

FutureHorizons
The Global Semiconductor Industry Analysts



Future Horizons Newsletter

July 2014

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Industry News By Company

[Advantest Launches 1.6-Gbps Digital Module Enabling Protocol-Aware Testing With Powerful EDA-Link \(FTA-Elink\)](#)

TOKYO, JAPAN--(Marketwired - Jun 24, 2014) - Leading semiconductor test equipment supplier Advantest Corporation (TSE: 6857) (NYSE: ATE) has introduced its new T2000 1.6GDM digital module, designed to improve efficiency in testing system-on-chip (SoC) devices on the T2000 test platform.

The 1.6-Gbit-per-second module incorporates a new feature called Functional Test Abstraction Plus (FTA+) to achieve protocol-aware testing, in which the tester communicates directly with the devices under test (DUTs) in each IC's protocol language. A powerful EDA-Link, called FTA-Elink, connects the design simulator to the T2000 test platform directly. In addition, Verilog code can run on the T2000 EPP (Enhanced Performance Package) system with the 1.6GDM module. By equipping the tester's pattern generator with protocol-aware engines capable of independent timing and memory functions, protocol-based I/O can be natively measured, enabling efficient multi-site and concurrent testing. This allows customers to significantly accelerate their design to tape-out for faster time to market.

With the 1.6GDM, the already versatile T2000 EPP can boost its performance to simultaneously test multiple DUTs. The functions of each DUT can be independently monitored and evaluated

[.Actions Licenses ARM For 64-Bit Tablets](#)

BARCELONA -- The iPad was the undisputed king of the consumer high-end tablet market until last year, but new Android-based devices such as the Sony Xperia Z2 and Samsung's Galaxy Tab S are giving Apple a run for its money.

Many other tablet OEMs are looking to introduce high-performance 64-bit tablets. Actions Semiconductor will start providing its first systems on chips (SoC) in late 2014, making it easier for the Chinese company to develop high-end devices.

Actions announced that it has signed a license agreement for the 64-bit ARM Cortex A50 processor family, making it one of China's leading technology design companies delivering an ARM-based 64-bit chip for tablet devices.

[Amazon Unveils 'Fire Phone' Smartphone](#)

Amazon.com Inc.unveiled its long-awaited smartphone Wednesday, thrusting it into the highly competitive handset market.

The Fire Phone, as the device is known, boasts a 4.7-inch screen, a 13 megapixel camera and earphones that resist tangling, among other features, said Chief Executive Jeff Bezos, at an event in Amazon's hometown of Seattle.

The device is Amazon's first smartphone and a big bet that it can take on industry leaders Apple Inc. AAPL -0.10% and Samsung Electronics Co. 005930.SE -1.16%

One potential advantage for the Fire Phone is unlimited photo storage on remote computers through Amazon's cloud-computing software. As smartphones have become many users' primary camera, photos can suck up much of the storage, leaving little room for new apps or music.

[Avago To Acquire PLX Technology For \\$6.50/Shr Cash - Quick Facts](#)

Avago Technologies Ltd. (AVGO: Quote), a maker of analog semiconductor devices, Monday said it agreed to acquire PLX Technology, Inc. (PLXT: Quote), a provider of semiconductor-based PCI Express connectivity solutions predominantly for enterprise data centers, in an all-cash deal valued at around \$309 million, or \$293 million net of cash and debt acquired. Avago expects the acquisition to immediately add to adjusted earnings.

Under the terms of the transaction, an unit of Avago will commence a tender offer for all of the outstanding shares of PLX common stock for \$6.50 per share. Avago expects to fund the acquisition with cash available on its balance sheet.

[Cadence Completes Acquisition Of Jasper Design Automation .](#)

SAN JOSE, Calif., June 16, 2014 /PRNewswire/ -- Cadence Design Systems, Inc. (NASDAQ: CDNS), a leader in global electronic design innovation, today announced that it has completed the acquisition of Jasper Design Automation, Inc., a market and technology leader in the fast-growing formal analysis sector.

The completion of this transaction expands differentiation of Cadence's System Development Suite, the industry's first and broadest system design and verification platform. Integration of Jasper's solutions with Cadence's connected debug analysis and software and hardware verification platforms will improve customers' ability to leverage Cadence's unified verification planning, metric-driven verification flow, and extensive dynamic and formal Verification IP portfolio for embedded processor system verification. The combination of Jasper and Incisive(R) Formal technologies and expertise will result in the most complete formal and semi-formal offerings in the industry.

The Jasper team, led by Kathryn Kranen, will join the System & Verification Group reporting to senior vice president Charlie Huang.

[Cadence, QNX Team Up For In-Car Active Noise Control](#)

Cadence Design Systems Inc. and QNX Software Systems, a subsidiary of BlackBerry and a developer of software platforms for in-car electronics, have revealed that QNX has ported its QNX Acoustics for Active Noise Control (ANC) software to the Cadence Tensilica HiFi Audio/Voice digital signal processing (DSP) core.

QNX Acoustics for ANC claims to be a high-performance software solution for reducing unwanted engine noise inside passenger vehicles. Compact and efficient, it can run on a DSP core in the vehicle's infotainment system or audio amplifier, eliminating the dedicated hardware of conventional ANC solutions. QNX Acoustics for ANC offers up

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to 20dB noise power reduction, depending on the transducer and vehicle seating configuration, and can be used with any of Cadence's HiFi Audio/Voice DSP IP cores.

[CSR And Abalta Technologies Offer Seamless Smartphone Integration Into Cost-Optimised Infotainment Platform](#)

CSR plc (LSE: CSR; NASDAQ: CSRE) and Abalta Technologies today announced a partnership to integrate Abalta's connected car solution, WEBLINK®, with CSR's highly advanced SiRFprimaII™ in-vehicle infotainment (IVI) location, connectivity and multimedia SOC (system-on-a-chip). As a result, CSR is able to provide its customers and OEMs with a leading automotive platform optimised for Display Audio applications, allowing consumers to have a consistently immersive user experience over the full lifecycle of their vehicles as WEBLINK is smartphone agnostic. The solution is available immediately and CSR and Abalta will demonstrate WEBLINK running on SiRFprimaII for the first time at the Telematics Detroit 2014 conference on 4 – 5 June.

Abalta's WEBLINK technology enables IVI systems to render smartphone applications and utilise the smartphone browser. This enables a user's phone to become the primary computing device, with the vehicle head unit acting as a 'terminal' to the phone. As a result, such systems no longer need a web browser and, as the vehicle ages, it will take advantage of the ever increasing power and capability of future smartphones as drivers swap out their old phones for new ones during the life of the vehicle. IVI systems can therefore be greatly simplified and built at a lower cost.

[CSR Invests In Wireless Technology Innovation With The Opening Of New R&D Centre In Bristol](#)

British technology pioneer CSR plc (LSE: CSR; NASDAQ: CSRE) today announces that it has opened a new Research and Development (R&D) facility in Bristol to drive further innovation in wireless connectivity. The new site, which opened in June 2014, will be focused on giving customers the solutions they need to differentiate their products in areas including automotive, wearable devices and audio.

Since the opening of CSR's original R&D site at the Bristol & Bath Science Park in 2012, the size of the team has grown to 33 employees and CSR expects to continue this expansion. The new R&D facility, at Almondsbury in Bristol, will better support the needs of the existing team and enable growth over the coming years. This expansion will create a number of job opportunities in the local area, especially for graduates from South West universities.

“At CSR, we're passionate about developing cutting-edge technology that helps our customers turn great ideas into market leading products, and to do that we need to invest strategically in R&D,” said Anthony Murray, Senior Vice President, Business Group at CSR. “That's why we're opening this new, larger facility in Bristol. Bristol has a vibrant technology scene and with high quality universities that are developing the next generation of engineering talent on our doorstep it is a great place to expand our R&D capabilities.”

Intel Signs Up Panasonic As Foundry Business Customer

Intel Corp. (INTC:US), trying to steal orders from Taiwan Semiconductor Manufacturing Co. and expand the use of its plants, said it signed up Panasonic Corp. as a customer in its biggest win so far for its chip-production effort.

Panasonic's chip division will use Intel to make system-on-chip products on the U.S. company's 14-nanometer technology, which is the most recent type of manufacturing process for semiconductors, Intel said in a statement today.

Intel Chief Executive Officer Brian Krzanich, a former factory manager, is trying to get the Santa Clara, California-based company into the foundry business to produce chips for others. That business, dominated by TSMC, is growing as semiconductor manufacturing costs rise and companies increasingly outsource their production.

Samsung And GlobalFoundries Will Produce Apple's A9 Chips In 2015

Samsung and GlobalFoundries have reportedly landed orders from Apple to produce the 14-nanometer A9 processor starting next year, according to DigiTimes.

These 14nm chips will be created in GlobalFoundries' Fab 8 factory in Malta, New York, which Samsung will also use to produce Apple's A-series chips. DigiTimes' source suggests that the two foundries plan to push their initial 14nm LPE (low power early) process — which was verified back in February — into risk production in Q4 this year, with small volume production in early 2015.

The report also states that Apple's longtime partner Taiwan Semiconductor Manufacturing Company (TSMC) will try to secure orders for Apple's A9 chip by introducing new semiconductor processes by early next year. Apple is additionally considering Intel as a potential partner to produce the A9.

It was revealed late last year that Samsung and TSMC would share production of Apple's A9 chip in 2015, with Samsung producing 30% to 40% of the total order. Samsung and GlobalFoundries have helped each other over the past year, with Samsung helping set up the Fab 8 factory last year, and GlobalFoundries providing the backup location when needed. Samsung and GlobalFoundries announced in April that they would be adopting the same chip production process to prepare for next-gen mobile devices.

SanDisk Adds SSD Clout With Fusion-io Buy

SanDisk, which develops NAND flash chips that it designs into its own solid-state drives, has acquired Fusion-io, a manufacturer of flash-based PCI Express (PCIe) hardware and software for the enterprise sector. For SanDisk, the \$1.1 billion cash deal extends its solid-state drive line that supports the PCIe interconnect, strengthening its enterprise storage product portfolio, which includes SAS and SATA drives. Fusion-io, which does not make NAND flash, will get a steady supply of parts.

"You need a broad portfolio of solutions, you need strong go-to-market capabilities as well, which we will be able to have together with Fusion-io, and you definitely need vertical integration," said Sanjay Mehrotra, SanDisk's president and CEO. "So we believe that we will have what it takes to really work closely with our customers, to understand their growing needs of IT infrastructure challenges and really bring compelling solutions to them. We believe we will be best positioned in the industry for leadership in the enterprise storage segment."

SMIC And Qualcomm Collaborate On 28nm Wafer Production In China

USA: Semiconductor Manufacturing International Corp/ (SMIC) and Qualcomm Inc. have announced that SMIC and Qualcomm Technologies Inc., a subsidiary of Qualcomm, are working together in connection with 28nm process technology and wafer manufacturing services in China to manufacture Qualcomm Snapdragon processors.

Qualcomm Technologies' Snapdragon processors are purpose built for mobile devices. SMIC is one of China's largest and most advanced semiconductor foundries, and Qualcomm Technologies is one of the world's largest fabless semiconductor vendors and a world leader in 3G, 4G and next-generation wireless technologies.

ST Diodes Take On Battery Chargers, Adaptors

Extending a trade-off between low forward voltage drop (VF) and low leakage current (IR), STMicroelectronics' new family of field-effect rectifier diodes (FERD) lets designers of equipment, such as battery chargers and notebook adaptors, to meet energy-efficiency standard requirements without the expense of using synchronous rectification techniques.

Standards such as Energy Star 6.0 test the limit of what can be achieved with conventional Schottky diodes in battery chargers and notebook adaptors. Synchronous rectification provides superior performance but at significantly greater cost. The ST FERD family provides an attractive alternative as it meets the efficiency levels required by the energy-savings standards applicable to off-line Switch Mode Power Supplies while costing about 30 per cent less than a synchronous rectification kit.

Long-life Paper-Thin Batteries From STMicroelectronics to Power Tomorrow's Tiny Tech

STMicroelectronics has begun limited production of its EnFilm™ advanced rechargeable batteries that are less than 0.25mm thick. These paper-thin batteries free designers from the constraints of standard battery sizes and are ideal for use in powering the next generation of personal technology and Internet-of-Things (IoT) devices.

At just 220µm thick and measuring 25.7mm x 25.7mm, ST's EFL700A39 EnFilm™ solid-state lithium thin-film battery is perfectly suited for use in ultra-low-profile devices. Surface-mount terminals allow direct attachment to the circuit board, which simplifies assembly and eliminates wires and connectors. Optional tape-and-reel.

JUSUNG Provides Etcher and Single Type TSD-CVD Semiconductor Deposition Equipment to CNSE /SUNYIT

In accordance with Governor Andrew M. Cuomo's commitment to maintaining New York State's leadership in nanotechnology, the newly merged SUNY College of Nanoscale Science and Engineering (CNSE) / SUNY Institute of Technology (SUNYIT) today announced a strategic partnership agreement with JUSUNG Engineering Co., Ltd. which includes delivery of state-of-the-art equipment for use in production processes of nanoscale computer chips and the location of technical staff from Korea to the Albany Nanotech campus.

The \$10M partnership, supported by 25 researchers and engineers in Korea and New York, focuses on improving manufacturing efficiency, which is a primary objective in semiconductor manufacturing. The JUSUNG etcher (Model name: Genaon Plus) represents a first-of-its-kind design that includes a core process tool to etch novel material metal layers. The cutting-edge tool enables significantly improved semiconductor chip efficiency that will set the standard for future production processes. In addition, JUSUNG employees stationed at the Albany Nanotech Complex will collaborate with researchers from the newly merged CNSE/SUNYIT and its global corporate partners to develop innovative etching and encapsulation techniques critical for advanced technology nodes.

Industry News & Trends

[Pulse Electronics Debuts Chokes For Car Networks](#)

Pulse Electronics Corp. has rolled out the HOT ROD product family of I-Bar chokes for automotive networks to offer EMC/EMI protection for automotive electronics. The chokes are aimed to meet Broadcom's BroadR-Reach Automotive Ethernet technology for mode conversion up to 400MHz. The first part in the series, the AE2000, meets the need for the current generation of 100Mb/s BroadR-Reach automotive Ethernet transceivers.

The HOT ROD AE20xx family of small-sized (4.5 x 3.2 x 2.8mm) SMD components has been approved by the Automotive Electronics Council (AEC) to meet the reliability criteria of AEC-Q200. The AE20xx family of devices is smaller and lighter in weight than Pulse Electronics' HM6902NL chokes, used in digital camera networks supporting BroadR-Reach technology. AEC-Q200 is a stringent series of stress and accelerated life testing required by the automotive industry for high reliability components. The AE20xx products are especially suited for use in a confined space. They have an operating temperature range of -40°C to 125°C. A high temperature capability is needed for use particularly on the outside of a vehicle, such as for a camera unit in the fenders, bumpers and on wing mirrors.

[Tungsten Diselenide-Based Leds Push Miniaturisation Limits](#)

A team of researchers at the University of Washington (UW) has claimed to have built the thinnest-known LED that can be used as a source of light energy in electronics. According to them, the LED is made from flat sheets of tungsten diselenide that makes it possible to stack or use in much smaller and more diverse applications than prevailing technologies.

"We are able to make the thinnest-possible LEDs, only three atoms thick yet mechanically strong. Such thin and foldable LEDs are critical for future portable and integrated electronic devices," stated Xiaodong Xu, a UW assistant professor in materials science and engineering and in physics.

Xu along with Jason Ross, a UW materials science and engineering graduate student, co-authored the paper. Most consumer electronics use 3D LEDs, which are 10 to 20 times thicker than the LEDs being developed by the UW team.

[Ford, Intel Team Up To Enhance IoT In Cars](#)

As vehicles join the Internet of Things bandwagon, Ford and Intel collaborate to bring about innovations for the connected car, which include the ability for drivers to remotely peer into their car using a smartphone, or a vehicle that could identify its owner using facial recognition software.

The joint research project, called Mobile Interior Imaging, or Project Mobii, explores how interior-facing cameras could be integrated with sensor technology and data already generated within and around the vehicle to create a more personalised and seamless interaction between driver and vehicle that transforms the driving experience.

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[LG, Samsung Deliver Android Wearable Devices](#)

LG and Samsung used Android Wear, Google's platform for wearable devices, in their first devices. Though they share some similarities, there are differences in their features that are worth noting.

Google dropped a lot of hard-hitting news during the opening keynote of its I/O developer conference on Wednesday. While most of the topics pertained to the company's various platforms, apps, and services, Google's hardware partners launched some wearables that are worth discussing.

[Intel Showcases Of-The-Future Technologies](#)

During this year's Intel Future Showcase, the company looked at how the combined capabilities of hardware for mobile devices and the Internet of Things will boost innovation. From advanced tablets to connected prototyping boards and smart cars, the company is positive that the future will bring a more secure and immersive experience and, consequently, greater chip sales.

[MANGA Project Helps To Establish Independent European Supply Chain For GaN Technologies](#)

Under the leadership of the European Defence Agency (EDA), the multi-national R&D project MANGA (Manufacturable GaN-SiC-substrates and GaN epitaxial wafers supply chain) says that it has succeeded in implementing a supply chain for the realization of power electronics components based on gallium nitride within Europe.

With the aim of optimizing development and manufacturing techniques for power electronics based on gallium nitride (GaN), research institutions, universities and defence-focused industry partners in five European countries (Germany, France, Italy, Sweden and the UK) have worked together over the past four years to produce high-quality GaN-based electronic devices in Europe, without relying on international suppliers. Due to the high efficiency and robustness of the semiconductor, GaN-based power electronic components have already replaced established technologies, mainly in the fields of radar and broadband amplifiers.

[Industrial Robots Help Create 80,000 Jobs In Electronics Industry](#)

While many people out there may be scared about a robot someday taking their job, a new report from the International Federation of Robotics (IFR) shows that from 2008 to 2011, robotics helped to create 80,000 jobs in the electronics industry.

This new IFR report is based on an updated 2013 study from research firm Metra Martech, which suggested that for every report deployed, 3.6 jobs are created. Expounding on this data and looking to the future, the IFR suggests that by 2016, robotics will account for an additional 110,000 global electronics jobs.

"This encouraging growth trend is evidence that robots do indeed create jobs," said IFR President Arturo Baroncelli in a press release. "In the electronics industry in particular, robots are lauded for their superhuman speed and precision when faced with often dull, repetitive tasks. There is simply no other way to achieve these production levels. The

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worldwide consumer demand for smartphones, computers, video game consoles, and a new generation of high-tech electronics depends on robotic automation."

Sensing Chip Fingerprints Explosives From 5km

A chemically modified chip developed by a team of Israeli researchers can remotely detect explosives at concentrations as low as a few molecules per 1,000 trillion.

The small sensing platform can rapidly detect various explosive species over several distances, which is said to be an impossible task for current detection technologies requiring bulky equipment and laborious sample preparation.

The fingerprinting of explosives is accomplished by identifying patterns of interaction established between the chemically modified nanodevice and the molecular analytes under test, according to the researchers.

Google Takes 'Wearable' Battle To Apple With Smartwatch Services

Google sought to steal a march on Apple and breathe life into a new market for "wearable" devices, as it showed off a range of stripped-down internet services such as voice-activated search to feature on a coming generation of smartwatches.

The search company also outlined plans to take its Android smartphone software into other new markets, signalling an intensification of the platform wars between the leading consumer technology companies and internet companies. These included a version for cars, called Android Auto, and a TV set-top box, named Android TV, taking Google into fields that Apple has already entered.

Battery Goes Organic

A water-based organic battery that can last long and is made from cheap, eco-friendly components has been developed by scientists from the University of Southern California.

The new battery, which uses no metals or toxic materials, is intended for use in power plants, where it can make the energy grid more resilient and efficient by creating a large-scale means to store energy for use as needed.

Memristor Breakthrough Has Broad Implications For Semiconductor Industry

How does your computer recall things and perform logical operations? It is all thanks to the "moving" metal particles in memory components, finds new research.

Researchers have shown that the metal particles in memristors and "resistive random access memory", or RRAM - computer components that combine logic and memory functions - do not stay put in one place as previously thought.

The finding has broad implications for the semiconductor industry and could pave the way for smaller, more efficient chips.

"Most people have thought you can't move metal particles in a solid material," said lead researcher Wei Lu, associate professor of electrical and computer engineering at University of Michigan in the US.

Camera Driver Achieves Less Than 3ms Auto Focus Settling

ON Semiconductor has unveiled an all-in-one type auto-focus driver that integrates current driver, control logic, Hall-sensor, and EEPROM, designed for small camera modules.

The LC898214XC features digital loop filter and provides fast, accurate auto focus convergence with temperature compensation, while consuming minimal power. The integrated constant current driver provides lower electro interference noise than competing solutions. In addition, the space-saving design enables thinner and lighter smartphones.

East European News & Trends

Russian-American Startup iBuildApp Raises Another \$200,000

Mobile app builder iBuildApp has raised \$200,000 from Starta Capital and Nikolay Belykh. iBuildApp is an international project that enables clients to build and manage mobile apps. As well as being a resident of Moscow's Skolkovo IT-Park, the project also has its headquarters in Foster City, California.

This investment brings the total invested in the project to \$1.9 million, including \$175,000 injected at seed stage by Starta Capital. The startup's latest round of funding came a few months ago with a group of private investors bringing in \$525,000.

The startup has clients all over the world, and by March this year these had created more than 660,000 apps using iBuildApp's platform. In Russia the project's most famous client is Sberbank, which has created more than 50 apps via iBuildApp. According to its CrunchBase profile, its platform is also used by a number of Fortune 2000 companies in the US.

GS Group To Make New Chips For Domestic Market In Northwest Russia

GS Nanotech, a sizable Russian microelectronics developer and manufacturer in the Kaliningrad region, is launching new microchip production, using 3D TSV technology. Its factory, which is part of the GS Group holding company, is thus expected to become Russia's first to use this advanced technology in commercial-scale production, GS Group announced.

Adopting the 3D TSV technology is said to enable the manufacturer to make its chips smaller, reduce energy consumption, and cut the cost of a chip, thus making an end product more competitive.

The new approach is expected to help beef up the domestic market for developing MEMS solutions, optoelectronics, hybrid modules, LEDs, power electronics, and other modern segments in electronics.

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Symantec And Skolkovo Pen Partnership Agreement

Earlier this week Skolkovo, the international tech hub under completion on the outskirts of Moscow, and California-based digital security solutions firm Symantec signed a deal for joint cooperation across a number of segments.

Cooperation will range from educational projects to cooperation in software development. In particular, Symantec will provide mentoring support and advice to companies participating at Skolkovo by helping them create innovative IT products.

Read more about Skolkovo “The development of an ecosystem that offers Skolkovo participants close contact with industry leading companies, scientific and technical experts, engineers and businessmen, access to sources, and the exchange of experience with colleagues from Russia, Europe, Asia and the USA is one of the most important activities of the Foundation,” Igor Bogachev, Executive Director of the IT Cluster at Skolkovo, stated in a press release.

Vader Vehicle Or Bat-Tram? Futuristic New Russian Streetcar Causes A Stir

A hi-tech new Russian-built tram has become the subject of heated discussion online after being unveiled to the public in Yekaterinburg.

Visitors to the annual Innoprom international industrial trade fair, which took place in Yekaterinburg (almost 900 miles east of Moscow) from July 9 to July 12, dubbed the innovative new-generation tram Russia One (R1) an “iPhone on rails.”

Jointly developed by Uraltransmash (part of scientific and production corporation UralVagonZavod) and the experimental design bureau Atom, the ultra-modern silent tram with its tinted windows looks more akin to a huge black crystal or a high-speed train from a sci-fi movie than a form of urban public transportation. Manufacturers have nicknamed their unusually-shaped offspring "the world's first business-class tram."

World Economic Round Up

According to figures that confirm the faltering state of the global economic recovery six years on from the collapse of Lehman Brothers, world trade had a poor start to 2014. Economists had been hoping for a bounce back in global trade this year to signal that the world economy was finally escaping the shadow of the 2008 financial crisis. The World Trade Organisation (WTO) has predicted that the return to growth of developed economies such as the US and EU will see trade grow at 4.7 percent this year, its fastest annual rate since 2010. But that now appears unlikely after the first three months of the year saw the volume of global trade expand just 2.2 percent from the same period a year ago. In May the OECD also warned that exports by the G7 and BRIC economies had fallen by a collective 2.6 percent in the first quarter of 2014 from the final quarter of 2013.

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 – 15th September 2014](#)
- [Mid-Term Industry Forecast Briefing, London – 09th 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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[Download Future Horizons Full Events Calendar Here](#)

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MARK YOUR CALENDER FOR THE NEXT

SILICON CHIP INDUSTRY WORKSHOP

MONDAY 15th September 2014

AND

MID-TERM 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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