



Semiconductor Biz Insight

Your 5 minute monthly e-link digest brought to you by VLSI Consultancy

April 2011 Issue

Your monthly digest which aims to provide you a round up of the semiconductor headlines with a special focus to the Asian arena - direct to your inbox. Simply click on the relevant links provided to get the details.

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Hi,

It has been a terrible month with the earthquake, tsunami and nuclear plant events that devastated Japan and brought forth serious ramifications to the world and also impacted the semiconductor industry. Unlike Applied Materials, the world's top semiconductor production equipment manufacturer which sees minimum impact on its customers (no impact in Q2), the second place holder Tokyo Electron has sustained serious damages. And as it is TSMC's primary equipment supplier, it is uncertain if TSMC will be able to fulfil its target capex budget for this year - \$7.7B. UMC and GlobalFoundries have not reported any significant impact on their operations. A manufacturing plant in Fukushima responsible for 20% of world's production of 300mm raw silicon wafers has been closed. Japan is also a major supplier of consumer semiconductors and the largest supplier of discrete devices. Expect significant delays and price increases in the supply chain

Moving on to rankings and reports....The increasing presence of EDA vendors in the semiconductor IP (SIP) has been reiterated by EDAC's latest results. While CAE is the largest revenue contributor, it is the SIP segment which showed the highest revenue growth.

In a stunning recovery from the 2008 & 2009 recession, the wafer fab equipment suppliers grew over 140%. While Applied Materials retained its top spot, ASML and Lam Research showed strongest growths.

Looks like Qualcomm's multi-OS strategy with integrated Snapdragon solution & mobile broadband technology portfolio is paying off. As per the Strategy Analytics' smartphone applications processor revenues report, Qualcomm led the overall

applications processor market with 41 per cent revenue share. A caveat for the handset manufacturers - Mobile is now a game of ecosystems and not just devices.

While on smartphones, Mediatek is stocking up its portfolio in its bid to target the higher tiered smartphone market with two main acquisitions this month – Ralink and Goodix. Unlike its compatriot and competitor MStar, MediaTek got its cap touch control technology through a 20% stake in Goodix.

If you have any thoughts on the above and would like to share them with me and your industry colleagues through this e-newsletter, please email me at meenu@asic-vlsi.com.

Have a good and safe month ahead!

Best Regards
Meenu

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LOCAL ASIA-PACIFIC NEWS

[Samsung begins production of 22in. transparent LCDs](#)

Source: Richard Wilson, Electronics Weekly – 31st March 2011

These low power panels are expected to be used in advertising and retail displays. Compared with the conventional LCD panels that use back light unit (BLU) and have 5% transparency, Samsung claimed the transparent LCD panel has a transparency rate of over 20% for the black-and-white type and over 15% for the colour type.

[IBM opens power R&D lab in Taipei](#)

Source: ELPort.News – 31st March 2011

The laboratory is expected to add to the range of IBM expertise in Taiwan, including design capabilities in electrical, mechanical, thermal and firmware as well enhancement skills in spec identification, customer services, industry domain know-how and cross region management.

[Renesas mulls foundry for MCUs](#)

Source: Peter Clarke, EE Times – 29th March 2011

As per some reports, the world's leading maker of microcontrollers that was hit hard by the Japan earthquake of March 11, is in talks on outsourcing the production of automotive microcontrollers to GlobalFoundries.

[First Solar begins building 250MW Vietnam factory](#)

Source: Electroiq – 23rd March 2011

The \$300 million manufacturing plant is scheduled to begin commercial production

KEY TAKE-AWAY

Japan's earthquake and tsunami disrupt the semiconductor supply chain

With almost a fifth of all global technology products being made in the country, this month's powerful earthquake and tsunami causing plant closures and production outages among Japan's high-tech companies has caused disruptions to the semiconductor supply chain.

Fab tool rankings

In VLSI Research wafer fab equipment suppliers' ranking, Applied Materials retained the top spot while ASML displaced Tokyo Electron Ltd. For the second place.

Mergers & Acquisitions

Mediatek got Ralink and Goodix, Broadcom bought Provigent,

in the second half of 2012 and employ around 600 associates. The plant will produce more than 250MW of First Solar's advanced, thin-film solar modules per year on four manufacturing lines, with the flexibility for future expansion.

[Sony closes 5 more factories](#)

Source: David Manners, Electronics Weekly – 23rd March 2011

Sony has shut five more factories on top of the eight manufacturing sites it closed immediately after the earthquake. The company says the five new closures stem from problems in getting supplies. However the company's battery factory at Tochigi has now re-opened for partial operations leaving 12 factories closed in all.

[Wipro to expand chip services unit by 10-15%](#)

Source: EE Times – 24th March 2011

Within its chip services unit, the company plans to hire and expand its workforce by 10 to 15 per cent in 2011, Wipro already boasts some 1,000 chip designers and 400 systems experts in-house. Within its chip operations, Wipro provides "silicon turnkey" or "concept to product" outsourcing services.

[Japanese orders secure, say TSMC and GlobalFoundries](#)

Source: David Manners, Electronic Weekly – 22nd March 2011

The CEOs of TSMC and GlobalFoundries report that orders from Japan have not been cut as a result of the earthquake. While TSMC expects revenues of \$16bn this year up from \$13.3bn last year (22% y-o-y), GlobalFoundries expects revenues of \$4bn this year up from \$3.5bn last year (15% y-o-y).

[Polysilicon in China in tight supply](#)

Source: Nanjing Shangkong Communications (article from Photovoltaics World) – 22nd March 2011

China imported 5,521 tons of Polysilicon in January, representing a year-on-year rise of 74.8%, according to the latest statistics released by the General Administration of Customs. The figure is 40% above the 2010 average monthly import, which was approximately 3,958 tons, providing evidence that the material is in tight supply across the country.

[Japan quake raises concerns over electronics supply chain](#)

Source: EE Times– 16th March 2011

Aside from being a significant manufacturer of chips, Japan holds a key position in the semiconductor equipment and materials supply chain, which could have a bearing on chip manufacturing factory operations in the rest of the world. Japan is a major player in LCDs, solar and other products.

[Renesas tops list of car chip suppliers](#)

Source: EE Times– 14th March 2011

Renesas Electronics was the leading supplier of semiconductors to the automotive sector in 2010, according to a report from Semicast Research, followed by Infineon

Xilinx bought Omiino and Advantest is set to buy Verigy.

Expansions in Asia

IBM opens power R&D lab in Taiwan, First Solar begins building its thin film solar modules factory in Vietnam, Wipro plans expansion, Osram Opto expands its LED capacity in Malaysia and Mediatek expands its design centre in Singapore – these are a few of the many announced expansions this month

EDAC reports revenue increase

EDA industry revenue increased 19.4% for Q4 2010 to \$1507.7 million. CAE was the largest category and America the largest region. However, strongest growth was noted in SIP category and Asia Pacific region.

Technologies, STMicroelectronics, Freescale Semiconductor and Bosch. The Japanese company had an estimated market share of 11 per cent.

[Hynix joins Sematech's 3D interconnect program to drive wide I/O DRAM](#)

Source: Suzanne Deffree, EDN – 8th March 2011

Hynix will collaborate with engineers in the consortium's 3D Interconnect program at CNSE's Albany NanoTech Complex to address industry infrastructure and technology gaps in materials, equipment, integration and product related issues for high volume adoption of through silicon vias.

[Osram Opto expands LED capacity with 6 inch conversion](#)

Source: LEDs Magazine – 7th March 2011

Osram Opto Semiconductors will convert its InGaN-based LED chip manufacturing facilities in Germany and Malaysia to use 6 inch wafers, advancing a two-fold expansion in capacity. A new production building is currently under construction in Penang, Malaysia. Meanwhile in Regensburg, Germany, the available space is being re-allocated.

[MediaTek expands R&D centre in Singapore](#)

Source: Mediatek – 4th March 2011

MediaTek will also invest more than SGD 120 million to expand its research and development centre and business operations in Singapore. Additionally, Singapore will now be MediaTek's regional base for RF design.

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INDUSTRY HEADLINES

[Akustica digital microphone uses smallest fully integrated MEMS](#)

Source: Electroiq – 30th March 2011

Akustica debuted a single-chip digital MEMS microphone, the company's first product that leverages Bosch's MEMS fabrication capabilities and global supply chain, for high-quality voice applications in laptops, tablets and netbook PCs.

[Missing sensor hits global automakers](#)

Source: Peter Clarke, EE Times – 28th March 2011

Japanese and global automotive production is being hit by the lack of an airflow sensor, according to market research firm IHS Automotive. Global automobile production is likely to see a further marked drop in vehicle production – beyond that due to missing Japanese production – within a matter of weeks, the analyst said.

[A quarter of global raw wafer supply turned off](#)

Source: David Manners, Electronics Weekly – 22nd March 2011

A quarter of the world's raw wafer production has been turned off as a result of a cessation of operations at Shin-Etsu's Shirakawa plant and MEMC's Utsunomiya plant, says iSuppli.

[Microsemi enters SSD market](#)

Source: Mark LaPedus, EE Times – 22nd March 2011

The Irvine, Calif.-based chip maker announced initial production and availability of its TRRUST-Stor secure storage device. The SSD is designed from the ground up for aerospace, defence, and military applications.

[Surging materials prices force redesign](#)

Source: Doug Smock, Design News – 21st March 2011

CEOs are telling their engineering staffs to redesign and reengineer products to reduce the impact of soaring materials' costs in 2011.

[HEM vendors battle Home Automations vendors for \\$2b business](#)

Source: Business Wire – 17th March 2011

Home energy management systems (HEMS) will see moderate growth through 2013, according to ABI Research. But starting in 2014, shipments of these systems are expected to accelerate rapidly until by 2016, nearly 44 million will hit world markets, when they will generate revenue of about \$2 billion.

[Applied, Magma managing yield for 20nm HVM](#)

Source: Ed Korczynski, Semiconductor Manufacturing & Design Community – March 2011

Applied Materials and Magma Design Automation launched their new collaborative solution to the problem of managing yield data when ramping the most complex ICs in high-volume manufacturing (HVM) at the SPIE Advanced Lithography (AL) conference.

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FINANCIAL WATCH

[Infineon to invest \\$160m in Malaysia to expand manufacturing capability](#)

Source: RTT News – 31st March 2011

The investment will increase the company's capacity to produce power semiconductors for energy efficiency applications.

[Siemens plans Osram IPO](#)

Source: LEDs Magazine – 30th March 2011

Osram will become a publicly-listed lighting company with Siemens as a long-term

anchor shareholder, and Wolfgang Dehen as its new CEO.

[IQE has a strong year as opto market lights up](#)

Source: Richard Wilson, Electronics Weekly – 29th March 2011

IQE, the supplier of semiconductor wafers, has had a strong year reporting a 38% increase in revenues, thanks mainly to a revenue growth from a range of new optoelectronic products which are moving toward volume production.

[ASML gains in fab tool rankings](#)

Source: Mark LaPedus, EE Times – 29th March 2011

In the VLSI Research ranking of the wafer fab equipment suppliers, Applied Materials retained its top spot while ASML displaced Tokyo Electron Ltd. to gain the second place.

[EDA Consortium reports revenue increase for Q4 2010](#)

Source: SOCcentral – 28th March 2011

EDA industry revenue increased 19.4% for Q4 2010 to \$1507.7 million, compared to \$1262.7 million in Q4 2009. While the largest category, Computer Aided Engineering (CAE), generated revenue of \$576.5 million in Q4 2010, the strongest growth came from semiconductor IP.

[Applied Materials details momentum in its markets and business](#)

Source: Applied Materials – 23rd March 2011

Applied Materials confirms outlook for record FY2011 revenue of more than \$11 billion and greater than \$1.50 non-GAAP EPS

[Cree shares drop after LED sales forecast revised](#)

Source: LEDs Magazine – 23rd March 2011

Shares in LED maker Cree took a hit after the company revised its financial targets for its fiscal third quarter ending March 27, 2011. Cree expects its gross margin for the quarter to be approximately 43%, a decline which it attributed primarily to increased pricing pressure for its LED chip product line.

[Sequans files for IPO](#)

Source: EE Times – 23rd March 2011

The fabless supplier of 4G semiconductors, has filed an initial public offering in the U.S. Sequans announced the establishment of its LTE program in 2009. In a recent news, China Mobile selected it to provide LTE chips and USB dongles for its TD-LTE demonstration network.

[Smartphone applications processor revenue showed rapid 2010 growth: Strategy Analytics](#)

Source: Business Wire – 17th March 2011

Smartphone applications processor revenue showed 77 per cent year-over-year growth to reach \$4.52 billion in 2010, according to a report from Strategy

Analytics. Both Qualcomm and Samsung registered triple-digit unit shipment growth in 2010.

[ZTE's profit climbs 32% on strong overseas sales](#)

Source: Phil Goldstein, FierceWireless – 17th March 2011

For all of 2010, ZTE said revenue clocked in at \$10.67 billion, up 17 percent from \$9.16 billion in 2009, thanks in large part to a strong boost in overseas sales. The Chinese equipment vendor and handset maker also said its fourth-quarter net profit jumped nearly 49 percent.

[SEMI: Chip equipment market up 148% in 2010](#)

Source: EE Times – 10th March 2011

Worldwide sales of semiconductor manufacturing equipment totalled \$39.54 billion in 2010, representing a year-over-year increase of 148 per cent, according to industry body SEMI. Steepest spending increases were reported for China and Korea. For the second year in a row, Taiwan was the region with the highest amount of spending with \$11.19 billion in equipment sales.

[IC Insights notes lowest decline in January IC sales for 21 years](#)

Source: Fabtech – 7th March 2011

According to data just released by WSTS (World Semiconductor Trade Statistics), worldwide January 2011 IC sales were US\$21.4 billion, 16% greater than in January 2010 and a sequential decline of only 4.5% from December 2010. IC Insights noted that from 1990-2010, the average January/December IC sales decline had been 17%.

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MERGERS, ACQUISITIONS, JOINT VENTURES, SPIN OFFS AND PEOPLE

[Xilinx acquires Belfast telecoms start-up Omiino](#)

Source: Silicon Republic – 31st March 2011

Omiino was founded in mid-2007 through an initial funding round of US\$1.5m led by Belfast-based Crescent Capital. It has since achieved significant global success with its highly innovative optical transport network (OTN) technology solutions, which are now used by some of the world's leading telecom suppliers.

[Advantest to acquire Verigy](#)

Source: John Ayling, The Star – 28th March 2011

The supplier of automated test equipment to chipmakers announced that the firm had reached a definitive agreement to acquire rival Verigy for \$15 per share in cash. In addition, Verigy announced that the firm paid \$15 million to break a competing agreement to merge with a different competitor, LTX-Credence.

[Broadcom to broaden chip lineup with Provigent acquisition](#)

Source: Shan Li, Los Angeles Times – 23rd March 2011

Broadcom, looking to widen its line-up of chips that handle smart phone data traffic, will acquire Israel-based Provigent for \$313 million. Chips made by Provigent transmit data over microwave radio links from cell towers to the backbone network that carries the bulk of Internet data.

[Gemalto and STMicroelectronics partner for NFC](#)

Source: Gemalto website – 21st March 2011

The two companies announced a new partnership to develop a range of solutions to initiate and distribute digital security services for NFC (near field communications) applications. Building on the two companies' extensive security expertise and portfolio of NFC technologies, the partnership aims to deliver solutions that will meet the strong global demand for NFC-based services

[AT&T seen selling assets to get nod for mega deal](#)

Source: Diane Bartz & Jasmine Melvin, Reuters – 21st March 2011

AT&T will likely be forced to sell major assets and pledge to expand service to poor areas to get approval from the U.S. government for its \$39 billion deal to buy Deutsche Telekom AG's T-Mobile USA.

[Mediatek buys into Goodix to build touch control capability](#)

Source: Taiwan Economic News – 18th March 2011

The Taiwanese fabless company recently announced acquiring a 20% stake in touch-control chip designer Goodix of mainland China for around US\$20 million through a subsidiary named Gaintech.

[Qualcomm reported to sell Indian wireless venture to Bharti Airtel for \\$1.2B](#)

Source: Phil Goldstein, Fierce Wireless – 17th March 2011

The report on the news channel ET NOW, which cited unnamed sources, said the chip maker is in advanced negotiations with Airtel, India's largest operator, to purchase the venture which was formed last year. It said the exact valuation could be between \$1.2 billion and \$1.3 billion, representing a 25-30 percent premium on the \$1.05 billion Qualcomm paid for spectrum in India's BWA spectrum auction last year.

[MediaTek expands into home networks with Ralink buy](#)

Source: Caroline Gabriel, Re think Wireless – 17th March 2011

The purchase takes MediaTek beyond the handset and makes it a portfolio player spanning all the networks that deliver consumer content and apps, at home as well as on the move.

[NetApp buys LSI storage unit for \\$480 million](#)

Source: Reuters – 9th March 2011

NetApp said it was paying cash for Engenio, which will help it with video capture and high-performance computing. The popularity of online video and the switch to digital data in various businesses are generating huge amounts of online traffic. That in turn is seen boosting demand for effective storage products and cloud computing.

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MARKET OUTLOOK

[Analysts at ISS Europe see tight capacity](#)

Source: David Lammers, Semiconductor Manufacturing & Design Community

Leading-edge semiconductor production capacity is "sold out three times over" and it will take about two years for today's record-setting investments to result in significant capacity increases, said market analyst Malcolm Penn at the SEMI Industry Strategy Symposium (ISS) Europe, held in Grenoble, France.

[Digital compass manufacturing: with nearly all makers in Japan, will the earthquake affect supply?](#)

Source: Electroiq— 25th March 2011

IHS iSuppli research indicates that 97% of all digital compass manufacturing worldwide in 2010 was conducted in Japan - the world's top four suppliers of digital compasses are Japanese firms AKM Semiconductor, Yamaha, Aichi Steel and Alps. Global demand for digital compasses is rising rapidly (263 million units in 2010 – a 354% increase from 2009) and is predicted to be 1.28 billion by 2015.

[MEMS market to reach 5 billion shipped in 2016](#)

Source: PCB Design 007— 25th March 2011

New data from ABI Research indicates that strong growth in the MEMS market over the next five years will result in nearly five billion MEMS being shipped during 2016. The MEMS market is currently split between seven quite specialized major vendors – STMicroelectronics, Asahi Kasei, InvenSense, Bosch, Knowles, Kionix, Freescale Semiconductor – and a number of smaller ones.

[Asia rises in automotive arena](#)

Source: EE Times – 16th March 2011

A study conducted by consultancy firm Roland Berger on "Automotive Landscape 2025" forecasts increasing market share of electric and hybrid cars as well as vehicle connectivity. It also predicts a "dramatic" shift to the Asian markets for both production and sales.

[Tablet success to infringe on PC sales](#)

Source: Suzanne Deffree, EDN – 11th March 2011

The rise of tablets is causing a shakeup in PC market share rankings. As more consumers look to hot devices for computing mobility, estimates for PC sales shrink as the segment loses some of the momentum it had from laptops.

[Stable ASPs fuel chip industry growth in 2011, 2012](#)

Source: ELPort.News – 9th March 2011

IC Insights' Bill McClean and Future Horizons' Malcolm Penn speaking at the ISS Europe conference foresee that the global semiconductor industry will achieve growth in 2011 and 2012 before experiencing a downturn in 2013. France took similar positions and ascribed the two-year boom to a return to normal unit demand allied with flat-to-increasing average selling prices (ASPs) for chips

[Record capex leads to fab equipment increase of 28% in 2011](#)

Source: Christian Gregor Dieseldorff, Semi – 1st March 2011

According to the SEMI World Fab Forecast report just released, spending on worldwide fab projects, including construction, facilities, and equipping could grow by 22 percent over 2010 levels with fab equipment spending (new and used) to grow by 28 percent over 2010 levels.

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IEWS AND OPINIONS

[Experts at the table: 3D stacking](#)

Source: Ed Sperling, Semiconductor Manufacturing & Design Community – March 2011

A round table discussion with Riko Radojic, director of engineering at Qualcomm; Drew Wingard, CTO at Sonics; Michael White, senior product marketing manager for Calibre physical verification at Mentor Graphics; Jim Hogan, a Silicon Valley venture capitalist; Prasad Subramaniam, vice president of design technology at eSilicon; and Mike Gianfagna, vice president of marketing at Atrenta and Semiconductor Manufacturing and Design.

[NXP's Rick Clemmer: short range technology, long range opportunity](#)

Source: Suzanne Deffree, EDN – 17th March 2011

NXP Semiconductors' CEO discusses the improving investor view of the semiconductor industry, capacity investment and the long-range opportunities short-range technologies like NFC (near-field communications) can provide.

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STOCK WATCH

Source: NASDAQ

1 month chart for Intel, TSMC, TI, Broadcom, STM, Xilinx, KLA-Tencor, Qualcomm, LSI, UMC, Applied Materials, Teradyne, Toshiba and Infineon



INTEL



TSMC



TI



BROADCOM



STM



XILINX



KLA-TENCOR



QUALCOMM



LSI



UMC



APPLIED MATERIALS



TERADYNE



TOSHIBA



INFINEON

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