FutureHorizons

The Global Semiconductor Industry Analysts

Future Horizons Newsletter

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Industry News By Company

Apple Acquires Passif Semiconductor For Iwatch Development

Apple has acquired Passif Semiconductor, a California-based company specializing in the production of ultra-low power chips for Bluetooth, although the details of the agreement were not disclosed.

Passif Semiconductor founded by two graduate students at University of California, Berkeley, is dedicated to creating small and low power consumption chipset for devices that take advantage of Bluetooth technology. In 2008, the company received a significant funding of $ 1.6 million from Khosla Ventures, and now has been acquired by Apple.

The company will join the swarm of recent acquisitions by Cupertino, and could help in developing iWatch-like wearable device that may be submitted by the end of the year or early 2014.

The Cupertino has confirmed the acquisition. Among the recent similar operations, the most important is the Autentech, a company specializing in the production of biometric systems for small devices.

Samsung And Cheil Industries Acquire Novaled AG.

Cheil Industries, a leading electronic materials company in the display industry, and Novaled AG, a world class provider in OLED technologies and materials, announced today that Cheil Industries acquires a majority stake in Novaled in a transaction valuing Novaled at €260 million. Samsung Electronics will buy 40% stake in Novaled.

Cheil Industries today signed a binding agreement to acquire a majority stake of approximately 50% in Novaled. Samsung Electronics will acquire approximately 40%, the remaining stake of approximately 10% in Novaled is currently held by Samsung Venture Investment which will maintain its current shareholding. The transaction values Novaled at a total enterprise value of €260m including a €30m contingent payment, which is conditional to reaching certain milestones.

Dialog Semiconductor Gains on Strong Apple iPhone Sales

Dialog Semiconductor Plc (DLG) rose to a two-month high after Apple Inc. (AAPL), the German company's biggest customer, reported second-quarter revenue and iPhone sales that beat analysts' estimates.

Dialog Semiconductor increased as much as 7.3 percent to 12.64 euros, the highest intraday price since May 22.

Apple reported revenue of $35.3 billion, exceeding analyst estimates of $35 billion. The Cupertino, California-based company sold 31.2 million units of the iPhone, its best-selling and most profitable product. Analysts had estimated 26.1 million units on average.

"IPhone sales were especially strong, which is important for Dialog," Thomas Becker, a Frankfurt-based analyst at Commerzbank AG, said by phone. "Apple did not disappoint."

Dialog Semiconductor To Acquire Iwatt

Dialog Semiconductor, a provider of highly integrated power management, audio and short-range wireless technologies, has entered into an agreement to acquire iWatt, a provider of digital power management ICs.

Under the terms of the acquisition agreement, the shareholders of iWatt will receive an up-front payment of approximately USD 310 million in cash, plus up to approximately USD 35 million in contingent consideration. The contingent consideration is based on achieving future revenue targets. The acquisition is being funded from both Dialog's existing cash resources and additional debt facilities of USD 125 million.

Finland Telecoms Company To Offload Phone Business To Microsoft

So long, Nokia. That isn't exactly true, but assuming all shareholder approvals are granted, Finland's best-known export (Angry Birds aside) is about to offload to Microsoft the bit that gets it all the bad headlines – phones. That would allow it to concentrate on the bit where sales are only declining slowly – telecoms equipment – but which is at least generating operating profits on an underlying basis.

As investors wait to hear from both companies about the deal, and while the inevitable conspiracy theories abound as to whether Stephen Elop was a sleeper agent for Microsoft all along, they can at least reflect on one general lesson: joint ventures in technology are too often doomed either to fail or not to succeed as well as they could have done.

Qualcomm And Alcatel-Lucent In 'Small Cell' Mobile Tie-Up

Qualcomm is to acquire a stake in Alcatel-Lucent as part of a far-reaching partnership agreement to develop the next generation of smaller mobile cell transmitters capable of coping with the rapid increase in mobile data.

The deal between the US chipmaker and the struggling French telecoms equipment group will be worth more than €100m in total research and development expenditure, according to a person familiar with the terms.

Qualcomm would take a stake in Alcatel-Lucent as part of the deal in a move to show the alignment of interests of the two companies, the person said, although the exact share would not be revealed.

STMicroelectronics Boosts 'Appcessory' Boom With Industry's Most Energy-Efficient Single-Chip Bluetooth 4.0 Network Processor

STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, has unveiled the industry's most energy-efficient Bluetooth(R) 4.0 Low-Energy Single-Mode chip enabling longer runtimes and smaller, lighter batteries in a wide range of wireless "appcessories" such as fitness wristbands, smart eyewear, or interactive clothes.

ST's BlueNRG network processor provides the functions needed to link the Bluetooth(R) Smart device to a Bluetooth(R) Smart Ready host such as a smartphone or a tablet. Best-in-class active current consumption enables ultra low-power devices to operate for

months or even years from a small coin-cell battery. Compliant with the latest Bluetooth 4.0 standard, BlueNRG features its own radio, processor and Bluetooth firmware to simplify the wireless design allowing engineers to concentrate on creating innovative applications.

Bluetooth 4.0 Low-Energy wireless technology consumes only a fraction of the power of Classic Bluetooth and is the technology behind the new wave of Bluetooth Smart devices now entering the market. All major mobile and desktop operating systems now support Bluetooth Smart Ready operations, paving the way to an ecosystem of Bluetooth Smart devices.

Samsung Now Mass Producing Industry's Fastest Embedded Memory

Samsung Electronics is mass producing the world's fastest embedded memory – the industry's first eMMC 5.0 devices – in 16 gigabyte (GB), 32GB and 64GB densities for next-generation smartphones and tablets.

Featuring an interface speed of 400 megabytes per second (MB/s), the eMMC PRO memory provides fast application booting and loading.

The chips will enable faster multi-tasking, web-browsing, application downloading and file transfers, as well as high-definition video capture and playback, and are responsive to running large-file gaming and productivity applications.

Tokyo Electron, Applied Materials Agree To Merge

Japanese semiconductor production equipment maker Tokyo Electron Ltd. 8035.TO +0.41%said Tuesday that it and Santa Clara-based Applied Materials Inc. AMAT +0.38%have agreed to merge their operations, in move that will create a firm with a market capitalization of $29 billion.

Under the accord, one Tokyo Electron share will be exchanged for 3.25 shares of the new entity. Meanwhile, one Applied Materials share will exchanged for one share of the new company. The two firms will be united in a joint holding company in the Netherlands.

Toshiba Opens New Semiconductor Facility In Thailand

Toshiba has announced that its Thai-based Group company, Toshiba Semiconductor (Thailand) (TST), has completed its relocation to a new semiconductor manufacturing facility and started mass production, marking the company's full recovery from the devastating flooding of 2011.

The new factory is some 140km north-east of Bangkok, a facility in the 304 Industrial Park in Prachinburi.

Construction started in July 2012, limited production began this April, and the facility is now operating at its current target capacity.

Tablets Eating Up PC Market; Posts 424% Growth

Tablets are cannibalizing the PC market and registering a phenomenal growth of 424 per cent in the second consecutive year, said the Manufacturers' Association for Information Technology (MAIT).

While the industry body predicted personal computer (PC) sales to be around 121.1 lakh units in FY 2013-14, actual sales stood at just 113.1 lakh units. The total PC sales between April 2012 and March 2013 registered five per cent growth at 113.1 lakh units, whereas MAIT expected the growth rate of eight per cent, over the last fiscal.

Feather-Light Integrated Circuit Developed!

A researcher's team at University of Tokyo has developed what they claim as world's lightest (3 g/m2) and thinnest (2µm) flexible integrated circuits and touch sensor system. "It is lighter than a feather and can be used as a stress-free health-monitoring system when worn."

"As far as the robustness of the organic transistor ICs is concerned, they are amazingly tough in spite of being the world's thinnest. Indeed, the ICs are mechanically and electrically unbreakable, even when squeezed to reduce the bending radius to 5µm, crumpled like paper, or dropped from a height of a metre (or more)," according to the researchers. "Furthermore, the electric and mechanical performances of the organic transistor ICs were practically unchanged even when stretched by up to 233 per cent."

Fastest Electrical Switch Announced!

Researchers from the U.S. Department of Energy's (DOE) SLAC National Accelerator Laboratory have clocked the fastest-possible electrical switching in magnetite, a naturally magnetic mineral. The results could drive innovations in the tiny transistors that control the flow of electricity across silicon chips, enabling faster, more powerful computing devices.

Scientists using SLAC's Linac Coherent Light Source (LCLS) X-ray laser found that it takes only 1 trillionth of a second to flip the on-off electrical switch in samples of magnetite, which is thousands of times faster than in transistors now in use.

Japan's Robots Eye Car Industry To Take Up Smartphone Slack

TOKYO (Reuters) - As the breakneck growth in the global smartphone market eases, the mostly Japanese companies that make the robots that build the phones are looking to automakers to take up the slack.

Robotics remains a strength in a Japanese electronics industry that has been hammered by competition from rivals in South Korea and Taiwan. Panasonic Corp, Hitachi High-Technologies, Yamaha Motor Co, Fuji Machine Manufacturing and JUKI Corp together make eight of every 10 component mounting robots.

The quickest of these can mount more than two dozen parts a second, some thinner than a tenth of a millimeter. A line of 10 connected robots can put together 5,000 smartphones a day.

USB 3.1 Specification Announced

The USB 3.0 Promoter Group said that it has completed the USB 3.1 Specification. The new spec adds enhancements to enable SuperSpeed USB to operate at up to 10 Gbps.

"SuperSpeed USB 10Gbit/s uses a more efficient data encoding and will deliver more than twice the effective data through-put performance of existing SuperSpeed USB over enhanced, fully backward compatible USB connectors and cables. Compatibility is assured with existing USB 3.0 software stacks and device class protocols as well as with existing 5Gbit/s hubs and devices and USB 2.0 products," the Group said.

New Technology Makes Software Unhackable!

Indian-origin scientist Amit Sahai from the University of California has developed a system that can prevent software from being hacked. Sahai and a team of researchers claimed they have designed a system to encrypt software so that it only allows someone to use a programme as intended, while preventing any deciphering of the code behind it.

This is known in computer science as "software obfuscation," and it is the first time it has been accomplished, the researcher said.

According to Sahai, previously developed techniques for obfuscation presented only a "speed bump," forcing an attacker to spend some effort, perhaps a few days, trying to reverse-engineer the software.

IBM Builds Brain-Inspired Programming Language

Scientists from IBM have announced the development of what it calls a "software ecosystem" designed for programming silicon chips that have an architecture inspired by the human brain.

The technology could enable a new generation of intelligent sensor networks that mimic the brain's abilities for perception, action, and cognition, the company said.

"Dramatically different from traditional software, IBM's new programming model breaks the mould of sequential operation underlying today's von Neumann architectures and computers. It is instead tailored for a new class of distributed, highly interconnected, asynchronous, parallel, large-scale cognitive computing architectures," IBM stated.

Scientists Invent Transparent, Stretchy Speaker

Harvard University scientists have developed a transparent, artificial "muscle" that can be also turned into a speaker. "No ordinary speaker, it consists of a thin sheet of rubber sandwiched between two layers of a saltwater gel, and it's as clear as glass. A high-voltage signal that runs across the surfaces and through the layers forces the rubber to rapidly contract and vibrate, producing sounds that span the entire audible spectrum, 20Hz to 20kHz."

But this is not an electronic device, nor has it ever been seen before, the researchers claimed. It represents the first demonstration that electrical charges carried by ions, rather than electrons, can be put to meaningful use in fast-moving, high-voltage devices.

Smartphones Outsell Feature Phones For First Time

martphone sales overtook those of features phones for the first time in the second quarter of 2013, capturing 51.8 per cent of mobile phone sales, said market research firm Gartner.

Worldwide mobile phone sales totalled 43.50 crore units during the quarter. Smartphone sales reached 22.50 crore units, up 46.5 per cent from the second quarter of 2012; while sales of feature phones totalled 21 crore units, declining 21 per cent year-over-year.

"Smartphones accounted for 51.8 per cent of mobile phone sales in the second quarter of 2013, resulting in smartphone sales surpassing feature phone sales for the first time," said Anshul Gupta, principal research analyst at Gartner.

Samsung Launches First Global Smartwatch

Samsung Electronics has become the first global mobile computing company to launch a smartwatch, leaping ahead of rivals Apple, Google and Microsoft in the ”wearable technology” market

The South Korean company’s Galaxy Gear smartwatch works as a “companion” to a Samsung smartphone, allowing users to check their emails, receive texts, listen to music and take pictures. It will go on sale in 149 countries this month priced at $299.

New 'Artificial Muscle' Carries 80 Times Its Weight

A team of researchers at NUS Engineering have created an artificial "robotic" muscle which could carry a weight 80 times its own while extending to five times its original length.

The invention paves the way for constructing of life-like robots with superhuman strength and ability, the team led by Arian Koh said.

In addition, these novel artificial muscles could potentially convert and store energy, which could help the robots power themselves after a short period of charging.

Robots, no matter how intelligent, are restricted by their muscles which are able to lift loads only half its own weight – about equivalent to an average human's strength. Artificial muscles have been known to extend to only three times its original length when similarly stressed. The muscle's degree of extendability is a significant factor contributing to the muscle's efficiency as it means that it could perform a wider range of operations while carrying heavy loads.

Smart Cars To Shake Up Auto Industry

The growing importance of intelligent, networked cars that can communicate with the driver and the environment will turn the entire industry on its head, according to major German component supplier Continental.

“The automobile industry has been a closed club for decades and it has been dominated by the mechanical world,” Continental’s car electronic chief, Christian Senger, said Wednesday, the second media day of the 65th IAA car show in Germany’s business capital Frankfurt.

“With the advent of ‘intelligent cars’, it’s time to open up the automotive world and work hand-in-hand with the IT industry,” Senger said.

Russia Should Use Own Electronics In Defence Industry-Deputy PM

NOVO-OGARYOVO, Russia, July 29 (Reuters) - Russia's defence industry is cutting down on its use of foreign electronics as a result of leaks by ex-U.S. spy agency contractor Edward Snowden, a Russian government official said on Monday.

Snowden's actions in divulging details of U.S. government intelligence programmes had shown the need for arms makers to be careful in importing any equipment that contained software capable of transmitting sensitive data abroad, Deputy Prime Minister Dmitry Rogozin said.

Rogozin specifically referred to foreign-made lathes.

"Those lathes contain software which can have certain settings. They could either shut down at some point or transmit certain data about the engineering parameters of an assignment (in progress)," Rogozin, who oversees the defence industry, told reporters after a meeting on arms contracts chaired by President Vladimir Putin.

Estonia: The Role Model For Tech-Enabled States

The tiny state of Estonia, one of Europe's smallest, might be the role model for what a technology-enabled country looks like in the 21st century.

Estonia, population just 1.29 million, is well known as punching considerably above its weight as a startup champion—it was the birthplace of Skype. But its embrace of technology goes way deeper than just 20-something entrepreneurs designing apps for iPhones; it is woven into the very fabric of the state.

This starts at the very top. President Toomas Hendrik Ilves, elected in 2006, is a passionate technology advocate who learned to program at 13 and may well be the only head of state who has written in Assembler on a PDP-8 microcomputer.

Russian Scientists Develop 3-D Nano-Scale Microscope

By combining several well-known microscopic methods, Russian nano-biotechnologists have developed an instrument that allows them to research the three-dimensional structure of objects and their optical properties on a nano-scale. They described their innovation in an article published in the journal ACS Nano.

A scanning microscope is traditionally used to research nanostructure, under which the object is examined using a sharp probe. However, this method only produces a two-dimensional image and does not permit research into the three-dimensional structure of an object.

Anton Yefimov, the founder of Skolkovo resident company SNOTRA, has found a way to overcome this limitation. This is achieved by slicing an object into the thinnest possible layers and, then, scanning each one separately. When combined, the resulting data provides a representation of the structure of a three-dimensional object.

First Russian Smartphone To Go On Sale Later This Fall

The first Russian manufacturer YotaPhone smartphones has signed a contract with the country's leading cellular network stores Evroset, Sviaznoy, MTS and Megafon. Smartphones will go on sale in November, as Vedomosti learned.

The company's website already allows visitors to pre-order the sensational phone model, which won the CNET Best of CES Award for its dual-screen on a mobile device at the Consumer Electronics Show in Las Vegas. There are plans to begin selling the phone abroad soon.

Yota Devices has been developing mobile devices (first operating in WiMax networks, and now in the LTE format) for six years. The company introduced its first YotaPhone back in 2012, promising that its mass production would be launched later.

HP Now Producing All-In-One PCs In Russia

The Foxconn factory near St. Petersburg has begun production of Hewlett-Packard (HP) All-in-One PCs, an HP representative told Vedomosti. The All-in-One PC is a type of computer in which the monitor is united with the processor, motherboard, hard drive and other components.

In early 2013, Russia imposed 10-percent import duties on desktop PCs and monoblocks, which resulted in a price increase in the market, explains Konstantin Kimelman, PC Category Country Manager in Russia.

Launching production in Russia reduces the dependence of prices on currency exchange rates, shortens delivery periods by 2-3 times, and makes the computers more accessible for public institutions that are required to purchase equipment produced domestically.

World Economic Round Up

According to the Organization for Economic Cooperation and Development's composite leading indicators, economic growth in Europe, the U.S. and Japan is set to pick up in the months ahead, while China and some other large developing economies will slow. The composite leading indicators for June suggest Germany will lead the euro zone out of its longest post war contraction, with Italy poised for a pickup in growth after almost two years of declining activity. The leading indicator for the U.K. also points to a rise in growth following a number of years of near-stagnation. The leading indicators continue to point to firming growth in the U.S. and Japan, the two largest developed economies. Brazil's tepid economic performance over the last two years has surprised many who believed Latin America's largest economy would be one of the main drivers of the global economy in the wake of the savage financial and economic crisis. Increasingly, the country looks set to remain a drag on the rest of the world for the next few years. Interest has now been raised 50 points to 9 percent.

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 2013

Future Horizons Events

- Silicon Chip Industry Training Seminar – London – 18th November 2013
- Industry Forecast Briefing, London – 21st January 2014
- International Electronics Forum – 8th – 10th 2014 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 18th November 2013
AND
INDUSTRY FORECAST BRIEFING
TUESDAY 21st January 2014

BOTH BEING HELD AT
NH HARRINGTON HALL HOTEL, LONDON
AND
INTERNATIONAL ELECTRONICS FORUM
8 – 10 OCTOBER 2014
VENUE TBA

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