FutureHorizons

The Global Semiconductor Industry Analysts

Future Horizons Newsletter

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Industry News By Company

Apple Wilts In China As Smartphone Market Heats Up

Apple's flagship store in Wangfujing, a central shopping district in Beijing, is a hive of activity. But, unfortunately for the iPhone maker, most people are not there to buy.

Part of the problem may be short term, according to staff in the shop. Many Chinese are putting off buying an Apple device until the new iPhone 7 model comes out in September, says an employee, who adds that a lull in sales before a big launch is to be expected. "There's no reason for any concern; when the new phone comes out sales will pick up," he says.

Liu Shan, a matronly woman guiding her teenage cousin around the store, is one of the few seemingly in the shop to buy a phone — but even she fails to show the sort of devoted Apple fandom that made China the company's largest market outside the US.

Avnet Beats Rival Bid For Raspberry Pi Maker

U.S. electronics company Avnet Inc. agreed to buy Premier Farnell PLC for GBP691 million ($907 million), trumping a previous bid for the maker of the $5 Raspberry Pi computer.

Switzerland'sDaetwyler Holding AG had last month agreed to buy the British company for GBP615 million. Premier Farnell on Thursday withdrew its recommendation of the Daetwyler offer.

The deal is the latest in a string of purchases of British companies to be agreed upon after the pound's fall against other currencies following Britain voting to leave the EU in a referendum on June 23. Japanese conglomerate SoftBank Technology Corp. last week agreed to buy U.K. semiconductor giant ARM Holdings PLC for GBP24.3 billion, while earlier this month AMC Entertainment Holdings Inc., part of China'sDalian Wanda Group Co., said it would pay U.K. private equity group Terra Firma Capital Partners Ltd.GBP500 million for Europe's largest cinema chain, Odeon & UCI Cinemas Group.

Softbank To Buy ARM Holdings For More Than $32 Billion

HONG KONG—U.K.-based chip designer ARM Holdings PLC confirmed Monday that it agreed to a buyout offer worth more than $32 billion from SoftBank Group Corp. , marking a significant push for the Japanese telecommunications giant into the mobile internet.

The all-cash deal comes on the heels of SoftBank Chief Executive Masayoshi Son's decision to take back the reins of the company's investment strategy from his former deputy and designated successor, Nikesh Arora, who resigned in June.

"ARM will be an excellent strategic fit within the SoftBank group as we invest to capture the very significant opportunities provided by the 'Internet of Things,'" Mr. Son said. "This is one of the most important acquisitions we have ever made, and I expect ARM to

be a key pillar of SoftBank's growth strategy going forward," he said. ARM's shares rose as much as 45% in Monday morning trading in London.

Evolving Power Electronics Industry Shows 'New Faces'

Infineon Technologies' acquisition of Wolfspeed for US$850 million in cash has made lots of noise in the compound semiconductor world. Indeed, this acquisition comes in a power electronics industry where SiC technology benefits are well-known and where business opportunities have been clearly identified by industrial companies.

In its latest compound semiconductor technology and market analysis report, "Power SiC 2016: Materials, Devices, Modules, and Applications," market research and strategy consulting company Yole Développement announced a Rs. 1,351.35 crore (US$200 million) market in 2015 and a 19% CAGR between 2015 and 2021, reaching Rs. 3,716.22 crore (US$550 million) by the period's end.

Both Wolfspeed and Infineon Technologies are the market leaders and this pact reinforces their dominant market position. The deal also includes the related SiC wafer substrate business for power electronics and RF power electronics. According to Yole's analyst Dr. Hong Lin, Infineon Technologies market share should increase more than 50% if the full acquisition is confirmed.

Mycronic Acquires Shenzhen Axxon Automation Co.,Ltd

Mycronic AB (publ)(STO:MYCR), has signed an agreement to acquire 75 percent of Shenzhen Axxon Automation Co.,Ltd (Axxon) for a cash consideration of approximately SEK 430 million. The acquisition will be financed through own funds. As part of the agreement Mycronic will acquire the remaining shares of the company in two steps – an additional 5 percent will be acquired within this year and the last 20 percent after three years. The purchase price for the last part after three years will be set based on parameters such as growth and earnings, which may include changes compared to the current valuation.

Axxon develops, manufactures, and sells dispensing equipment for the electronics industry and has obtained a leading position in the SMT market in China in a short time. China represents approximately 40 percent of the global dispensing market, a market worth several hundred million US dollars. The company's head office is located in Shenzhen, China and has currently approximately 240 employees. Axxon has obtained this position through a strategy to develop mainstream products, combined with fast response time to customer and market requirements. This has enabled Axxon to operate with high growth and good margins. In 2015 net sales increased over 100 percent to approximately SEK 150 million with an EBIT margin exceeding 20 percent.

Mycronic's strategy for growth includes organic growth as well as acquisitions to reach sustainable net sales above SEK 2 billion. This deal is part of the growth strategy.

RFEL Supplies Hyperspeed FFT IP Core To Arizona Radio Observatory

RFEL is supplying one of its HyperSpeed FFT™ IP cores to the Arizona Radio Observatory (ARO) at the University of Arizona in Tucson, Arizona. They are developing a new high performance radio astronomy spectrometer system where RFEL's core forms a key component to improve sideband separation in their heterodyne receivers. To support the receiver's wide signal bandwidth, the core utilizes parallelism to operate at a high input data rate of over 10 Giga samples per second.

"Radio astronomy is a perfect example of how our expertise can provide solutions that cannot be found elsewhere," explained Dr. Alex Kuhrt, RFEL's CEO. "Radio telescopes generate huge amounts of data that have to be processed without loss to extract signals. This requires specialist skills to create solutions that can handle this amount of data whilst retaining the mathematical precision. Our HyperSpeed FFT core is configured to match the demanding research needs of the ARO giving them the throughput and performance required."

STMicroelectronics Acquires AMS' NFC And RFID Reader Assets

STMicroelectronics, (NYSE: STM) , a global semiconductor leader serving customers across the spectrum of electronic applications, today announced that it has acquired ams' (SIX: AMS) assets related to NFC[1] and RFID[2] reader business. ST has acquired intellectual property, technologies, products and business highly complementary to its secure microcontroller solutions serving mobile devices, wearables, banking, identification, industrial, automotive and IoT markets. Approximately 50 technical experts from ams have been transferred to ST.

The acquired assets, combined with ST's secure microcontrollers, position ST for a significant growth opportunity, with a complete portfolio of best-in-class technologies, products and competencies that comprehensively address the full range of the NFC and RFID markets for a wide customer base.

"Security and NFC connectivity are key prerequisites for the broad rollout of mobile and IoT devices anticipated in the coming years. This acquisition builds on our deep expertise in secure microcontrollers and gives ST all of the building blocks to create the next generation of highly-integrated secure NFC solutions for mobile and for a broad range of Internet of Things devices," said Claude Dardanne, Executive Vice President and General Manager of STMicroelectronics' Microcontroller and Digital ICs Group. "We welcome this highly competent team from ams into ST for the benefit of our customers."

Samsung Smartphones Shine As Apple's Iphones Slip

South Korea's Samsung Electronics has seen its handset business rise just as iPhone maker Apple recorded its second quarterly decline in shipments.

Samsung, which makes electronics products ranging from chips to refrigerators, said in a statement that its second-quarter profit this year grew, led by expanded sales of smartphones such as the Galaxy S7 and S7 Edge. Just a day earlier, Apple said that

during its fiscal 2016 third quarter ended June 25, iPhone shipments fell to 40.4 million units from 47.5 million units in the same period a year ago.

Samsung shipped about 72 million smartphones in the second quarter this year, according to The Korea Herald, citing Samsung executives speaking on a conference call to announce the company's financial results.

Industry News & Trends

Robots And 3D Printing Could Threaten Millions Of Southeast Asian Jobs In Next Two Decades

The fears of robots replacing humans in the workplace and taking their jobs has been ongoing since the dawn of automated industrial technologies. Now, it seems those fears are may be coming to fruition in South East Asia, where significant textile, automotive, and disk drive manufacturing is done for large companies. According to a report released by the United Nations' International Labour Organization (ILO), more than half of workers in South East Asia may be at risk of losing their jobs within the next two decades primarily because of the rise of 3D printing technologies, wearable technologies, nanotechnologies, and robotic automation.

The study, called ASEAN in Transformation: How Technology is Changing Jobs and Enterprises, has found that around 56% of salaried workers in South East Asia are at high-risk of losing their jobs in the near future. This 56% comprises of about 137 million workers, amongst which those working in the garments industry are the most vulnerable. The garments industry, which includes textiles, clothing, and footwear, employs about 9 million people across South East Asia, of whom the majority are young women.

Scientists Develop Plastic Flexible Magnetic Memory Device

It looks like a small piece of transparent film with tiny engravings on it, and is flexible enough to be bent into a tube. Yet, this piece of "smart" plastic demonstrates excellent performance in terms of data storage and processing capabilities. This novel invention, developed by researchers from the National University of Singapore (NUS), hails a breakthrough in the flexible electronics revolution, and brings researchers a step closer towards making flexible, wearable electronics a reality in the near future.

The technological advancement is achieved in collaboration with researchers from Yonsei University, Ghent University and Singapore's Institute of Materials Research and Engineering. The research team has successfully embedded a powerful magnetic memory chip on a flexible plastic material, and this malleable memory chip will be a critical component for the design and development of flexible and lightweight devices. Such devices have great potential in applications such as automotive, healthcare electronics, industrial motor control and robotics, industrial power and energy management, as well as military and avionics systems.

The research team, led by Associate Professor Yang Hyunsoo of the Department of Electrical and Computer Engineering at the NUS Faculty of Engineering, published their findings in the journal Advanced Materials on 6 July 2016.

Chinavasion Releases Affordable DIY 3D Printer

Five years go the idea of owning your own desktop 3D printer was something dreamlike. They were expensive, with the cheapest DIY being around $350 and the next jumping to $530, and pre-built printers would have you shelling out at least $700. Fast forward to 2016 and Chinavasion have made a DIY 3D printer that will start at around $200USD.

This is largely due to the recent boom in 3D printing, which has created a new market and opened new opportunities for industry specialists.

Thanks in part to the fantastic-ness of the internet, and its open source community of developers and designers, 3D printers have reached greater heights.

“This has resulted in precision 3D printers becoming radically more affordable,” explained Ms. Rose Li, PR Manager at Chinavasion.

Nano-Sized Photo Detector Can Be Integrated On CMOS Chip

Glass fibers may become the information superhighways of the information age. Researchers from the Karlsruhe Institute of Technology (KIT) succeeded in developing an innovative photo detector for optical data paths—the central component at the receiver side of the glass fibers—that sets new standards as to their size: The researchers claim a footprint of less than 100 square micrometer, ideal for integration on an integrated circuit. Even more impressing is its data rate.

The new photo detector, according to the research team around Sascha Mühlbrandt the smallest worldwide for optical data transmission, permit a significant performance increase of optical communications systems, because they can be integrated on optical semiconductors in large quantities. In their experiments, the researchers reached a throughput up to 40 Gbps—enough to transfer the entire content of a video DVD within a fraction of a second, explains Sascha Mühlbrandt who carried out the related research activities at the Institutes for Microstructure Technology and Institute for Photonics and Quantum Electronics, both subsidiaries of the KIT.

Samsung Electronics Unveils New Curved-Screen Galaxy Note Phone

Samsung Electronics Co Ltd on Wednesday unveiled a new Galaxy Note smartphone with a curved screen and iris-recognition technology, seeking to build on the sales momentum that has helped it roar back to surging profit growth.

Samsung, the world's top smartphone maker, saw its January-June mobile profit jump 49 per cent from a year earlier, thanks to robust sales of its flagship Galaxy S7 devices as well as a line-up overhaul that ditched unpopular models for fewer but more attractive new mid-to-low tier products.

The South Korean firm is betting the new big-screen device - the Galaxy Note 7 - will help sustain its mobile business revival through the second half, though new launches from rivals like Apple Inc will likely steal some of the thunder.

Samsung is using a 5.7-inch, curved screen display for the Galaxy Note 7. The new device employs a similar design to the Galaxy S series, but offers a larger screen and functions involving a pen accessory. Grip on the device was also improved to make it easier to be used with one hand.

Tiny Laser Makes 'Twisted Light'

A tiny laser that emits "twisted light" has been unveiled by researchers in the US and Italy. Measuring just 9 μm across, the semiconductor device can produce a beam of light

that carries orbital angular momentum. While improvements are needed before the laser can be commercialized, it could someday be used to boost the bandwidth of optical-telecommunication systems. Twisted light could also find use in quantum computing and quantum communications.

In a beam of light with orbital angular momentum (OAM), the wavefront of the light's electric and magnetic fields twists around the direction of propagation, creating a vortex in the middle of the light beam. OAM occurs in well-defined and unique modes, and researchers have already created prototype optical-telecommunication systems that use these modes to transmit information. The ability to use several different modes at the same time could increase the amount of data that can be sent along an optical fibre. Physicists have also shown that the OAM of single photons can undergo quantum teleportation, and OAM could someday be used to transfer quantum information in quantum computers and quantum-cryptography systems.

East European News & Trends

Moscow To Launch Driverless Buses And Triple Its Technoparks

Driverless buses will appear on the streets of Moscow during the 2018 World Cup, Russian Deputy Prime Minister Arkady Dvorkovich announced at the Moscow Urban Forum, reports the TASS news agency.

Driverless public transport will mark the first phase of the Russian capital's technological transformation, said Dvorkovich at the event, which ran from June 30 to July 3.

Earlier, an eight-passenger driverless bus project was introduced in June 2016 at the St. Petersburg International Economic Forum. Equipment for the new bus will be 60-percent made in Russia, Alexei Bakulin, the managing director of the Volgabus holding company that developed the project, said at the time.

Moscow Ranks Among The World's Top Tech Hubs

"There is no question that Silicon Valley is the original and most successful tech hub in the world, but is it the best place to live in if you're starting a tech career or company?" That's the question researchers at the international consulting firm, Expert Market, tried to answer.

In early June the company published a ranking of the leading cities with the most comfortable living and working conditions in the IT industry.

Researchers evaluated a number of criteria, including commuting time and average residential rental price. The results were surprising -- well-known tech hubs such as London and New York finished at the bottom. First place went to Berlin; second to Austin, Texas; while third was taken by Toronto. The top ten also included Paris and Amsterdam.

Labour Shortage A Grave Issue For 70% Of Manufacturers In Hungary

Hungary's manufacturing industry has been facing a shocking shortage of labour as of Q3 2016, with more than 70% of the companies surveyed reporting that the lack of adequate workforce is a hindrance to production. The service sector has likewise witnessed an increase in labour shortage, although the issue was mentioned by "only" about one-third of service providers in the latest update of the European Commission's quarterly economic growth report.

The European Commission publishes the latest figures in the first month of each quarter; the latest statistics have now revealed that shortage of labour is causing a setback to as many as 71% of manufacturing companies in Hungary. The index has been steadily rising for 8 quarters in a row now; the 14-point surge reported in the current update has been the greatest increase ever.

Russian Developer Of Web Apps Security Solutions Goes To Silicon Valley

Wallarm, a Russian developer of web apps security solutions, has been selected to join California-based Y Combinator and is getting $120K in investment from the global business incubator to put together its expansion in the American market, Firrma.ru reported.

Wallarm's other investors include Runa Capital, a Russian VC fund, and the government-owned Skolkovo Foundation (the latter earlier gave the company a $77K grant).

Wallarm products analyze Internet traffic and identify typical user behavior. They are said to be able to tell hacking attempts from legitimate Internet surfing and identify vulnerabilities fraudsters try to take advantage of. Machine learning is the core of web app operation and provides exact rules of blocking.

Visionlabs Gets $5.3m To Enhance Face Recognition Expertise

VisionLabs, a Russian expert in computer vision and machine learning, has just raised $5.3m in investment from Sistema Venture Capital, a Russian corporate VC fund. The fund has acquired 25% of this young company currently valued at $21+m, the Skolkovo Foundation announced. VisionLabs is a resident of the Skolkovo innovation hub just outside Moscow.

According to VisionLabs CEO Alexander Khanin, this is the first time a venture fund invests in his company. Earlier funding came from acceleration programs and the founders' own pockets.

VisionLabs wants to funnel the new money into further development of its proprietary face recognition and analysis technology, and also has international expansion plans. Foreign markets are focal for VisionLabs, the CEO said, as "the Russian market is interesting but, unfortunately, not so large.

World Economic Round Up

US crude has dropped below US$40 a barrel while the global benchmark Brent hovered at three-month lows, as higher output and exports from big producer countries weighed on market sentiment. The world's leading energy bodies have said a rebalancing of supply and demand is well under way, but oil prices remain under pressure while previously bullish hedge funds are turning more negative. Market participants also point to increasing production and exports from OPEC countries, just as concerns rise about falling crude demand from refineries as refined products inventories swell.

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 2016

Future Horizons Events

- Silicon Chip Industry Training Seminar – London – 14th November 2016
- Industry Forecast Briefing, London – 20th September 2016

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

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

Download Future Horizons Full Events Calendar Here

Industry Events

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MARK YOUR CALENDER FOR THE NEXT

SILICON CHIP INDUSTRY WORKSHOP
MONDAY 14th NOVEMBER 2016
AND
INDUSTRY FORECAST BRIEFING
TUESDAY 20th SEPTEMBER 2016

BOTH BEING HELD AT

HOLIDAY INN KENSINGTON FORUM, LONDON

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