



# Future Horizons Newsletter

January 2016

## Contents Page

<b>Industry News by Company</b>	<b>Page 03 - 05</b>
<b>Industry News &amp; Trends</b>	<b>Page 06 - 08</b>
<b>East European News &amp; Trends</b>	<b>Page 09 - 10</b>
<b>World Economic Round Up</b>	<b>Page 11</b>
<b>Future Horizons &amp; Industry Events</b>	<b>Page 12</b>

## Industry News By Company

### [Amazon Enters Semiconductor Business With Its Own Branded Chips](#)

A secretive Amazon.com Inc. unit broke its silence Wednesday about plans to market computer chips and related components to other companies.

Annapurna Labs, an Israeli company purchased by Amazon last year that is now based in Silicon Valley, said it is targeting customers designing home equipment like Wi-Fi routers, data storage gear and media-streaming devices.

Some of its technology is already available in commercial products, Annapurna said. It cited manufacturers that include Asustek Computer Inc., Netgear Inc. and Synology Inc.

### [Altair Semiconductor Expands Global Operations, Opening New R&D Center in Taiwan](#)

Altair Semiconductor (altair-semi.com), a leading provider of LTE chipsets, today announced the opening of a research and development (R&D) center in Taiwan to support the company's technical advancement in the major Asian growth-center.

"The opening of a R&D facility in Taiwan represents our commitment to expanding our global footprint and our desire to bring next-generation LTE solutions to today's market," said Eran Eshed, VP of Marketing and Business Development at Altair Semiconductor. "We are rapidly expanding our customer footprint, many of which are designing innovative products based on our IoT chipset. We intend to further enhance the service we provide to this growing community and tap into the highly qualified talent pool that exists in Taiwan."

### [Apple Scales Back Orders For Its iPhones](#)

BEIJING—Shares of Apple Inc. extended their descent on Wednesday, amid news that the company is scaling back orders for its iPhones.

Apple's stock fell 2% to \$100.70 in afternoon New York trading. Concerns about the iPhone have weighed on Apple, with its shares down 15% over the past month. The stock fell 2.5% to \$102.71 on Tuesday, after Japan's Nikkei newspaper initially reported a potential cutback in phone orders.

Apple's plans to scale back sent ripples throughout the multibillion-dollar industry that supplies and builds the company's phones.

A Chinese provincial capital promised Foxconn Technology Group—which assembles iPhones—more than \$12 million in subsidies to minimize layoffs at its operations there, according to a government document.

Headquartered in Israel, Altair Semiconductor has six worldwide offices, including four in Asia: China, Taiwan, Japan, and India. R&D teams, spread throughout the company's corporate network, work to develop next-generation LTE chipsets for the IoT/M2M and broadband markets.

### **Intel Acquires Ascending Technologies, An Autopilot Drone Maker**

Intel Corp. said Monday it has purchased drone maker Ascending Technologies, a 75-employee company that focuses on professional-grade drones that automatically detect and avoid obstacles.

Intel did not disclose the price but said all employees are receiving offers to join Intel.

In a blog post, the chip company said the acquisition of the Krailling, Germany-based company lets it “integrate the computing, communications, sensor and cloud technology required to make drones smarter and more connected.”

Some of Ascending Technologies products already use Intel’s RealSense 3D camera. The company sells its products, which can be used for visual inspections of hard-to-reach places and 3D mapmaking, to companies and researchers.

### **Multi-Touch Display Features 3D Gesture Control**

Microchip Technology Inc. has teamed up with Silicon Integrated Systems Corp. (SiS) to deliver what they flaunt as complete projected-capacitive touch (PCAP) and 3D-gesture interface modules that promise to speed development and lower costs.

The modules will make it easier to design multi-touch and 3D gesture displays with Microchip's GestIC technology, which offers a hand tracking range of up to 20cm from the display surface, noted the companies. Hand gestures are universal, hygienic and easy to learn. In addition, they enhance safety by reducing the need for precise hand-eye coordination.

### **Samsung, LG Expand Battlefield to Auto Electronics**

Samsung has created a new department specializing in automotive electronics in its organizational shake-up last week, more than two years after perennial rival LG launched a vehicle components division.

That means Korea's top two electronics companies have found yet another area in which to battle it out following decades of intense competition in the home appliance, handset and other sectors.

The automotive electronics industry is growing fast as smart car technology evolves. Self-driving cars being developed by Apple and Google and the Tesla electric vehicle are spurring development in the field.

### **Samsung Puts 3D NAND Production Line in Xi'an Into Full Operation**

Samsung Electronics’ Xi’an plant in China, which is the main production base of 3D NAND flash memory chips, has achieved the initial wafer production target of 100,000 sheets a month based on its stable market demands. This is the maximum figure possible

with the current production facility. The company, which has ordered 3D NAND manufacturing equipment this year, will make an additional investment in the 3D NAND production line from next year.

According to industry sources on Dec. 20, the wafer production of Samsung Electronics' Xi'an plant in China has reached 100,000 sheets on a monthly basis a year and a half after starting a full operation. Its monthly production stood at 10,000 to 20,000 sheets last year and passed the 50,000 mark in the third quarter of this year.

The latest figure has far surpassed its previous forecasts of 60,000 to 70,000 sheets. It means that the demand of 3D NAND flash products is growing greater than expected. In fact, Samsung Electronics has recently been using 3D NAND products in microSD cards as well as servers and solid state drives (SSDs) for consumers, expanding its application areas. The company is also planning to use them in mobile devices, including smartphones, in earnest from next year.

### **ST's Digital Power Amps Promise Clear Audio For Cars**

STMicroelectronics has unveiled its second generation power amplifiers that promise to streamline the design for car radio system suppliers and deliver better listening experiences to drivers and passengers, even in more compact cars.

ST's second-generation FDA801 and FDA801B 4-channel class-D1 amplifiers with digital input convert the digital audio source directly into high-quality, cabin-filling sound. The digital input gives immunity to GSM noise, improves sound quality, saves component costs and simplifies system design, indicated the company.

The power amplifiers combine superior audio quality and increased energy efficiency, as well as the unique real-time measurement of speaker impedance via the digital impedance metre (FDA801B), which represents a quantum leap in automotive diagnostics compared to any other audio amplifier, the company added.

## Industry News & Trends

### **100GbE Transceivers Flaunt Ethernet Gearbox Functionality**

Marvell has rolled out what it describes as a fully integrated, 100GbE Gearbox with Multilink Gearbox (MLG) functionality. The Alaska C 88X5111 allows 100Gb/s full duplex transmission and performs all physical layer functions required for a number of media such as single mode and multimode optical modules, copper backplanes, and passive and active copper direct attach cables.

The 88X5111 line interface is fully compliant with IEEE 802.3BJ and supports the Reed Solomon Forward Error Correction (RS-FEC) function required for 100G-CR4, 100G-KR4 and 100G-SR4 operation, as well as auto-negotiation and coefficient training protocol required by IEEE 802.3 standards. The 88X5111 is sampling to Marvell's global customers and will be sold as a standalone PHY, as well as with Marvell switches.

### **Intersil Debuts 80A PMBus Step-Down Power Module**

Intersil has introduced what it describes as a complete PMBus enabled DC/DC single channel step-down advance power supply capable of delivering up to 80A of current and optimised for high power density applications. Operating over an input voltage range of 4.5V to 14V, the ISL8273M offers adjustable output voltages down to 0.6V and achieves up to 93 per cent conversion efficiencies.

For higher output current, up to four ISL8273Ms can be paralleled to supply up to 320A in a multiphase current sharing configuration. A unique ChargeMode control architecture offers a single clock cycle response to an output load step and can support switching frequencies up to 1MHz, detailed the company.

### **First WiFi Kiosks Set To Land On New York's Streets**

The world's fastest and largest municipal WiFi network is being rolled out in New York by a consortium of investors including Google, in the latest attempt by the internet company to shake up the US telecoms market.

LinkNYC will provide free-to-use connections with speeds of up to one gigabit per second through a network of 7,500 wireless hotspots that will be located on the sites of old telephone boxes. The speeds on offer will be roughly 20 times faster than the typical broadband service in New York.

The first of two "Link kiosks" will be unveiled on Tuesday on Third Avenue: the nine-foot towers will act as WiFi transmitters for a new superfast fibre network to replace the copper wires that once connected the phone boxes.

Each kiosk will also include a hands-free phone, an Android tablet for web browsing, and two digital screens for displaying advertisements, which will be sold to fund the service.

### **[NXP Develops Tiny Radar Sensors For Self-Driving Cars](#)**

NXP Semiconductors unveiled what it calls "the world's smallest single-chip 77GHz radar transceiver" at the International Consumer Electronics Show this week.

Measured at 7.5mm x 7.5mm NXP's tiny radar chip, based on CMOS process technology, will open the door for car OEMs and Tier Ones to develop systems consisting of a 'cocoon' of radar sensors for self-driving cars, according to Lars Reger, chief technology officer of NXP Automotive. Such a system can provide a high-resolution, 360-degree view of the environment not only in self-driving but also Advanced Driver Assistance Systems (ADAS) cars in the volume market, according to NXP.

### **[2,500 More Wi-Fi Hotspots To Rise Across India](#)**

The government is embarking on a huge project to connect the country to the Internet by installing 2,500 Wi-Fi hotspots in 256 locations by the next fiscal, Indian Express quoted Telecom Minister Ravi Shankar Prasad.

Prasad added that in the next six to seven months, the government targets to reach as much as 50 crore Internet subscribers.

According to the minister, mobile penetration today stands at 100 crore, while Internet penetration is 40 crore. In the past it took them almost four years to reach 30 crore, and less than a year after that to achieve 40 crore. This time, Prasad aims to cross 50 crore in half a year.

### **[In-Building Mobile Data Traffic To See 6-Fold Growth By 2020](#)**

ABI Research has released a report predicting the rapidly increasing adoption of 4G and WiFi that will drive monthly in-building traffic to 53 exabytes per month by 2020. With the majority of mobile traffic either originating or terminating indoors today, WiFi is considered a robust access technology for mobile data offload, stated the market research firm.

In 2015, WiFi offload traffic from mobile devices continued to exceed 4G mobile traffic, and, by 2018, WiFi traffic is set to exceed all 2G, 3G and 4G cellular traffic combined.

### **[Sweet Tooth? Print Yourself Some Chocolate](#)**

Students at the Samara State Aerospace University have created an experimental 3D-printer to make large chocolate figures. In January it will be tested, and soon this technology will be available in one of the city's restaurants.

The breakthrough consists in a novel way of supplying and cooling the chocolate in the 3D printer. This solves the main problem of "printing" large figures when the chocolate "ink" melts and is unable to freeze properly. The students created the new system in collaboration with the head chef at a local restaurant.

Dark, white, or milk?

"We simultaneously use several cooling systems," said Vera Panova, one of the printer's developers. "The first is a sort of big hair drier that blows from different sides. The

second is production intervention -- we add certain products and the chocolate cools faster; not in ten minutes, but in three to five."



## East European News & Trends

### [Toshiba Electronics Quits Russia Over Falling Ruble, Competition](#)

Japanese electronics company Toshiba has pulled out of the Russian consumer market over the weakening ruble and tough competition, the Kommersant newspaper reported Monday.

The company is shutting down Toshiba CIS, the Russian division that sells televisions and kitchen appliances, maintaining only its b2b-unit Toshiba Rus.

“We have fully quit the Russian consumer market. We sold all goods last December when sales were high,” Hiroaki Tezuka, head of Toshiba Rus, was quoted by Kommersant as saying.

### [Russia's ABBYY Shows How To Keep Ahead Of The IT Competition](#)

Since its humble beginnings in a Moscow dorm room in the 1990s, ABBYY has grown to become one of the world's leading developers of IT solutions. Today, ABBYY's technologies are licensed by some of the world's largest manufacturers, including Microsoft, Acer, Panasonic and Samsung. RBTH spoke with ABBYY's CEO Sergei Andreyev about the challenges the company faces in the new economic reality.

Sergei Andreyev: For us, all regions are important. The U.S. market remains a priority because it is more developed in terms of technology. In the U.S. competition in the technological sphere is very steep. It takes a lot of work to transfer knowledge. We are exporters, and almost 80 percent of our profits come from abroad. We get about 20 percent of our revenue from Russia and about 40 percent from the United States. Europe accounts for 20 percent, and another 20 percent comes from a combination of Asia, Africa and South America. Interestingly, sales in developing countries are growing faster than in the developed nations.

### [Russia To Cut Expenditure By 10%Comments](#)

Russia is slashing budget expenditure by 10 percent as it scrambles to cope with lower revenues following the latest big drop in oil prices.

Ministries and other government departments have until Friday to formulate plans for cuts that must total Rbs700bn (\$9.1bn), according to three cabinet officials.

The amendments mark the second straight year that sliding crude prices have forced Russia to redraft its budget, underscoring the country's dependency on commodity exports to keep its economy afloat.

The government decided on the 10 percent cuts at a meeting called by Prime Minister Dmitry Medvedev at the end of December when Brent crude sold for \$37 a barrel.

Since then, prices have fallen another 20 per cent, hitting \$30.43 on Monday — the lowest since April 2004 — before recovering a little to \$31.46 on Tuesday.

### **GenerationS Gives More Than \$2 Million To Boost Startups**

The GenerationS competition, organized in Moscow by the Russian Venture Company (RVC), ended with 35 startups receiving investments of more than \$2.2 million from more than 150 of the project's partners. These included foreign and Russian companies such as SAP, IBM, Samsung, Microsoft, Johnson&Johnson, Sberbank-Technology, NPO Saturn, and many others.

The approximate \$142,000 in grand prize money was shared by three winners. First place went to the AntionkoRAN-M anti-tumor drug that has worked effectively against head and neck cancer, as well as cervical cancer.

The Samocat Sharing System, a new concept for renting scooters with cloud technology, came in second. Next year, Samocat will be launched in Moscow, Paris, and Brussels. The bronze medal went to Turbo-diagnostics that makes a software used to check the condition of turbo blades during use.

### **Russian Software Is Conquering The World**

Over the past five years, Russian software exports have more than doubled, reaching about \$7 billion. At the same time, demand for IT companies' products on the domestic market has been falling. Analysts attribute it to a transformation of the Russian market, with demand shifting from hardware to services.

“Here we must run as fast as we can, just to stay in place. And if you wish to go anywhere, you must run twice as fast as that.” This quote from Lewis Carroll's “Alice in Wonderland” has become a motto for many Russian IT companies these days.

The period of boom on the Russian IT market is over: if in 2010-2012 sales grew by an average 20-30 percent, in 2013-2014 growth was practically zero. According to a forecast by the international analytical group IDC, in 2015 the Russian IT market contracted by 1-3 percent in ruble amounts compared with 2014. In dollar amounts, the drop will reach some 18 percent, up to about \$30 billion.

## World Economic Round Up

Oil's volatile start to the year continued after Brent crude sank below US\$35 a barrel for the first time since 2004 as a relentless rise in global production overshadowed geopolitical upheavals. Escalating tensions between Saudi Arabia and Iran over the execution of a prominent cleric took the international oil benchmark to almost US\$39 a barrel earlier this week. But the rally was short lived as traders and investors focused on concerns of a supply glut and divisions within the Opec producers' cartel that have contributed to oil prices plummeting 70 percent since mid-2014, Global stocks kicked off 2016 with a stumble, as another disappointing report on China's economy rekindled concerns over slowing global growth and tempered hopes for a better year.

***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 2015

### Future Horizons Events

- [Silicon Chip Industry Training Seminar](#) – London – 21<sup>st</sup> September 2015
- [Industry Forecast Briefing](#), London – 24<sup>th</sup> September 2015

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

**Telephone: +44 1732 740440**

**Email: [mail@futurehorizons.com](mailto:mail@futurehorizons.com)**

[Download Future Horizons Full Events Calendar Here](#)

### Industry Events

- 

MARK YOUR CALENDER FOR THE NEXT

SILICON CHIP INDUSTRY WORKSHOP

MONDAY 7<sup>th</sup> MARCH 2016

AND

INDUSTRY FORECAST BRIEFING

TUESDAY 20<sup>th</sup> SEPTEMBER 2016

BOTH BEING HELD AT

HOLIDAY INN KENSINGTON FORUM, LONDON

Follow Us On Twitter

For weekly semiconductor news and updates follow us on Twitter.

Future Horizons Ltd, • 44 Bethel Road • Sevenoaks • Kent TN13 3UE • England

Tel: +44 1732 740440 • Fax: +44 1732 740442

Affiliates in Europe, India, Israel, Japan, Russian, San Jose California, USA

e-mail: [mail@futurehorizons.com](mailto:mail@futurehorizons.com) • [www.futurehorizons.com](http://www.futurehorizons.com)