

FutureHorizons



The Global Semiconductor Industry Analysts

Future Horizons Newsletter

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Industry News By Company

Semiconductor Introduces High-Current EzBuck™ Regulator

SUNNYVALE, Calif.--(BUSINESS WIRE)--Alpha and Omega Semiconductor Limited (AOS) (Nasdaq: AOSL), a designer, developer and global supplier of a broad range of power semiconductors and power ICs, today introduced a new family of EZBuck™ regulators. The first two members of the family are the 20A, AOZ2367QI and the 25A, AOZ2368QI. The new devices provide a compact, efficient power converter solution for next-generation chipsets used in high-end TVs, servers, data storage systems, networking and other compact PC systems.

Next generation microprocessors and SoCs require more power to do fast-speed calculation as well as to provide more add-on functions for the enhancement of user experiences. Implementing much higher output power in a DC/DC converter often requires the use of several external components such as high current and low turn-on resistance MOSFETs. The 20A, AOZ2367QI and the 25A, AOZ2368QI make the design of such converters simple by integrating AOS' advanced MOSFET technology to power next generation high-end systems. AOS' unique packaging expertise also provides these converters better thermal management capabilities to ensure the system runs in a stable and robust environment.

LG And Infineon To Introduce LG G8thing With Front-Facing Time-Of-Flight Camera

Munich, Germany, and Seoul, Korea, 7 February 2019 – LG Electronics and Infineon Technologies AG have teamed up to introduce leading edge Time-of-Flight (ToF) technology to smartphone selfie photo lovers world over.

Infineon's REAL3™ image sensor chip will play a key role in the front-facing camera of the upcoming LG G8 ThinQ, to be unveiled in Barcelona during Mobile World Congress 2019. Building upon the combined expertise of Infineon and pmdtechnologies in algorithms for processed 3D point clouds (a set of data points in space produced by 3D scanning), the innovative sensor will deliver a new level of front camera capability in a smartphone.

While other 3D technologies utilize complex algorithms to calculate an object's distance from the camera lens, the ToF image sensor chip delivers more accurate measurements by capturing infrared light as it is reflected off the subject. As a result, ToF is faster and more effective in ambient light, reducing the workload on the application processor thereby also reducing power consumption.

And due to its fast response speed, ToF technology is widely used in various biometric authentication methods, such as face-recognition. What's more, because ToF sees objects in 3D and is not affected by light from external sources, it delivers an excellent recognition rate, both indoors and out, ideal for implementation in augmented reality (AR) and virtual reality (VR) applications.

ON Semiconductor And 3M Collaborating On Roadway Safety

3M has integrated ON Semiconductor's AR0234AT CMOS image sensor into 3M's Smart Code sign technology. The Smart Code system allows vision systems to "read" bar codes placed on street signs. A self-driving car can recognize the meaning of the sign, for instance a sign designating a work zone, and then take appropriate action, in this example slowing down while driving through the work zone.

The AR0234AT is a 1/2.6-inch, 2 MPixel, 1920 x 1200 CMOS global shutter image sensor. The sensor is designed to capture moving scenes at full resolution, running at 120 fps. Features include auto exposure control, video and single frame modes, and windowing among others

Renesas To Cut 1,000 Jobs In Japan

TOKYO – Japanese semiconductor company Renesas Electronics plans to eliminate roughly 1000 jobs – equivalent to five percent of its entire workforce. Cuts are targeted at employees in Japan.

As a first step, Renesas will soon start soliciting voluntary early retirements.

The company, which will announce fourth quarter financial results on Friday, told EE Times that the move reflects its desire to spend more resources on business opportunities overseas.

Getting ready for IDT

A spokeswoman at Renesas told us, “2019 will be the first year of IDT integration and an important year that serves as a launching pad for our further growth.”

Under the leadership of CEO Bunsei Kure, Renesas has shifted from its predominantly domestic market focus, as it identifies the company's growth potential in new technology and product segments outside Japan

ST Highlights Power Technologies Growth

LONDON – Reporting its fourth-quarter and full-year results for 2018 this week, STMicroelectronics outlined its capital expenditure plans for 2019, including its new 300-mm fab for power technologies in Agrate, Italy, where the company expects to see volume production in 2021.

Jean-Marc Chery, ST's president and CEO, said that 2018 was an important year of achievement, and despite a forecast 20.7% decline in sequential revenue growth for the first quarter of 2019, he expects this to pick up again during the second half of the year. ST reported 15.8% revenue growth to \$9.66 billion for 2018 but expects a sharp decline in sequential growth for the first quarter of 2019. This gloomy first quarter outlook, Chery said, reflects the combined impact of increased unfavorable dynamics such as in smartphones, computer hard disk drives, distribution in China, and in Europe.

ST said that it plans to spend up to \$1.3 billion in capital expenditure on maintenance, R&D, and capacity additions in existing technologies, as well as on three strategic initiatives: a new 300-mm fab in Agrate, expansion of silicon-carbide (SiC) capacity plus production ramp-up of gallium nitride (GaN) for RF devices, and next-generation image sensor technologies.

STMicroelectronics To Acquire Majority Stake In Silicon Carbide Wafer Manufacturer Norstel AB

STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, today announced it has signed an agreement to acquire a majority stake in Swedish silicon carbide (SiC) wafer manufacturer Norstel AB (“Norstel”). After closing, ST will control the entire supply chain for a portion of its SiC devices at a time of constrained global capacity and positions itself for a significant growth opportunity.

ST will acquire 55% of Norstel’s share capital, with an option to acquire the remaining 45% subject to certain conditions, which, if exercised, will result in total consideration of \$137.5 million, funded with available cash.

"ST is the only semiconductor company with automotive-grade silicon carbide in mass production today. We want to build on our strong momentum in SiC, both in volume and breadth of applications for industrial and automotive, targeting continued leadership in a market estimated at more than \$3 billion in 2025," said Jean-Marc Chery, President and CEO of STMicroelectronics. "The acquisition of a majority stake in Norstel is another step forward strengthening our silicon carbide ecosystem: it will boost our flexibility, improve yield and quality, and support our long-term silicon carbide road

Industry News & Trends

Smart Battery Gears Up For E-Mobility

LAS VEGAS — Whether for running a wearable device or powering an electric vehicle, battery life is the bugaboo that keeps system designers (and consumers) awake at night.

Compared to all comparable advancements in the electronics industry, innovations in battery technology are painfully slow.

In the smartphone business, design engineers spend a lot of time and resources trying to improve battery management systems (BMS). In the battery business, researchers are constantly fussing and tweaking even for tiny improvements.

But curiously, nobody has thought about integrating BMS, charger and inverter directly into a battery pack — until CEA-Leti, a Grenoble, France-based research organization. At the Consumer Electronics show last week, CEA-Leti demonstrated its new three-in-one battery pack.

Trade War Forces Chinese Chipmaker Fujian Jinhua To Halt Output

US sanctions against Fujian Jinhua will force the Chinese state-owned company accused of stealing trade secrets from American memory chipmaker Micron to stop production by March, according to people familiar with the situation.

The case, under which the US commerce department in October practically banned all exports and technology transfers to Fujian Jinhua, is one of the clearest outcomes yet of Washington's war on the rise of China's tech sector.

Fujian Jinhua is rapidly running out of imported materials vital for keeping its fabrication plant running as a result of Washington's export ban, according to two people close to Jinhua and United Microelectronics (UMC).

Location Finds Bluetooth, UWB

SAN JOSE, Calif — An update of the Bluetooth specification released today enables location services accurate to within 10 centimeters thanks to a new direction-finding capability. It arrives as a separate draft standard is nearly ready for an even faster and more accurate capability using ultra-wideband (UWB) radio, geared for use in smartphones.

Bluetooth 5.1 describes ways to determine location using multiple antennas at either the transmitter or receiver. It uses measures of signal phase and amplitude to measure location, though profiles for application developers are still being finished.

In mid-March, the IEEE 802.15.4z standard for UWB should be in a stable draft form, opening the door for silicon designs. It enables location measures within a single centimeter and resolves in a nanosecond, a rate faster than Bluetooth.

Apple Cuts 200 Staff From Secretive Driverless Car Project

Apple has cut around a fifth of the staff working on its secretive autonomous car project, in the latest speed bump for the slow-burning venture.

More than 200 people working on “Project Titan”, as the team of more than 1,000 staff is known, have left Apple or been redeployed to other divisions of the iPhone maker.

Autonomous transportation is one of Apple’s biggest R&D efforts, alongside healthcare, digital services and wearable devices such as smart glasses, as it searches for a new breakthrough to follow the iPhone.

Apple’s R&D budget jumped 23 per cent year-on-year to \$14.2bn last year, more than doubling since 2014 despite slower iPhone sales.

New Wave Of Chinese Tech Start-Ups Focus On Overseas Markets

These groups are looking overseas at a time when China’s domestic market is dominated by a handful of established tech companies, and as regulation on the sector tightens.

“Growth in China is slowing and people are feeling it’s getting harder to do business because it is dominated by the big guys and the environment is harder,” said Jeremy Choy, head of M&A at China Renaissance investment bank. “It’s a relatively new phenomenon and a lot of these guys got funding at the early stages.”

Tencent and Alibaba, the giants that dominate China’s tech scene and back most of its biggest start-ups, are also moving overseas — particularly in south-east Asia and India.

Global 3D Printing In Electronics Industry Market 2019: Making New Commitments To The Sustainable Future

Global 3D Printing in Electronics Industry Market report talks about current industry’s market in types of review/definition, application, expectations relating quality and volume, and future forecasts to 2024

3D Printing in Electronics Industry Market 3D Printing in Electronics Industry Market

Market.Biz is meant Global 3D Printing in Electronics Industry Market report back to give the most effective and most penetrating analysis needed to any or all 3D Printing in Electronics Industry manufacturing, industrial and profit-making ventures in any sector of online business. we have a tendency to pride oneself in our ability to satisfy the Global 3D Printing in Electronics Industry Market research desires of each domestic and international businesses.

Industry Growth of 3D Printing in Electronics Industry Market Report :

The Worldwide 3D Printing in Electronics Industry research report 2019 presents associate degree in-depth study regarding key trends and rising drivers with market characteristics, size and growth, segmentation, regional breakdowns, competitive landscape, shares, trend and techniques for 3D Printing in Electronics Industry for PCB market. The market is anticipated to estimate at XX million by 2024 growing at a CAGR of XX%. The 3D Printing in Electronics Industry business report summarizes the world

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market insights that are key drivers for the growth of the global 3D Printing in Electronics Industry sales market over the forecast period(2019-2024).

East European News & Trends

Pulsar VC Seeks Start-Ups With Global Potential

Pulsar Venture Capital, a Kazan-based Russian VC fund, is launching a new selection of projects for its fifth tech start-up acceleration program, Firm.ru reported.

In this round, Pulsar and partners are ready to invest in a company up to \$308K. Half of the amount will come from the fund itself, and the rest is expected from the government-owned Investment Venture Fund of the Republic of Tatarstan and others partners. Ten best projects will be eligible for investment after this selection round

Huawei May Purchase Russian High Tech Company

Vocord, a Russian developer of face recognition and video analytics systems, may be sold to a foreign investor, the Russian business daily Kommersant reported. It is Huawei, a sizable Chinese household electronics maker, that is deemed likely to take over the Russian company.

Sources familiar with the development shared behind-the-scene information that a \$38.5-46m deal was being negotiated. The current unofficial valuation of Vocord is within a \$7.7-12.3m range.

Moscow-based Vocord has developed solutions to analyze digital photo and video material. One of the promising applications is forensic science (criminalistics). Another is biometric face recognition designed to ensure security at home, office or in large public places..

Russian VCs Invest In French And German Start-Ups

Last week Runa Capital, an international venture fund with Russian roots, announced its participation in two start-up funding deals in Western Europe, EWDN reported.

The fund led a 7 million euro funding round for Vehiculum, a German-founded start-up that has developed a new car leasing marketplace.

Almost simultaneously, French start-up Admo announced the completion of its 6 million euro series B funding, involving Runa Capital as well as two Paris-based investors. Admo, which is an advertising analytics solution provider, intends to use the money to enlarge its UK team and open new offices in Spain and Germany.

Russian Technology May Drive Down Smartphone Price

Scientists at MISiS, a top Russian tech university based in Moscow, have developed technology which has the capacity to slash the cost of smartphone displays manufacture.

At the core of today's smartphone displays production are artificial sapphires (monocrystalline corundum) obtained through chemical processes from high-purity aluminum oxide. With the lack of domestic large-scale production of this raw material Russian manufacturers have to import it at a high price. To address the problem MISiS researchers have come up with a cost-effective and safe method of high-purity aluminum oxide production.

The patented import substitution technology is now expected to provide enough raw material to meet the needs of domestic producers in monocrystalline corundum as the main component of LEDs and protective glass for modern gadgets.

Russia “Learns Lessons” And Steps Up High-Tech Investment, Top Russian Financier Says

Russia has “learned its lesson” about oil price volatility, the chief executive of the Russian Direct Investment Fund (RDIF) told CNBC Tuesday.

Speaking from the World Economic Forum in Davos, RDIF CEO Kirill Dmitriev emphasized the importance of diversification in the Russian economy.

“For the Russian economy we continue to focus on diversification. We expect technology to make up 25 percent of our portfolio,” Mr. Dmitriev said.

World Economic Round Up

The US government has committed three serious policy mistakes since late 2017. In December that year Congress cut taxes just as the US economy attained full employment. Then, in April 2018, the Federal Reserve turned hawkish as it mistook the temporary sugar high from the tax cut for a higher trend growth. A month later, President Donald Trump abandoned America's longstanding commitment to free trade by imposing a broad range of tariffs on Chinese imports. Despite these policy errors, the dollar rose. If any other country had done the same thing, it would have been severely punished in currency markets and probably downgraded by credit rating agencies. Soaring food costs drove the Turkish inflation rate higher in January, adding to the central bank's challenge to control price rises ahead of local elections next month.

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 2019

Future Horizons Events

- Silicon Chip Industry Training Seminar – London – 25th March 2019
- Industry Forecast Briefing, London – 17 September 2019

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 25th March 2019

AND

INDUSTRY FORECAST BRIEFING

TUESDAY 17th September 2019

BOTH BEING HELD AT

HOLIDAY INN KENSINGTON FORUM, LONDON

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