architecture is shortened test time and time to market of new applications – without endangering the stability and integrity of the core networking software.

Microsemi To Acquire Vitesse Semiconductor For US$389 Million

Microsemi has entered into a definitive agreement to acquire Vitesse for $5.28 per share with the total transaction value is approximately $389 million.

Vitesse develops semiconductor chips for mobile access/IP edge, enterprise cloud access, and industrial-IoT networking. Though Vitesse develops high-end chips, its revenue performance was below the industry range in 2014.

Smartphone-Like Graphics Coming To Everyday Objects Courtesy Of New STM32 Microcontrollers From Stmicroelectronics

STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, has introduced new microcontroller chips designed to bring the same high-performance graphics enabling intuitive smartphone-like user interfaces in the world of wearable devices, smart appliances, and other IoT (Internet of Things) applications. The new STM32F469/479 microcontroller line delivers this new level of performance through the combination of ST's Chrom-ART Accelerator™1 and

the MIPI-DSI technology2 that is widely deployed in today's leading smartphones and tablets, without higher cost or shorter battery-lifetime penalties.

Paving the way to enabling "smart objects" such as wearable fitness aids or intelligent home appliances, the new product line combines leading real-time processing performance with extended connectivity to deliver to these applications the benefit of software ecosystems such as application stores that are increasingly part of everyday life.

Solantro Semiconductor Raises $11 Million To Accelerate Manufacturing

Ottawa's Solantro Semiconductor Corp. announced Tuesday it has landed $11 million in series-B financing.

The latest funding comes from existing investors Black Coral Capital of Boston, Presidio Ventures – an early stage investment fund owned by Japanese trading company Sumitomo Corp. – New England-based Clean Energy Venture Group, the Business Development Bank of Canada and Export Development Canada as well as a new investor, Montreal's Inerjys.

Sondrel Announce China Expansion Plans with new Design Centre to Open in Xi'an

Sondrel HQ March 2015.... The IC Design Services Consultancy, Sondrel, welcomed VP APAC Julian Kingsbury's arrival in the UK last week to discuss the implementation of the company expansion plans in China for 2015.

Sondrel's strategy in China in 2015 is an ambitious one, as the momentum continues to grow the business alongside China's developing semiconductor industry. Since entering China in 2009, Sondrel's customer base has expanded rapidly and relationships with multinationals and local IC design houses have deepened.

This year Sondrel will further develop its existing presence in the ancient capital of Xi'an, where Samsung has recently invested $7.5 billion in a new 10nm foundry, by opening a state-of-the-art design centre to better service the needs of local and international customers looking to expand their China footprint.

World's First Multitouch Button-Free 3D Shaped Panel For Automotive

Canatu, a leading manufacturer of transparent conductive films, has in partnership with Schuster Group and Display Solution AG, showcased a pioneering 3D encapsulated touch sensor for the automotive industry. The partnership is delivering the first ever, button-free 3D shaped true multi-touch panel for automotives, being the first to bring much anticipated touch applications to dashboards and paneling. The demonstrator provides an example of multi-functional display with 5 finger touch realized in IML technology. The integration of touch applications to dashboards and other paneling in cars has long been desired by automotive designers but a suitable technology was not available. Finally the technology is now here. Canatu's CNB™ (Carbon NanoBud®) In-Mold Film, with its unique stretch properties provides a clear path to the eventual replacement of mechanical controls with 3D touch sensors. The touch application was made using an existing mass manufacturing tool and industry standard processes.

Silicon Valley Startup Develops Drone-Delivery System

While Amazon.com Inc. and Google Inc. aim to use drones to ship packages to customers—an exceedingly complex task—one Silicon Valley startup says there is an easier way to deliver with drones.

Matternet Inc. is working on creating networks of delivery drones that fly on largely fixed routes between base stations. The system can serve as a cheap and efficient infrastructure to transport crucial goods in the developing world, the company says, or a shipping pipeline for companies to move inventory between stores or to frequent large-scale customers.

Matternet aims to sell its delivery-drone systems to companies, governments and aid groups. "We want to be the people that enable FedEx and UPS and many other smaller and bigger players to take [drone delivery] to the marketplace and make it widespread," said Andreas Raptopoulos, Matternet's 41-year-old chief executive.

Bosch Eyes Safety, Connectivity For Two-Wheeled Vehicles

Robert Bosch GmbH is set to open the doors of its new business unit that focuses on the areas of driving safety systems, powertrain technology and bike cockpit systems for motorbike electronics. The automotive supplier couldn't have picked a better time to address this market, considering that motorbikes and similar two-wheelers demonstrate robust growth in the global mobility market.

The Two-Wheeler and Powersports business unit will be a subsidiary of Bosch's existing Mobility Solutions branch. Unlike the latter that is based Germany's motor capital Stuttgart, the latest unit will be headquartered in Yokohama, the centre of Japan's motorbike industry. It will bundle existing activities in the areas of driving safety systems,

powertrain technology and bike cockpit systems with the goal of serving the individual needs of motorbike designers. In addition, the company plans to expand its bike-related product portfolio and strengthen its standing in this market. The new business unit will launch its activities "within a few weeks," explained a spokesperson. The GM will be Geoff Liersch.

IBM Says To Invest $3 Billion In 'Internet Of Things' Unit

Business Machines Corp said on Tuesday it will invest $3 billion (2 billion pounds) over the next four years in a new 'Internet of Things' unit, aiming to sell its expertise in gathering and making sense of the surge in real-time data.

The Armonk, New York-based technology company said its services will be based remotely in the cloud, and offer companies ways to make use of the new and multiplying sources of data such as building sensors, smartphones and home appliances to enhance their own products.

For its first major partnership, IBM said a unit of the Weather Co will move its weather data services onto IBM's cloud, so that customers can use the data in tandem with IBM's analytics tools.

5 Motivations For An Apple-Managed Car Supply Chain

Why would Apple try to successfully operate an automotive supply chain on a worldwide scale? Perhaps simply because it can.

With almost $180 billion in cash reserves, the company is already on a better footing to enter the car industry than when it reinvented the smartphone market with its iPhone.

Apple has yet to announce that it is even developing an electric car, despite numerous analyst and media reports and strong indicators that it is very much indeed making sizeable investments in an electric car model it plans to produce. Apple could begin production of its car model in 2020, according to Bloomberg.

But before Apple's project does become official, here are five reasons why Apple is more than ready to manage a multi-billion dollar automotive supply chain.

Silicon Labs Develops Low-Power API For ARM

ARM's mbed device software for the Internet of Things (IoT) will get a new power management application programming interface (API), courtesy of Silicon Labs. The API will be released this month with Silicon Lab's 32bit EFM32 Gecko microcontroller, which runs mbed on an ARM Cortex-M.

Silicon Labs did not provide specific power consumption goals but pointed to several features enabled by its API that could reduce power. For example, it automatically enables an optimal sleep mode based on the MCU peripherals in use.

New Process Could Make Gallium Arsenide Cheaper For Computer Chips, Solar Cells

Computer chips, solar cells and other electronic devices have traditionally been based on silicon, the most famous of the semiconductors, that special class of materials whose unique electronic properties can be manipulated to turn electricity on and off the way faucets control the flow of water.

There are other semiconductors. Gallium arsenide is one such material and it has certain technical advantages over silicon – electrons race through its crystalline structure faster than they can move through silicon.

But silicon has a crushing commercial advantage. It is roughly a thousand times cheaper to make. As a result, gallium arsenide-based devices are only used in niche applications where their special capabilities justify their higher cost.

Smartphones Are Silver Lining For Brazil's Electronics Sector

Smartphone sales were the silver lining of the Brazilian consumer electronics industry in 2014, comprising PCs, tablets, printers and handsets.

The segment confirmed exceeded projections in 2014, with some 54.5mn smartphone sold in Brazil, a 55% increase from the 35.2mn sold in 2013, according to data from consultancy and research firm IDC.

The figure represents sales of 104 smartphones every minute, compared with a rate of one every 68 minutes in the previous year and confirms Brazil as the fourth largest smartphone market in the world, after China, the US and India.

Boosted by the Black Friday sales event, more smartphones were sold in Q4 alone than in the whole of 2012, IDC said.

Microsemi Unveils Compact Rubidium Miniature Atomic Clock

Microsemi has released what it describes as an improved Quantum rubidium miniature atomic clock (MAC) family that surpasses wireless LTE base station and mission-critical defence infrastructure holdover requirements. Based on the company's coherent population trapping (CPT) technology, the Quantum MAC SA.3X line-up is one of the smallest, lightest and highest-performing MACs in the market, boasted the company.

Featuring mechanical robustness and temperature performance, the MAC SA.3X family is only 25 per cent of the volume of the nearest competing clock in the same category, stated the company. This small size, combined with its very low power consumption, makes the SA.3x series ideal for various platforms that mount directly on printed circuit board assemblies (PCBA), eliminating the need for a heat sink or fan.

St. Petersburg And Germany's Stuttgart Collaborate In Supercomputers

The St. Petersburg State Polytechnic University has announced collaboration with Germany's University of Stuttgart in advanced supercomputing technologies. A St. Pete Polytechnic delegation visited Stuttgart's HLRS Supercomputer Center last month.

The partners discussed the inception phase of a sizable joint project aimed at adapting a complex software code which the Russian university has developed to the petaflops class supercomputing resources the University of Stuttgart has.

Russian Scientists Look To Print Smartphone Covers And Satellites On 3D Printer

In late February 2015, scientists at the Skolkovo Institute of Science and Technology (Skoltech) in Moscow developed a new printing technology that produces three-dimensional items made of composite materials – carbon fiber to be specific. They also built a prototype for Russia's first composite printer, which is superior to its global competitors in both price and quality.

According to the scientists, it will take 5-7 years before this technology can create parts for drones, robots or satellites on a 3D printer. However, a consumer version of the printer for phone covers and other items should be functional in the near future. International companies have already shown interest in the technology. Skoltech told RBTH that they are in talks with Samsung.

Russia Considers Creating Integrated Robotics Center

Russia wants to set up an integrated robotics competencies center, which is expected to bring together numerous projects across the country, the website of the Russian Ministry of Industry and Commerce announced.

Experts believe the new entity will help optimize research in this critical scientific area.

"The future of advanced defense systems lies in the area of robotics. There are so many developers in this field, and in many instances they do very similar research.

U.S.-Russia Innovation Corridor Met Russian edtech Start-Ups

Three education technology start-ups from Russia traveled to the Washington, D.C. and Baltimore regions on March 2-12 as part of the U.S.-Russia Innovation Corridor (USRIC) program, announced American Councils for International Education administering the initiative.

Funded by the US-Russia Foundation, USRIC connects Russian start-ups to universities, scientists, business development experts, industry associations, and customers in the U.S. with the goal of accelerating commercial activity and creating win-win economic partnerships.

Russian E-Commerce Startups Look Westward

Even though Russia's internet-related businesses make up just 10 percent of the country's GDP, more e-commerce and discovery commerce startups are looking at the U.S. market for ample investment and opportunities for growth. 2for1, a fledging Russian-Ukrainian startup is one such company that has tailored its project for the U.S. market.

Being part of the rapidly growing discovery commerce sector, 2for1 aggregates the best sale deals of the 15 most visited online stores in the U.S. and Europe. Designed as a web site and Android application, 2for1 filters the biggest bargains in Macy's, Nordstrom, Gap, Zappos, Nike, H&M, Asos and redirects users to the stores.

World Economic Round Up

Economic growth is set to slow in some of the world's largest economies, although the euro zone is set for a pickup, according to leading indicators released recently by the Organization for Economic Cooperation and Development (OECD). Sweden's central bank has slashed its key policy rate deeper into negative territory and expanded its bond-buying programme to prevent the recent appreciation of the Swedish krona from stifling a budding revival in inflation. The Riksbank, the Swedish monetary authority, lowered its benchmark rate to minus 0.25 percent from minus 0.1 percent and said it would buy government bonds worth US$3.45 billion, an extension of bond purchases worth 10 billion kronor announced earlier.

The latest economic news by country to include USA, Europe, UK, Japan, China, Asia Pacific and India can be found each month in our Semiconductor Monthly Report.

Industry Events 2015

Future Horizons Events

- Silicon Chip Industry Training Seminar – London – 8th June 2015
- Industry Forecast Briefing, London – 24th September 2015

To book your place on any of our events please contact us on:

Telephone: +44 1732 740440
Email: mail@futurehorizons.com

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Industry Events

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MARK YOUR CALENDER FOR THE NEXT

SILICON CHIP INDUSTRY WORKSHOP
MONDAY 8th JUNE 2015

AND

INDUSTRY FORECAST BRIEFING
THURSDAY 24th SEPTEMBER 2015

BOTH BEING HELD AT

HOLIDAY INN KENSINGTON FORUM, LONDON

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