FutureHorizons

The Global Semiconductor Industry Analysts

Future Horizons Newsletter

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Industry News By Company

Altair And LG Electronics Slash Smartphone Drop-Test Simulation Time From Weeks To Less Than 24 Hours

TROY, Mich., Dec. 11, 2013 /PRNewswire via COMTEX/ -- Altair today announced a major achievement in the electronics industry that is expected to significantly accelerate the development of new smartphones, tablets, home appliances and other consumer electronics while enabling engineers to create a wider range of durable designs.

Working together, Altair and Korea's LG Electronics (LGE) have successfully created a seamlessly integrated drop-test simulation automation system which enables LGE engineers to conduct smartphone drop-test simulations within 24 hours--a crucial procedure that normally requires one to two weeks for companies across the smartphone industry.

ARM mbed Project Welcomes ST

ARM and STMicroelectronics have revealed that ST has joined the ARM mbed project that gives developers using ST's STM32 MCUs, based on the ARM Cortex-M processor series, free access to the mbed software, development tools and online collaboration platform. According to the firm, this would enable them to realize their own visions for the new wave of intelligent electronics products.

ARM mbed is a collaborative industry project to nurture the Internet of Things (IoT) and meet the needs of a new professional developer audience. It delivers free tools and fundamental open-source hardware and software building blocks for the rapid development of innovative ARM-based devices. The project also enables the easy integration of connectivity, sensor and cloud service software components and the tools and support for a dynamic, collaborative developer and partner ecosystem.

Arm Rises Strongly On Apple Contract Win

Arm Holdings led the London market sharply higher yesterday on hopes of a sales boost from Apple’s long-awaited contract win in China.

Arm, whose chip designs power the iPhone, added 3.9 per cent to £11.10 on confirmation that Apple had finally agreed to sell handsets to China Mobile, the world’s largest mobile services provider with more than 760m customers. With China Mobile expected to sell around 17m iPhones next year, Apple’s unit sales growth will rebound to about 20 per

cent with Arm expected to take a royalty payment of between 50 and 60 cents per handset sold, according to analysts.

Abu Dhabi's ATIC To Invest Up To $10 bn In US Chip Plant

ABU DHABI: Abu Dhabi's Advanced Technology Investment Company (ATIC) plans to invest up to $10 billion over the next two years in GlobalFoundries' New York semiconductor factory, its chief executive said on Friday.

ATIC owns unlisted GlobalFoundries, having completed a buy-out of joint venture partner Advanced Micro Devices in March 2012. ATIC is controlled by Abu Dhabi state investment fund Mubadala.

Singapore's Avago To Buy Storage Chip Maker LSI For $6.6 Billion

Avago Technologies on Monday announced that it will buy LSI Corp for $6.6 Billion in an all cash deal. LSI, which acquired SandForce a couple of years ago, is one of Silicon Valley's best known name in the semiconductor industry. The deal, which is the industry's second-largest this year, is expected to create a company with annual revenue of around $5 billion.

Avago has joint headquarters in San Jose and Singapore. It became a legal entity in 2005 after the semiconductor operations of Agilent Technologies, originally a part of Hewlett-Packard Co., were bought by Silver Lake and KKR Co. The company went public three years later.

The semiconductor company has once again turned to Silver Lake Partners to help finance the deal. Under the terms of transaction, the US-based private equity firm will invest $1 billion. Another $1 billion payment will be done by Avago, while the remaining amount of $4.6 billion will be paid through bank loans. The company will pay $11.15 a share in cash for LSI and the deal is expected to close during the first half of 2014.

Dialog Semiconductor Enables Smallest, Low Power Ultrabook(TM) Adapters

LONDON & LAS VEGAS — Dialog Semiconductor plc (FWB: DLG), a provider of highly integrated power management, audio, AC/DC and short-range wireless technologies, today announced its latest move to deliver innovative solutions for Ultrabooks(TM) with the thinnest, smallest 45W and 12W travel-size power adapters that can be used with an Ultrabook. Developed by Dialog's Power Conversion Business Group (formerly iWatt Inc.), the 45W design enables Ultrabook power adapters that are less than one-half the overall volume and approximately 50% thinner than conventional 45W adapters. The 12W design enables the first compact, pocket-size adapters for an

Ultrabook at just 68mm x 68mm x 17mm thick, with a typical charge time under five hours.

Dialog's ultra-slim adapter solutions complement the company's power saving technology initiatives for Ultrabooks, including SmartWave(TM) multi-touch display sensor ICs and highly integrated, next-generation power management and audio solutions.

eMemory And SMIC Expand Partnership In eNVM Technical Development .

HSINCHU, Dec. 30, 2013 /PRNewswire/ -- eMemory, the global leader in embedded non-volatile memory (eNVM) and Semiconductor Manufacturing International Corporation ("SMIC"; NYSE: SMI; SEHK: 981), China's largest and most advanced semiconductor foundry, today announced that they plan to expand the deployment of their current collaboration on SMIC's eNVM platform development. The platform covers both One Time Programmable (OTP) and Multiple Times Programmable (MTP) eNVM technologies, such as NeoBit, NeoFuse, NeoEE and NeoMTP, across a wide range of technology nodes ranging from 0.35um to 40nm.

eMemory and SMIC have been collaborating since 2004. SMIC's processes that apply eMemory's eNVM solutions include logic, HV, analog, and BCD processes; with applications ranging from digital set-top box (STB), multimedia players, power management IC, microcontrollers, Bluetooth controller IC and Radio Frequency Identification (RFID) IC...etc.

Infosys To Employ 16,000 Engineers

IT and software services giant Infosys will add nearly 16,000 engineers to its employee roster as outsourcing opportunities coming from the U.S. and European markets continue to increase. Chairman N.R. Narayana Murthy made the announcement Wednesday at an event in Mumbai.

Outsourcing services account for more than 80 per cent of revenues in the local IT sector, which is currently valued at $108 billion, according to a report from Press Trust of India. Murthy remains optimistic about the health of the local economy and believes that as long as the government remains steadfast in nurturing the growth of businesses and taxes are properly utilised then stability and public trust will be achieved.

Micron, Broadcom Team Up To Accelerate DRAM Timing

Micron Technology has partnered with Broadcom Corp. to create what they say is the industry's first solution designed for customers challenged by an intrinsic DDR3 timing parameter called tFAW, or four activate window. tFAW refers to a DDR3 timing parameter that restricts data throughput in server, storage and networking applications and can compromise bandwidth by 15 to 35 percent.

With every new DRAM generation, the access granularity is becoming double, causing some timing parameters such as tRDD and tFAW to restrict data throughput. This creates challenges for high-performance applications because no more than four bank activate commands can be issued in any given tFAW period.

Panasonic Sells Wafer Fabs To TowerJazz Joint Venture

Panasonic has agreed to form a joint venture with TowerJazz, turning some of its semiconductor manufacturing sites into foundries for use by other companies. TowerJazz will hold 51 percent in the joint venture, which covers 8- and 12-inch wafer productions assets at Panasonic's three Hokuriku factories. Panasonic also committed to taking production from the joint venture for five years.

Samsung Develops Industry's First 8GB LPDDR4 Mobile DRAM

SEOUL, South Korea, Dec 29, 2013 (BUSINESS WIRE) -- Samsung Electronics Co., Ltd., the world leader in advanced memory technology, announced today that it has developed the industry's first eight gigabit (Gb), low power double data rate 4 (LPDDR4), mobile DRAM.

"This next-generation LPDDR4 DRAM will contribute significantly to faster growth of the global mobile DRAM market, which will soon comprise the largest share of the entire DRAM market," said Young-Hyun Jun, executive vice president, memory sales & marketing, Samsung Electronics. "We will continue introducing the most advanced mobile DRAM one step ahead of the rest of the industry so that global OEMs can launch innovative mobile devices with exceptional user convenience in the timeliest manner."

Soitec And CEA Unite In Five Year R&D Deal

Soitec, a developer of semiconductor materials for the electronics and energy industries, and CEA-Leti have renewed their long-standing and fruitful partnership for the next five years.

This new contract aims to support Soitec’s strategy for the electronics, solar energy and lighting markets. It will focus on engineered substrates and materials offering higher performances and energy savings at a competitive cost.

The partnership is putting in place an R&D ecosystem aiming to reduce research to product time to market.

Thanks to the strengths of CEA-Leti in electronic materials, multi-domain research and its pre-industrialisation infrastructure, competitive R&D sample prototyping will be possible. This will be enabled through a common platform, reducing time to market and R&D costs for Soitec and its customers.

Soitec And IntelliEPI To Improve GaAs Services

Soitec, and Intelligent Epitaxy Technology, a provider of InP, GaAs, and GaSb epitaxial wafers to the electronics and optoelectronics industries, have signed a collaborative agreement to better serve the GaAs market.

This partnership aims at addressing the market requirements for a reliable second source, while also extending the leadership position of both companies in the GaAs market as well as delivering the best product at the lowest cost for the customers.

"We are delighted to announce the license of our technology leading to a second source for our products for our key GaAs customers ," says Bernard Aspar, Senior Vice President and Soitec's Communication & Power Business Unit General Manager.

SuperSpeed USB 10Gb/S Improves Host-Device IP Data Transfer

Synopsys has successfully demonstrated what it claims to be the industry's first SuperSpeed USB 10Gb/s (USB 3.1) platform-to-platform host-device IP data transfer. As measured by the Ellisys USB Explorer Protocol Analyzer, the IP achieved effective data rates of more than 900MB/s between two Synopsys HAPS-70 FPGA-based prototyping systems while using backward-compatible USB connectors, cables and software.

Developed to deliver more than double the data throughput of SuperSpeed USB (USB 3.0) for consumer mobile and external storage device chipsets, the SuperSpeed USB 10Gb/s (USB 3.1) specification from the USB Implementers Forum (USB-IF) defines a more efficient data encoding scheme that increases I/O power efficiency.

Samsung Wearable Technologies Shaking Up Industry

Korean electronics manufacturer Samsung powerhouse is expanding research and development into AMOLED technology that can be used in wearable clothing and flexible electronics. The AMOLED industry is going to quickly evolve into a multi-billion-dollar industry by 2020, because of high global demand from numerous computer companies.

Samsung's focus on wearable technology will involve using the new-generation "stretchable" AMOLED display, as the company realizes the traditional smartphone market is becoming saturated. Samsung and rival LG are the only two companies able to manufacture curved displays on a wide-scale, as other companies trying to catch up. If the smartphone industry is reaching a higher saturation point, being able to implement AMOLED into future products could give Samsung and LG a significant edge.

Steering Towards The Design Of Self-Driving Cars

A number of companies may have informally set 2014 as a critical year to drive their technology into semi-autonomous car platforms, which are now in development by various carmakers. Such platforms, according to a Freescale Semiconductor executive, will ultimately become the basis for each car OEM's own, branded, self-driving cars.

Major car OEMs including General Motors, Nissan and Toyota are all racing to develop their own, unique semi-autonomous architectures. While describing it as a "friendly race," Davide Santo, Freescale's ADAS (Advanced Driver Assistance System) microcontroller product line manager, said the competition intensified when Nissan this summer announced that its first cars using the autonomous car platform will arrive in 2020. Germany's Daimler AG similarly announced plans to start selling a self-driving car by 2020.

Innovative Liquid Crystals Show Potential For Use As Lenses

University of Pennsylvania material scientists, chemical engineers and physicists have revealed a breakthrough in their research to use liquid crystals as a medium for assembling structures. Their study revealed a complex pattern 3D array in the shape of a flower that resembles a compound eye and can thus be used as a lens.

The team consists of Randall Kamien, professor in the School of Arts and Sciences' Department of Physics and Astronomy; Kathleen Stebe, the School of Engineering and Applied Science's deputy dean for research and professor in Chemical and Biomolecular Engineering and Shu Yang, professor in engineering's departments of materials science and engineering and chemical and biomolecular engineering. Members of their labs also contributed to the study, including lead author Daniel Beller, Mohamed Gharbi and Apiradee Honglawan.

Don't Want To Shovel Your Driveway? Get A Robot Snowplow

A team of engineers from the Urals city of Perm have developed a robot snowplow for suburban homeowners. The idea first came to Oleg Kivokurtsev, a postgraduate student at the Perm Polytechnical University when he saw the number of people who were admitted to hospitals each year when the snow started falling.

"We were repulsed by unofficial statistics that stated that 838 people sought medical assistance at first aid stations in Moscow on the first day of a heavy snowfall. The streets are rarely cleared of snow more than twice a day – and that is not sufficient," Kivokurtsev said. He founded OMI-Robotics and developed the robot concept, which was christened the OMI-Plowv.

FlatFrog Unveils Touchscreen With Zero |Air-Gap Technology

FlatFrog Laboratories AB, a provider of Win8 certified in-glass optical multi-touch systems, has unleashed its optimal zero air-gap ZG touch screen geared for all displays including high definition (HD) quality displays.

The touch screen combines a single cover glass with a zero air-gap technology, enabling true edge-to-edge designs with a perfect touch and viewing experience, stated the firm. By minimizing the distance between the display and touch module the industrial design can be made thinner and lighter allowing elimination of all parallax issues when touching, even at wide angles. With optional anti-reflective (AR) coating the light transmission is over 99 percent and any disturbing reflections are minimised without the need for expensive direct bonding of cover glass and LCD panel.

Intel Touts Smart Earbuds, SD Card-Sized PC For Wearables

Intel has developed a reference design for smart earbuds that provide biometric and fitness information, harvesting energy from the audio stream, as well as a Bluetooth speech recognition headset.

The smart earbuds (above) are aimed at fitness enthusiasts and is unique for being built into an accessory that many people already wear when they exercise. They provide full stereo audio and monitor heart rate and pulse, while the applications on the user's phone keep track of run distance and calories burned. The product also includes Intel-developed software that enables users to precision-tune workouts and acts as a coach, automatically selecting music that matches the target heart rate profile.

Intelligent Energy Taps Car Cells To Keep India Connected

A technology originally developed to power electric cars has been adapted by a UK company to keep Indian mobile phone networks working during power cuts.

Intelligent Energy, a spin-out from Loughborough University, on Tuesday signed a deal with Ascend Telecom, a private-equity backed Indian network services company, to install its hydrogen fuel cell power units at 4,000 mobile telecom towers across 26 states.

Together, these towers serve 10m mobile phone users in India – equivalent to the entire network coverage provided in Greater London, or one-fifth of the total in the UK.

Henri Winand, a former Rolls-Royce engineer who is chief executive of the privately owned fuel cell company.

Tiny Windmills May One Day Power Cell Phones

Smitha Rao and J.-C. Chiao of the University of Texas created what is said to be the world's smallest wind turbine that could one day power portable electronics and recharge smartphone batteries.

The micro-windmill is so small that 10 such windmills could be mounted on a single grain of rice. The device is about 1.8 mm at its widest point. Rao, along with J.C. Chiao, a professor of electrical engineering at UT, developed the technology based on recent advances in micro-robotic devices.

"Hundreds of the windmills could be embedded in a sleeve for a cell phone," the researcher claimed. "Wind, created by waving the cell phone in air or holding it up to an open window on a windy day, would generate the electricity that could be collected by the cell phone's battery."

Tele2 Russia Faces Up To Competition

When Rostelecom, Russia's state-controlled telecoms group, approved the merger of its mobile business into rival Tele2 Russia last week, it did not just create a fourth national operator in Europe's biggest mobile market.

The attempt to introduce greater competition into a market dominated by MTS, Megafon and VimpelCom also illustrates the difficulties of doing business in Russia, far beyond the telecoms sector.

The new contender is challenging some of the men who control most of Russia's economy. MTS is controlled by Vladimir Evtushenkov's Sistema, a group with investments in technology, property and oil. Megafon belongs to the empire of Alisher Usmanov, the metals and media magnate, while VimpelCom is part of Mikhail Fridman's Alfa Group, which also has interests in Russia's largest retailer and made a fortune in the sale of its oil joint venture TNK-BP this year.

VimpelCom Launches 4G iPhone Services

OSCOW—VimpelCom Ltd. has become Russia's first mobile service provider to give customers using the newest Apple Inc. devices access to the fastest 4G networks since the Silicon Valley giant had blocked the service when the latest iPhone went on sale in October.

Until Thursday, access to long-term evolution, or LTE, technology on the newest iPhone models was unavailable in Russia. Industry insiders and analysts said Apple may have blocked the new models from accessing Russia's major telecoms companies' 4G service because of worries about the quality of Russia's networks.

An Apple spokesman in London declined to comment.

Sistema Eyes Stake In Retailer Ozon

MOSCOW—Russian conglomerate AFK Sistema is in talks to buy a blocking stake in the country's leading online retailer, Ozon Group, business daily Vedomosti reports.

The newspaper, citing people close to the negotiations, says that Ozon's principal owner, Baring Vostok Capital Partners, ultimately plans to sell its entire 60% stake in the retailer, which is widely known as "Russia's Amazon," but that Sistema is only discussing the purchase of a 25% stake.

Will Russia's First Anti-Smartphone Revolutionize The Market?

Trailer Studio, a Russian maker of short video adverts, has announced the development of a new phone called Skvone. Described by the company as an "anti-smartphone," the gadget has a bare minimum of in-built functionality, and relies on wireless communication with a tablet computer for heavy duties.

A special app for iOS, Android, Mac and Windows will allow the user to manage contacts, alarms and text messages, view an extended calls list, and change ringtones. The phone communicates with the host tablet via Bluetooth.

Skvone is quite compact (95 x 45 x 7 millimeters), with large physical buttons and large fonts – exactly what is needed for children, elderly people, and big-fingered users. The back cover is made if aluminum, and the front is designed in “expensive matte plastic.” The non-removable battery is charged via a micro-USB port.

World Economic Round Up

Gains in consumer spending probably continued to drive the U.S. economic expansion at the end of 2013 as sales at non-auto retailers climbed during the holidays. Elsewhere, inflation in the U.K. probably held at a four-year low in December, Brazil's central bank may slow the pace of monetary tightening, and Australia's employment growth cooled. The global steel industry is expected to make a recovery this year led by a rebound in Europe and the rest of the world, offsetting a slowdown in Chinese growth.

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 – 17th March 2014
- Industry Forecast Briefing, London – 9th September 2014
- International Electronics Forum – 8-10th October

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

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Industry Events

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MARK YOUR CALENDER FOR THE NEXT

SILICON CHIP INDUSTRY WORKSHOP
MONDAY 17th March 2014
AND
INDUSTRY FORECAST BRIEFING
TUESDAY 9th SEPTEMBER 2014

BOTH BEING HELD AT
NH HARRINGTON HALL HOTEL, LONDON
AND
INTERNATIONAL ELECTRONICS FORUM
8-10th OCTOBER
Venue TBA

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