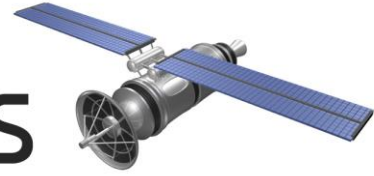


FutureHorizons



The Global Semiconductor Industry Analysts

Future Horizons Newsletter

July 2018

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Industry News By Company

[Chip Industry on Edge as Trade War Heats Up](#)

SAN FRANCISCO — Semiconductor industry analysts and market watchers expressed concern after U.S. President Donald Trump announced that the U.S. would impose 25% tariffs on \$50 billion of Chinese goods, including many products in the semiconductor supply chain.

U.S. chip firms and their suppliers largely oppose the tariffs and the escalation of a trade war between the world's two largest economies. The ultimate result, many fear, will be decreased sales of electronic products and components.

The Trump administration has argued that the tariffs are necessary to close a \$375 billion trade deficit with China and counter Chinese policies deemed harmful to U.S. industry, including required technology transfers and lax intellectual-property protection.

[1.5 Billion Chips Sold: Technology For Passport And ID Security On The Rise](#)

London, United Kingdom, and Munich, Germany – 21 June 2018 – To date, Infineon Technologies AG (FSE: IFX/OTCQX: IFNNY) has sold 1.5 billion security chips with its awarded Integrity Guard technology. Infineon provides robust solutions for enabling the protection of today and tomorrow's government-issued electronic ID documents like passports from potential security attacks. The technology features a complex digital security architecture. It includes a fully encrypted data path and a self-checking dual CPU core. Even if attackers eavesdrop on the data signals, all they see is encrypted and illegible information. Integrity Guard was developed for applications with high data security requirements for a particularly long life cycle.

“With Integrity Guard we provide an unrivalled security solution for the connected world through one of the world's most advanced technologies,” said Thomas Rosteck, Division President of Chip Card & Security at Infineon Technologies. “At Infineon, we are proud that through Integrity Guard we have set the technological standard for chip-based security.”

[Samsung Begins Mass Producing Industry's First 16Gb, 64GB DDR4 RDIMM](#)

SEOUL, South Korea--(BUSINESS WIRE)--Samsung Electronics, announced today that it is the first in the industry to begin volume production of modules containing a 16 gigabit (Gb) monolithic 64 gigabyte (GB) DDR4 memory solution. The new registered dual in-line memory module (RDIMM), which is designed primarily for use in enterprise and cloud server applications, will be shown at the HPE Discover Las Vegas conference and exhibition June 19-21 at the Venetian-Palazzo Resort Center in Booth #170.

“By featuring Samsung's market-leading 16Gb 64GB RDIMMS on HPE ProLiant DL385 and ProLiant DL325 Gen10 servers based on the AMD EPYC™ processors, Samsung, AMD, and HPE are partnering to advance the state of the art for higher performance with lower TCO, addressing the demands of today's leading applications.”

“Large data centers are increasingly embracing Big Data, high-speed mobility, IoT, deep learning, AI and cloud-native technologies, with Samsung and other leaders like HPE and AMD delivering integrated solutions that are faster, denser, more scalable, and more power-conserving,” said Sewon Chun, senior vice president of memory marketing at Samsung Electronics. “At Samsung, we are taking the industry to new horizons with our 16Gb, 64GB RDIMMs and other leading-edge memory and storage solutions in helping to fully enable the real-time needs of leading enterprise OEMs (original equipment manufacturers) worldwide,” he added.

[Semiconductor Startup Raises €3m To Improve Communication Quality](#)

Dutch semiconductor company SemiBlocks has raised €3m from BOM Brabant Ventures and a major strategic partner in the United States that will be used to develop a new type of compensation for temperature variations, significantly improving the quality of communication technologies.

Communication technologies are influenced by temperature variations. Without the required compensation, communication is lost. Every conventional communication product uses a specific compensation method to handle variations in temperature.

“There are many problems with these conventional products, e.g., limited accuracy, high costs, and limited temperature range”, says Rob van der Valk, CTO and co-founder of the company. “SemiBlocks has developed a disruptive technology solving these problems using standard IC design technology. It plans to be the first company to introduce a self-sensing measurement system enabling the use of low-cost materials while achieving higher accuracies. Other advantages are the support for a much larger temperature range and the option for further integration into other ICs.”

[ON Semiconductor Acquires SensL](#)

PHOENIX, June 18, 2018 — Semiconductor solution developer ON Semiconductor Corp. has acquired sensing technology developer SensL Technologies Ltd., based in Ireland.

SensL specializes in silicon photomultipliers and single-photon avalanche diode and lidar sensing products for automotive, medical, industrial, and consumer markets. This acquisition aims to strengthen ON Semiconductor's market position in automotive sensing applications for advanced driver-assistant systems and autonomous driving with expanded capabilities in imaging, radar, and lidar. In the second half of 2018, ON Semiconductor is planning to introduce samples to the market that incorporate technology from the radar assets acquired in 2017.

[UMC Acquires 100% Ownership Of Mie Fujitsu Semiconductor](#)

Fujitsu Semiconductor and United Microelectronics Corporation (UMC) today announced that the Taiwan-based foundry house will acquire all of the shares of Mie Fujitsu Semiconductor (MIFS), a 300mm wafer foundry joint venture between both companies.

In addition to the 15.9% of MIFS shares currently owned by UMC, Fujitsu Semiconductor will transfer the remaining 84.1% of its shares in MIFS to UMC, making MIFS a wholly-owned subsidiary of the Taiwan-based foundry. The consideration of the transaction will be around JPN 57.6 billion (US\$520.25 million). The transfer is planned for January 1, 2019, pending approval by the relevant governmental authorities, the companies said.

UMC's board of directors also approved plans for the company to apply with the China Securities Regulatory Commission for UMC's mainland operations to be listed on the Shanghai Stock Exchange as an A-list offering. HeJian Technology (Suzhou) will represent UMC's China businesses, which include HeJian's 8-inch fab, United Semi and its 12-inch fab in Xiamen and Shandong-based UDS, which provides IC design support services.

[Xcom's Wireless Blanks](#)

Paul Jacobs's new San Diego startup Xcom is aptly named. It is still a very unknown response to the unclear situation with Qualcomm, the former home of its three founders.

Jacobs announced Xcom with a tweet (below), noting that Qualcomm's former president and CTO — Derek Aberle and Matt Grob — are joining him in the company where he will be CEO. The startup's skeletal website says only that it will focus on wireless technology.

It turns out Xcom will develop IP and do contract R&D, with initial ideas focused on gateway-like products, according to an interview with Grob who is hiring engineers for a San Diego lab.

Rather than sell hardware, Xcom will use a model popularized by Rambus of developing and licensing technology. “We don't have plans for an SoC, that's a major undertaking,” said Grob.

Industry News & Trends

[Chip Industry Holds Its Breath as Trade War Heats Up](#)

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[LG Innotek Launches UV LED brand InnoUV](#)

Seoul-based materials and component manufacturer LG Innotek (a subsidiary of South Korean electronics company LG Group) plans to launch the brand InnoUV (combining 'innovation' and 'ultraviolet'), applying the name to all 40 types of UV LED packages and modules that it has developed (with varying UV wavelengths and light outputs, depending on application).

UV LEDs eliminate germs and viruses (depending on their wavelength) and are used for water, air and surface disinfection, medicine, biotechnology and curing and light exposure equipment because of their ability to chemically react with particular substances. UV LEDs are eco-friendly because they emit light without using any chemical substances or heavy metals. They also offer high usability, due to their long lifespan, high durability and small form factor (under 1cm).

LG Innotek says that InnoUV reflects its aim to make increase the sterilizing power of UV LEDs. The firm's record-output 100mW UV-C LED (unveiled last November) can wipe out 99.9% of Salmonella (a cause of food poisoning) in just 3.4 seconds, it is reckoned.

[iPhones Seemingly Shielded From US-China Tradewar](#)

SAN FRANCISCO — The Trump Administration has told Apple CEO Tim Cook that it would not levy tariffs against iPhones made in China, according to a New York Times report that cites an anonymous source said to be familiar with the negotiations between the tech giant and the U.S. president.

Such a promise would be significant in light of recent moves by the Trump Administration that move the U.S. and China closer to an all-out trade war. Trump last week announced that the U.S. would indeed levy tariffs against some \$50 billion worth of goods made in China, many of which are high tech products and materials and components used in tech. China has vowed to retaliate in kind, placing tariffs on U.S. goods, most of which are agricultural and other food products.

However, on Tuesday (June 19), CNBC reported that White House trade advisor Peter Navarro said he has no knowledge of a tariff exemption for iPhones in trade talks with China.

[New WiFi Specs Expected In July](#)

SAN JOSE, Calif. — July 1 is the big day for 802.11ax, the next big thing in Wi-Fi. That's the date engineers are expected to approve an initial draft of the standard.

It's been a longer than anticipated road to get to this point. First and second drafts failed to get the required 75% approval from the group in November 2016 and September 2017. At one point pundits thought early 11ax products might ship in 2017.

Typically, IEEE standards take three years. The 11ax group has been at it four years so far. That's longer than today's 11ac standard took, but still shorter than the complex 11n standard before it.

Participants blame the complexity of the spec. It aims to boost users' data rates up to 30 percent while lowering latency nearly 4x and delivering as much as four times the overall data on the same spectrum as today's 11ac.

[Asus Foreshadows 5G Handsets](#)

A new handset from Asus gives a glimpse into design issues for next year's 5G smartphones supporting millimeter wave bands.

Asus announced at Computex what could possibly be the most powerful smartphone to date. The Asus ROG (Republic of Gamers) is a beast, with features such as vapor chamber cooling (found only in gaming laptops), a Snapdragon SDM845 SoC, 8GB RAM, 512 GB storage and a slew of accessories.

The handset has the potential to redefine smartphone gaming. However, my interest in this phone is not gaming, but in one of its connectivity features called 802.11ad aka WiGig, a 60 GHz version of Wi-Fi.

This is Asus' second attempt at .11ad. Its first .11ad smartphone, the Asus Zen 4 announced last year, only had limited availability. This announcement along with recent news about Facebook's Terragraph trials shows continued .11ad momentum.

East European News & Trends

Researchers Unveil “Unprecedentedly Sensitive” Biochips

Researchers at the Moscow Institute of Physics and Technology (MIPT), a top technology university in Russia, have developed new biosensor chips of “unprecedentedly high sensitivity.” They replaced gold, which is typically used in such devices, with copper. The approach is expected to not only lower the cost of the end solutions but also make biosensor manufacturing technology much simpler, the developers said.

In their experiments, nanooptics and plasmonics specialists at MIPT’s Center for Photonics and 2D Materials used copper and graphene oxide to create the key sensitive element of their biosensor. That reportedly resulted in a dramatically increased sensitivity without any noticeable change in chip configuration, which makes the new solution compatible with the biosensors that are currently available in the market, such as Biacore, Reichert, BioNavis or BiOptix.

Artificial Intelligence Supports Medical Diagnostics

TeleMD, a Russian start-up, is developing a software platform that uses artificial intelligence (AI) for cancer diagnostics and prognostication.

Over the past few months the start-up has been focused on fine-tuning the platform’s image recognition functionality for cancer diagnostics, and also on making the solution scalable for medical specialists from across disciplines to be able to analyze heterogeneous medical data.

The TeleMD platform is designed to enable physicians to diagnose and predict oncologic developments in complicated cases by analyzing medical images and other patient-specific data. With the solution, doctors may expect to be able to reach out to broader medical communities and get remote advice. TeleMD is reported to have developed its diagnostics criteria and algorithms in close collaboration with experts from the Moscow-based Russian Blokhin Research Center for Oncology and some other leading scientific hubs and clinical centers.

New E-Nose Can Identify And Remember Mixtures Of Odors

Scientists at the Higher School of Economics (HSE) in Moscow have developed and patented a device that can identify smells. With neural network technology at its core, the device is also said to be able to “remember” new odors.

Gas sensors are no news to the market; however, most of what’s currently available can sniff out a single odor. In an interview last year Vladimir Kulagin, the team leader, underscored the danger of having such a narrowly focused e-nose and pointed out the necessity to use ones that can identify both quantitative and qualitative compositions of gas mixtures:

“For example, miners have methane sensors, and as soon as the gas appears, the sensors alert the miners to the danger. But what if a mixture of gases comes into the mine? That’s where problems arise; the sensors will single out methane from the mixture and “overlook” other gases—a situation where it’s exactly a mixture, not a single gas, that is responsible for human casualties.”

[Russian, Japanese And Middle East Funds Invest In Russian Telemedicine](#)

The sovereign Russian Direct Investment Fund (RDIF) has pooled efforts with the Russo-Japanese Investment Fund and a number of sizable Middle East funds in raising \$4m for Doctis, a Russian telemedicine service, the Russian news agency TASS reported.

At the moment of deal closing the funds secured a 27.4% stake in the innovative service. Prof. Mark Kurzer, a Russian academician and well-known obstetrician and gynecologist who founded the service, now owns 70% of Doctis. The project aims at helping people keep track of their health status without having to leave the comfort of their homes.

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World Economic Round Up

The surge in the price of oil has pushed euro zone inflation above the European Central Bank's (ECB) target, but policymakers in Frankfurt are expected to ignore the rise as broader price pressures across the region remain weak. Headline inflation rose to 2 percent in the year to June from 1.9 percent in May. While that leaves inflation above the ECB's target of just under 2 percent, officials are expected to maintain their exceptionally loose monetary policy. If the effects of the oil price and higher food costs are stripped out, the figures present a picture of an economic zone still struggling to produce the sort of consistent rise in inflation seen as necessary to keep growth smooth

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 2018

Future Horizons Events

- Silicon Chip Industry Training Seminar – London – 12th November 2018
- Industry Forecast Briefing, London – 16th September 2018

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 12th November 2018

AND

INDUSTRY FORECAST BRIEFING

TUESDAY 18th September 2018

BOTH BEING HELD AT

HOLIDAY INN KENSINGTON FORUM, LONDON

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