FutureHorizons

The Global Semiconductor Industry Analysts

Future Horizons Newsletter

March 2015

Contents Page

Industry News By Company

FD-SOI Gets Approval From Freescale, Cisco, Ciena

The reputation of fully-depleted silicon-on-insulator (FD-SOI) had gained some credit after Freescale, Cisco and Ciena revealed their own experience with the process technology, which generated notions that other companies might soon follow.

Freescale Semiconductor last week during the Embedded World conference in Nuremberg, Germany, acknowledged that it's designing chips with FD-SOI process technology.

Freescale Semiconductor Unveils S32V Vision Microprocessor

Monday introduced the S32V vision microprocessor, the first automotive vision system-on-chip or SoC with the requisite reliability, safety and security measures to automate and 'co-pilot' a self-aware car.

According to the company, the S32V takes the industry beyond the current, convenience-centric "assist" paradigm and toward an era where cars can capture data, process it and actually share

New Version of DAVE™ Development Platform Significantly Reduces Software Development Time for XMC Microcontrollers from Infineon

Munich and Nuremberg – February 24, 2015 – At the Embedded World Exhibition & Conference (February 24-26, 2015), Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY) today announced the new version of its development platform DAVE™, the “Digital Application Virtual Engineer” for its 32-bit microcontroller families XMC1000 and XMC4000.Infineon has equipped the virtual DAVE engineer such that the development time for embedded systems on the basis of the XMC microcontrollers is further reduced thanks to efficient, component-based software development.With the latest version of DAVE, the reusability of the software components, otherwise known as the DAVE APPs, is further enhanced for example thanks to the introduction of a device driver level, the XMC Lib.

The programming of high-performance and flexible microcontrollers (MCUs) for high real-time requirements such as those of the 32-bit XMC portfolio from Infineon generally calls for extensive hardware knowledge.Substantial time savings can be realised during software development, for example, if for the respective use cases, software components that have already been developed and tested can be reused. XMC Lib and the DAVE APPs of the the latest DAVE release include reusable software components that provide users with abstracted programming interfaces (APIs, application programmable interfaces). The user can easily program the XMC microcontrollers and its peripherals supported via a graphical user interface. At the same time, users do not have to concern themselves with the underlying hardware details.One key feature of DAVE and the

DAVE APPs is the “resource solver” for the efficient and conflict free management of the available hardware resources.

Chipmaker NXP To Buy Freescale

NXP Semiconductors, which specialises in chips used in debit and credit cards, is buying smaller US rival Freescale in a deal that will create a company with a combined enterprise value of $40bn.

Netherlands-based NXP will pay Freescale’s shareholders $6.25 a share in cash and 0.3521 of an NXP share, valuing the US company about $11.8bn, in the latest in a series of acquisitions in the rapidly consolidating semiconductor industry. After the deal Freescale shareholders will own about a third of the combined company.

Nasdaq-listed NXP, once part of the electronics company Philips and which has a market capitalisation of $21.4bn, will pay virtually no premium for Freescale, which had a market value of $11.1bn at the end of last week.

Microchip Licenses Ethercat To Streamline Industrial Design

Microchip Technology Inc. has licensed the EtherCAT technology for its next-generation Ethernet controllers. This licensing agreement, together with Microchip's Industrial Ethernet product portfolio, hopes to deliver solutions that boost overall system efficiency and minimise system costs.

According to the company, this licence emphasises Microchip's strategy for expanding its industrial-market presence with a continuing commitment to provide unique, leading-edge products tailored for industrial designers' needs.

Adding EtherCAT technology to Microchip's next-generation Ethernet controllers provides system developers with the high level of integration, flexibility and stability required to design products that meet and exceed today's evolving industrial standards, indicated the company.

Qualcomm Grooms Latest Mobile SoCs For High-Performance Apps

Qualcomm has pulled out all the stops in its goal to dominate the mobile SoC space when it recently announced an extensive range of products targeting portable devices. With the latest announcement, Qualcomm becomes the first ARM partner to unveil devices using the latest 64bit ARM Cortex-A72 core.

Qualcomm's latest offering concerns the company's 600 and 400 series Snapdragon mobile SoCs aimed at mid-range mobile devices. Starting off at the high-end is the Snapdragon 620, which will feature four of the latest 64bit ARM Cortex-A72 CPU cores in a big.LITTLE octal configuration with four ARM Cortex-53 cores. In addition, the Snapdragon 620 will include all the features of the existing Snapdragon 800 series, including dual integrated image signal processors (ISPs) that can support up to 21MP image sensors, the Qualcomm Hexagon DSP for multimedia processing, a dedicated 4k HEVC video encode-decode engine, an upgraded Adreno GPU, and support for QHD

displays at 60fps. The Snapdragon 625 will also feature a next generation Cat 7 LTE modem that supports 2x20MHz carrier aggregation and the LTE Advanced standa

Samsung Launches Latest Galaxy Smartphone To Reverse Sales Slide

Samsung has pressed the reset button on its flagship range of Galaxy smartphones in an attempt to revive its faltering fortunes as the world's leading maker in the sector.

Samsung dubbed its latest Galaxy phones "Project Zero" internally, which highlighted the need to reinvent its premium smartphones and reverse falling sales in the face of an increasing threat from Apple's iPhones.

The South Korean group has built two versions of the Galaxy S6, unveiled late on Sunday. The most eye-catching features edges that curve away on either side of a translucent glass-and-alloy screen boasting the highest resolution of any phone on the market.

"This is one of the most important devices Samsung has launched," said Ben Wood, analyst at CCS Insight. "Samsung needs to recreate the top end smartphone for the company. This is righting the wrongs of previous products and saying that Samsung is still the market leader with products to show it."

ST's Smallest Dual-Channel Filter Streamlines Board Designs

The market's smallest integrated single-chip, dual-channel filter from STMicroelectronics allows designers to streamline and simplify circuit design and board layout, reduce product size and make room for new functions. The filter has a 1.2x3.4mm2 footprint and a height of less than 560µm after reflow.

This BOM-saving DLPF-GP-01D3 filter can replace up to 16 discrete surface-mount components and save 35mm2 of PCB area in ZigBee RF4CE remotes and consumer electronics equipment such as TVs, alarms, lighting, home gateways and others.

Synopsys, Freescale Help Speed Up Automotive Projects

Synopsys Inc. announced a virtualiser development kit (VDK) optimised for Freescale's S32V200 MCU family to help customers speed up their automotive system projects and deliver high-quality results to market. The VDK integrates ARM Fast Models for the dual-core, dual-cluster ARM Cortex-A53 processor and can be used with DS-5 Development Studio tools. In addition, the VDK also allows access to CogniVue's APEX sub-system model, a key element in developing algorithms based on the S32V2 series.

The VDK, developed through a collaboration between Freescale and Synopsys, uses the S32V234 virtual prototype as an embedded target for early and more efficient software development, integration and test of advanced driver assistance systems (ADAS). Freescale has been venturing into Internet of Things (IoT) applications in the automotive industry, and the recent development of this VDK can help bring such technology to market.

Europe Sets Direction For 5G

Europe's vision of 5G technologies and infrastructure is much clearer now with the presentation of the EU Commissioner, along with companies Alcatel-Lucent, NTT DoCoMo, Ericsson, Nokia, Orange, Qualcomm, Thales Alenia Space, and other partners in the 5G Public-Private Partnership. It is expected that, by 2020, 5G will manage the massive growth of communication and wireless technologies used by humans and machines.

In his opening remarks, Günther H. Oettinger, European Commissioner for Digital Economy and Society, praised the technological progress in several EU-funded projects such as METIS, 5GNOW, iJOIN, MIWEBA, CREW, EVARILOS also being showcased at Barcelona in the EU 5G Research Stand. 5GNOW has already achieved important results on new radio access technology, and METIS has delivered the main usage scenarios, associated technologies and architectures

China To Have Most Robots In World By 2017

Feb 5 (Reuters) - China will have more robots operating in its production plants by 2017 than any other country as it cranks up automation of its car and electronics factories, the International Federation of Robotics (IFR) said on Thursday.

Already the biggest market in the $9.5 billion global robot trade -- or $29 billion including associated software, peripherals and systems engineering -- China lags far behind its more industrialised peers in terms of robot density.

China has just 30 robots per 10,000 workers employed in manufacturing industries, compared with 437 in South Korea, 323 in Japan, 282 in Germany and 152 in the United States.

Drones Invisible On Radars, Pose Security Threats

French authorities scramble to put an end to unidentified drones, which have been sighted two nights in a row flying in the skies above Paris. This has prompted them to tighten security in the wake of last month's Charlie Hebdo attacks.

So far, the French authorities don't know who launched the tiny UFOs, how many there were, whether they might have been coordinated or why they were up there.

Separately, three Al-Jazeera journalists were arrested Wednesday (Feb. 25) for illegally flying a drone in Paris, according to the Associated Press report. They were reportedly flying and filming a drone in Bois de Boulogne in the western part of the city.

Blackberry Unveils Leap Smartphone, Software Updates

At the Mobile World Congress show Tuesday, BlackBerry debuted the Leap, a new smartphone slated to go on sale later this year. BlackBerry said three more handsets are on deck, as wells as a revised mobile device management software.

While BlackBerry's turnaround efforts are moving forward at full speed, it's debatable whether or not it's simply too late for the beleaguered smartphone maker to remake itself, especially with a new focus on device management software.

Altair Semiconductor Says Will Bring 4G Network To Small Devices

JERUSALEM, Feb 25 (Reuters) - Altair Semiconductor said on Wednesday it has developed a new technology that will allow small devices like security alarms and electricity meters to connect to fourth generation (4G) mobile networks more efficiently.

A big limitation for devices that use 4G technology known as LTE has been their short battery life.

Altair said it has designed a new chipset - which controls data flow - that has up to 10 times lower power consumption, and half the connectivity cost, of the standard LTE technology being used today.

Qualcomm CTO Muses On 5G, LTE-U

Qualcomm recently gave specifics about LTE-Unlicensed (LTE-U), which is designed to extend LTE Advanced to unlicensed 5GHz spectrum for higher capacity and coverage.

The very concept of LTE-U is getting buzz at the Mobile World Congress. Yet, it worries some users who fear it will enable carriers to hog unlicensed spectrum and charge more, leaving little precious unlicensed band for Wi-Fi users.

Qualcomm disagrees.

EE Times caught up with Matt Grob, Qualcomm CTO. We asked the why's and wherefore's of LTE-U. Further, we asked what challenges he sees for the yet to be defined 5G standard. Going beyond speed, 5G is expected not only to connect billions of devices but also to cater to myriad use cases, serving very different requirements in disparate industries—automotive, medical, gaming, entertainment and other.

T-Shirt Charges Phones Using Solar Power

Charging personal gadgets when you're out and about is now made easier, thanks to the Solar Shirt. Holst Centre, TNO and fashion designer Pauline van Donger have teamed up to develop the shirt that integrates solar panels and flexible electronics into an attractive shirt that can charge smartphones and other mobile devices.

The Solar Shirt generates power from 120 thin-film solar cells integrated into the fabric itself. In bright sunlight, it produces around 1W of electricity, enough to charge a typical phone in a few hours. Indoors, the shirt generates enough power to keep a battery charged, so your phone or other device is always ready when you need it. The shirt can charge smartphones, MP3 players, cameras, GPS systems and other USB-compatible handheld or portable devices. Moreover, if all your devices are charged, the electricity can be stored in the shirt's battery pack for later use.

Apple Watch: Is It All Hype?

At the Spring Forward event, Apple unveiled its much awaited Watch and MacBook. Although both devices showcased impressive software and hardware engineering, they seemed to deliver less-than-stellar performance, at least when it came to the consumers' expectations.

I gave my 20-something son a $100 Pebble for a gift to see what he thought of the smart watch. He never wore it. When I asked why he said it didn't have enough interesting apps.

I won't be making the same experiment with the Apple Watch that comes out April 24 given its $349 minimum price tag. (Sorry, Michael.) Apple clearly poured its famous software engineering into the product, but it's not yet clear that will be enough to create the first mainstream consumer wearable device.

Wireless Power Receiver Cuts Charging Time For Mobile Devices

Integrated Device Technology Inc. (IDT) has unveiled a wireless power receiver that promises to deliver faster charging. The P9027 magnetic induction receiver boasts 80 per cent peak system level efficiency and improved overall thermal performance.

According to the company, the device features a high-efficiency architecture that enables higher power transfer rates, translating into shorter charge times for portable devices such as smartphones and phablets

A 3D Pen Using Safe Ink Is Developed In Siberia

A new CreoPop printing pen is filled with a fundamentally new photopolymer ink that hardens when exposed to ultraviolet light. The device runs on battery power, is non-toxic and avoids limitations inherent in other 3D pens. Roughly 35 countries have already taken interest in the new device, which will hit the market in April 2015.

A team of developers from Tomsk – Siberia's oldest scientific and innovation center – has created a 3D pen that uses photopolymer ink that hardens under the influence of an inbuilt UV source in the form of a bright LED diode.

Developed on the basis of liquid photosensitive resin, the ink allows the pen to avoid the major drawback of its analogs - heat - making it safe for children. Using such a pen, one can draw three-dimensional objects, create magnetic, glow-in-the-dark shapes and use it for 3D design and in metallurgy.

Skolkovo Unveils Russia's First Prototype Composite Printer

The Skolkovo Institute of Science and Technology (Skoltech), the university set up by the Skolkovo innovation hub outside Moscow, appears to have developed Russia's first prototype composite printer, the website of the Mir24 TV channel reported, citing a source in Skoltech.

According to the scientists, they have prepared materials for printing in a very special way. The prototype uses an inexpensive Italian platform, but for the real printer the Russian researchers are reported to be working on their own platform.

Russia Expects To Use New Technology In Solar Module Production

Russian company NTTs Thin-Film Technologies for Energy, a spin-off of the St. Petersburg-based Ioffe Physical Technical Institute and a resident of the Skolkovo innovation hub outside Moscow, has made Russia's first industrial prototypes of higher-efficiency silicon-based heterostructure solar modules, using a modern technology called HIT (Heterojunction with Intrinsic Thin layer).

The samples produced are reported to have proven about 20% conversion efficacy.

Startpack Launches Recommendation Service For Cloud Apps

Startpack, a Russian software developer, announced last week the launch of its online recommendation service to choose cloud products by analyzing characteristics and users' feedback. The service is called "Startpack Market," the developer told Marchmont News.

The new product is expected to help entrepreneurs take as little time as possible to find useful solutions for their businesses, compare between those, and eventually cut the cost of using software.

According to the company, the service offers detailed descriptions of most widely used Russian and international cloud products and ranks those based on users' assessments and/or pricing.

Abramovich Invests In New Shale Technology In The U.S

Russian billionaire Roman Abramovich has invested $5 million in Houston-based Propell Technologies, which through its subsidiary Novas Energy USA has exclusive U.S. rights to a new fracking technology known as plasma-pulse (PPA). The investment was made through Ervington Investments of Cyprus, of which Abramovich is the ultimate beneficiary. In the deal, Ervington acquired more than half a million of preferred shares of Propell and an option to buy another nearly 3 million securities worth $9.75 million.

Although PPA is still undergoing testing, its potential for the shale oil industry is huge. When using traditional hydraulic fracturing, water or acidic solutions are pumped into wells under high pressure to extend fractures in shales and squeeze out the oil and gas. PPA, however, uses electrical pulses to fracture shale. PPA is considered “clean” fracking because it does not depend on water or chemicals.

World Economic Round Up

Recent developments have underscored a remarkable turnabout in the global economy since the financial crisis. Six years ago, the U.S. was in financial panic, Europe was seen largely as an innocent bystander and China as an engine for a return to global growth. Now the U.S. economy is charging ahead, producing jobs at the fastest pace since the late 1990s, while Chinese authorities are struggling to manage a gathering slowdown and Europe is still getting back on its feet. Emblematic of the shifts are differing monetary signals: Recent strong U.S. jobs data on increased the likelihood the Federal Reserve will raise short-term interest rates this year, while the People's Bank of China added to a rate-cutting campaign early this month.

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 2014

Future Horizons Events

- Silicon Chip Industry Training Seminar – London – 8th June 2015 and 21st September
- Industry Forecast Briefing, London – 15th 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

INDUSTRY FORECAST BRIEFING
THURSDAY 24th September 2015
and
SILICON CHIP INDUSTRY WORKSHOP
MONDAY 8th June 2015

BOTH BEING HELD AT

HOLIDAY INN KENSINGTON FORUM, LONDON

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