FutureHorizons

The Global Semiconductor Industry Analysts

Future Horizons Newsletter

December 2014

Wishing You All A Very Happy Christmas And A Peaceful 2015

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Industry News By Company

CSR Sirfusion™ Makes Precise Indoor Location A Reality

Technology innovator CSR plc (LSE: CSR; NASDAQ: CSRE) today announced the launch of its SiRFusion™ Software Development Kit (SDK) for Android application developers. The solution enables indoor positioning for Android developers looking to create next-generation apps.

Developers can now leverage the SiRFusion library to rapidly integrate new location-based capabilities and services such as indoor location tagging and analytics for social networking applications, indoor navigation, lone worker efficiency and safety capabilities, as well as indoor asset tracking and targeted e-commerce services.

Mobile applications with integrated SiRFusion™ can now deliver the ubiquity of outdoor navigation to indoor environments without costly surveys or infrastructure upgrades. SiRFusion combines real-time Wi-Fi signals, satellite positioning information, pedestrian dead reckoning, and the company's cloud-based CSR Positioning Center to calculate accurate indoor location. SiRFusion technology provides the accurate indoor position fixes needed to make continuous indoor navigation a part of everyday life. The system automatically crowd-sources a venue's indoor Wi-Fi signatures as consumers walk through the location, and it has also been architected to accommodate future proximity and location technologies such as Bluetooth® Smart beacons, Wi-Fi Round Trip Time (RTT), and Indoor Messaging System (IMES).

Freescale Acquires California Semiconductor Company

Freescale Semiconductor Ltd. stock had a strong showing Wednesday following news it acquired a California-based fabless semiconductor company and saw its shares upgraded from "hold" to "buy" by TheStreet.

Austin-based Freescale (NYSE: FSL) bought Zenverge Inc. the developer of high-definition content processing integrated circuits. Financial terms of the deal were not disclose

Infineon Technologies Bipolar Offers Application Optimized Bipolar Power Modules Introducing Cost-Effective Solder Bond Modules

Munich, Germany – November 25, 2014 – Infineon Technologies Bipolar GmbH & Co. KG today launches bipolar power modules in solder bond technology to address the specific requirements of cost-effective applications. With these new PowerBlock modules the company expands its already comprehensive power module portfolio which, so far, was only using pressure contacts. Infineon offers optimized solutions for different applications like industrial drives, renewable energy, soft starters, UPS systems, welding and static switches driven by cost and/or performance restrictions.

With market prices of approximately 25 percent (depending on module/application) less than related pressure contact variants solder bond modules offer significant cost advantages in modules with smaller packages sizes of up to 50mm. The small solder PowerBlock modules are ideal for applications like standard drives or UPS, where the high robustness of pressure contacts is not necessarily a must. Whenever high robustness is a key criterion, like for soft starters or static switches, Infineon offers the pressure contacts as the best solution. For example, in an input rectifier application directly operating under harsh line voltage conditions the requirements for robustness increase with module size, demanding for the highly reliable pressure contact technology.

NXP To Acquire Quintic's Wearable And Bluetooth Low Energy Ic Business – Update

NXP Semiconductors N.V. (NXPI: Quote), a Dutch semiconductor company, Monday announced that it has entered into a definitive agreement with Quintic, a Silicon Valley-based supplier of Bluetooth Low Energy product line Qblue. The deal is to acquire assets and IP related to its Wearable and Bluetooth Low Energy or BTLE IC business.

The financial details of the deal were not disclosed. Significant IP assets, including more than 60 US and Chinese patents, form part of the transaction.

Plessey LEDs To Power 8point3'S Linear Lighting

Plessey has entered a long-term commercial agreement with 8point3 Ltd., a UK-based LED luminaire manufacturing company. Plessey will be supplying its GaN-on-Silicon MaGIC LEDs, made at its semiconductor manufacturing facility in Plymouth, UK, for use in 8point3's new Sabre Architectural range of LED linear lighting products.

Award-winning 8point3 is a provider of LED solutions to a wide range of customers across the private and public sector. Following this commercial agreement with Plessey, 8point3's Sabre Architectural lighting products will be able to claim that they are fully made in Britain and will be branded with the official 'Made in Britain' marque.

Qualcomm Invests $7M In Silicon Image Subsidiary

Silicon Image, a provider of multimedia connectivity solutions and services, has revealed that Qualcomm Technologies Inc. has strategically invested $7 million in Silicon Image's new subsidiary, Qterics, for a seven per cent ownership interest.

Qterics will be focused on enabling various solutions and services for Internet-enabled consumer products such as TVs, mobile handsets, tablets, routers, home automation devices, white goods and more. Qterics includes the UpdateLogic services business combined with other related Silicon Image assets such as software and other intellectual property (IP). Current UpdateLogic GM, Kurt Thielen, will assume the role of president of Qterics.

SanDisk Ventures Backs Altair Semiconductor

MILPITAS, Calif., Nov. 19, 2014 – SanDisk Corporation (NASDAQ: SNDK), a global leader in flash storage solutions, today announced that the company's venture arm, SanDisk Ventures, has invested in Altair Semiconductor, the leading developer of high-performance, single-mode LTE chipsets. Altair's high-performance products bring 4G LTE Internet connectivity to tablets, netbooks, USB dongles, portable hotspots, fixed routers and modems, machine-to-machine applications and other devices.

SanDisk's investments through SanDisk Ventures enable the company to expand the possibilities of storage by advancing technologies and trends that are shaping the way that data is captured, stored, shared and managed.

SiTime Acquired By MegaChips

SiTime Corporation, a MEMS and analog semiconductor company, today announced the completion of its acquisition by MegaChips Corporation (Tokyo Stock Exchange: 6875), a top 25 fabless semiconductor company based in Japan. This closing follows the announcement on October 28, 2014, that SiTime had entered into a definitive agreement to be acquired by MegaChips for $200 million in cash.

SiTime will retain its name and operate as a wholly owned subsidiary of MegaChips.

MegaChips Corporation (1st section of the TSE (Tokyo Stock Exchange): 6875) was established in 1990 as an innovative fabless company dedicated to ASICs and system LSIs with the goal of integrating LSIs and systems knowledge and solutions. Its focus is on the development of cutting-edge system LSIs and systems products incorporating original algorithms and architecture in the areas of imaging, audio, and telecommunications, and using the advances it achieves to offer outstanding products and solutions that meet the needs of its clients. For additional information, visit: http://www.megachips.co.jp/english/index.html.

Latest STM32 ARM® Cortex®-M0 Microcontroller From Stmicroelectronics Boosts Integration For Better User Experiences

STMicroelectronics' latest STM32F091 ARM® Cortex®-M0 microcontroller overcomes the resource constraints imposed by similar devices positioned for cost-sensitive applications by providing large on-chip memories and up to eight USARTs1 that save multiplexing communication ports in applications such as in-car audio or three-phase power metering.

With up to 256Kbytes of Flash on-chip and a 32Kbyte SRAM -- enough to implement a Java stack -- the STM32F091 can host applications that deliver user experiences normally associated with larger or more expensive devices. All variants, including those in economical 48-pin packages, have at least six USARTs. Three of the USARTs are able to support smartcard, LIN2, IrDA3, and Modbus4 modes.

75% Of Cars Will Have Self-Driving Features By 2035

Navigant Research has released a report that looks into the emerging worldwide market for advanced driver assistance systems (ADAS) leading to semi-autonomous and autonomous driving. According to the report, the first batch of vehicles with some level of self-driving capability are forecast to come to market by 2020, with noteworthy sales volumes for autonomous vehicles appearing by 2025. Although the legal and regulatory barriers to fully autonomous vehicles are high, the technology has the potential to transform the automobile industry and significantly lower roadway accidents. Navigant Research also stated that the proportion of vehicles sold worldwide with some degree of autonomous capability is expected to reach 75 per cent by 2035.

Static, Moving Cameras Talk To Each Other To Track Humans

To say that the volume of data surveillance cameras generate is vast is an understatement. However, one may ask how meaningful these images and video footages are especially in terms of identifying people on the screen or providing a significant relationship across a number of video clips. Now, a team of electrical engineers at the University of Washington has come up with a way to automatically track people across moving and still cameras by using an algorithm that trains the networked cameras to learn one another's differences. The cameras first identify a person in a video frame, then follow that same person across multiple camera views.

"Tracking humans automatically across cameras in a 3D space is new," said lead researcher Jenq-Neng Hwang, a UW professor of electrical engineering. "As the cameras talk to each other, we are able to describe the real world in a more dynamic sense."

Raspberry Pi Rolls Out $20 Model A+

The Raspberry Pi Foundation has released the Model A+ single-board computer (SBC) with a price of only $20, Forbes reported.

The new microcomputer is not only $5 cheaper than its predecessor; it's also smaller with a dimension of 65mm x 56.5mm as compared with Model A's 85.6mm x 56.5mm. Both units, however, utilise the same BCM2835 application processor from Broadcom clocked at 700MHz, and have 256MB of RAM.

For hobbyists and designers who prefer more RAM, Raspberry Pi offers the Model B series, which has 512MB of RAM for a cost of $35. But the Model A+ also features some improvements present in the B series, such as 40 GPIO pins, a better push-push micro SD card socket and audio circuit that incorporates a dedicated low-noise power supply.

Schoolboy Gets Intel Backing For Low-Cost Braille Printer

Shubham Banerjee is your typical middle schooler, well, aside from being possibly the world's youngest venture capital-backed entrepreneur. The 13-year-old's start-up, Braigo Labs Inc., recently received a seed round investment from Intel Capital, which will be used to expand the teen's line of low-cost, portable Braille printers.

The Santa Clara, California-based teen invented an open source DIY Braille printer Braigo v1.0 in February using Lego Mindstorms. Then, Banerjee released a new prototype, the BraigoTM v2.0, at the Intel Developer Forum 2014. This consumer-focused Braille printer, which uses new technology and an Intel Edison chip, is portable, silent, IOT-enabled and will be offered at a price point well below currently available products for the visually impaired, according to Braigo Labs.

Mobile Phones: Early Adopters Ring The Changes With Payment Revolution

When it comes to everyday banking, Japan is a paradox. The country has some of the most advanced infrastructure in the world but remains a cash-based society.

Many Japanese choose to pay utility bills with hard currency at convenience stores. Restaurants and small businesses often only accept cash. And it is not uncommon to see foreigners venting their frustration when they discover that they cannot use most cash machines, but are restricted to those operated by the post office or international banks.

Despite this apparent reluctance to embrace new banking practices, the Japanese were early adopters of contactless payments and the “tap-and-pay” technique with a smart card.

Startup Gets $143M To Develop Sentient Computers

Looking back at the relatively recent portion of our computing history, certain turning points have actually led to the development of sentient computing. First IBM's Deep Blue computer beat the world champion Garry Kasparov at chess in 1997. Then in 2008 the University of California at San Diego (UCSD) authored an open source poker bot, Fell Omen, which could beat humans. Then Apple's Siri amazed the world in 2010 by answering natural language questions on the iPhone. In 2011, IBM pitted its Watson supercomputer (since moved to the cloud) against former winners of the game show Jeopardy. Watson beat them and took the first-place prize of $1 million.

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Dutch Researchers Create Temperature-Dependent LED Coating

Researchers from the Netherlands have found a novel way to ensure the lights of the future not only are energy efficient but also emit a cozy warmth.

"We demonstrated a seemingly simple - but in fact sophisticated - way to create LED lights that change in a natural way to a cozy, warm white colour when dimmed," said Hugo Cornelissen, a principal scientist in the Optics Research Department at Philips Research Eindhoven.

Cornelissen and his colleagues from the Eindhoven University of Technology, Netherlands describe their new LEDs in a paper published today in The Optical Society's (OSA) open-access journal Optics Express.

New Semiconductor Device Could Lead To Better Photodetectors

Los Angeles, California - UCLA researchers have developed a perovskite photodetector that could reduce manufacturing costs and improve the quality of medical and commercial light sensors.

Photodetectors are semiconductor devices that convert incoming light into electrical signals. They are used in a vast array of products, from visible and infrared light detection systems to television remote controls.

Perovskite is an organic-inorganic hybrid material with a crystal structure that is extraordinarily efficient for converting light into electricity. In recent years, the use of perovskite materials has led to rapid advances in the efficiency of solar cells.

Bristol Team Looks To Chalcogenides For Optical Networks

Research by Maciej Klemm and Martin Cryan from the University of Bristol has shown that chalcogenide phase change materials such as Ge2Sb2Te5 could potentially be used to transform high-speed optical neworks.

Chalcogenide compounds are used in rewritable optical disks and will be used in next generation phase change memory with high speed electronic switching. By applying heat, these semiconductors can be switched between an amorphous (glassy) and a crystalline state, changing their optical and electrical properties and allowing the storage of information.

The Bristol researchers have adapted these approaches to develop a low cost, high-speed optical switching technology based on dynamic optical beam shaping and steering using PCM-based optical antennas and antenna arrays.

Dual-Band WiFi Audio Chip Designed For IoT Apps

Broadcom Corp. has uncloaked what it flaunts as the industry's first dual-band WiFi audio chip into its Wireless Internet Connectivity for Embedded Devices (WICED) portfolio. The SoC provides high-definition (HD) audio streaming over a WiFi network to wireless audio devices and cuts interference for a better sound quality, stated the company.

The BCM43907 SoC reduces cost for OEMs by integrating all needed functionality onto a single device. As the first audio SoC to implement dual-band WiFi, Broadcom's BCM43907 reduces interference and delivers a cleaner overall sound to wireless streaming devices such as portable speakers, 5.1 multi-speaker systems, sound bars and media players. Devices with dual-band WiFi experience fewer interruptions and benefit from a significant network performance boost by operating on two bands.

Semiconductor Sensor Developer Comes Up With New Strain-Sensing Elements

Thin Film Technology, a Russian semiconductor sensor developer, has received a $1.9m grant from Skolkovo, the international tech hub under completion on the outskirts of Moscow, for the creation of new technology for the synthesis of high-precision strain-sensing elements for their sensors.

The firm was founded in 2006, and has been working with the Skolkovo innovation center since 2011, reported East-West Digital News, the leading international resource on digital industries in Russia. It develops semiconductor sensors for measuring pressure, vibration levels and other physical parameters in unstable and aggressive environments.

Top Tech Startup Nex Raises Second Round Finance To Develop "Fyre" In Untapped Myanmar Digital Market

Myanmar (Burma) is the next hot IT market. Local digital startup NEX has raised second-round funding from European investors to develop 'Fyre"mobile app.

NEX is a great IT startup with expertise and the possibility of achieving great prosperity.... The opportunities have never been better as (Myanmar)'s IT sector is on the verge of great developments.— Jonas Lindstörm, CEO, BlibrosYANGON, MYANMAR (BURMA), November 7, 2014 /EINPresswire.com/ -- Myanmar's untapped market for mobile and digital development businesses is opening up and investors are eyeing the wide range of promising opportunities within the Southeast Asian nation's fast growing IT sector.

Top Myanmar mobile and digital startup NEX founded in 2013, and is now set to grow faster with the successful completion of new round of fundraising. In this second seed round, Blibros Ltd, the privately-held investment arm of Sweden's Böcker family, is investing US$150,000. Singapore-based Blibros has a special worldwide interest on investing in IT companies.

Russian Gadgets: What's Next After Yotaphone 2?

No other gadget, not even the iPhone, has had a promotion campaign quite like the Russian YotaPhone 2. At the APEC summit, which was held in Beijing in early November 2014, President of Russia Vladimir Putin presented a YotaPhone 2, which has not yet been released, to Chinese leader Xi Jinping.

The new "Russian smartphone" is the world's only mobile gadget with two screens, one of which runs on e-ink, ensuring that the screen remains elucidated even when the battery is drained. The phone is available for pre-order on the official website of its manufacturer, Yota Devices. The official launch will be held in Moscow on Dec 2.

YotaPhone 2 is not the only notable Russian gadget available on the market. There are many other portable devices, although many of them could hardly be described as technological breakthroughs. However, these Russian gadgets offer good value for the

money, which could allow them to compete successfully on the world market. RBTH looks at the most promising of these gadgets

Global Sales Of Yotaphone2 Begin Today

YotaPhone2's press office told RBTH that the presentation will go forward today in London at the Old Truman Brewery on Brick Lane at 18:00 local time. Following that, online sales will begin worldwide. Preliminary orders for the phone have already been coming in for the last few weeks. So far orders have come in from France, Italy, U.K., Germany, India, UAE and other countries.

In China sales will begin in the first quarter of 2015. The phone's producers believe that this market has a lot of potential, especially since Vladimir Putin gave a YotaPhone2 to China's president, Xi Jinping. Sales in the U.S. will also begin in 2015.

Russian gadgets: What’s next after YotaPhone 2? Meanwhile, the phone can be purchased on the company's official website. According to preliminary data, the price for the European market is 495 euros. However, the exact price will be announced today during the presentation.

World Economic Round Up

Many of the world's top policy makers are rewriting their economic forecasts for the U.S., Europe, Japan and other countries, betting that falling oil prices will lead to an overall boost in the global economy by delivering a windfall to consumers and manufacturers. Officials at the International Monetary Fund (IMF), U.S. Federal Reserve and European Central Bank have in recent days shrugged off concerns that the tumbling cost of crude signals a global slowdown. Instead, they project cheaper oil will be a shot in the arm for the world economy overall, especially countries with high energy tabs

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 2014/2015

Future Horizons Events

- Industry Forecast Briefing, London – 20th January 2015

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

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