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G'foundries debuts 45nm RFSOI

Globalfoundries announced it has process design kits available for 45nm RF SOI, a node particularly suited for use making millimeter-wave chips in 24-100GHz bands for 5G cellular. Skyworks Solutions Inc. signaled its plans to use the technology for next-generation chips.

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DSP catches up with 5G, LTE tech demands

CEVA has developed a communication DSP, the CEVA-XC12, to implement 5G, gigabit LTE, MU-MIMO Wi-Fi and other multi-gigabit modems. Already licensed to a wireless OEM, the CEVA-XC12 delivers up to 8x more efficiency and consumes 50% less power than the CEVA-XC4500 for a 5G baseband modem.

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How power tech fuels wearables' growth

With an estimated figure of 600 million devices to be sold in the coming years and a future certainly optimistic also linked to the advent of IoT and the upcoming industry 4.0, the market for wearable devices is growing strongly. Today, wearable devices are not just gadgets but also include health monitoring tools used in many fields of medicine.

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TALK TO US

Falling prices plague smart sensor sales growth

The demand for smart sensors has been growing for years, as these kinds of sensors start to play an important part in several sectors, including automotive, IoT, Industry 4.0 and other application areas such as modern health monitoring systems. They collect data and automatically connect themselves with machines and robots to ensure constant systems monitoring and optimised processes.

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Smartphone makers line up devices to challenge

Seeking to press their advantage, with rival Samsung Electronics humbled by the Note 7 recall fiasco, LG and Huawei revealed their latest flagship devices on Sunday a day before the Mobile World Congress kicks off in Barcelona.

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G'foundries Debuts 45nm RFSOI

SAN JOSE, Calif. – Globalfoundries announced it has process design kits available for 45nm RF SOI, a node particularly suited for use making millimeter-wave chips in 24-100GHz bands for 5G cellular. Skyworks Solutions Inc. signaled its plans to use the technology for next-generation chips.

The process provides a substrate resistivity of greater than 40 ohm-cm to enable to reduces parasitic capacitance and minimize disparity in phase and voltage swing, the company said.

Designers can stack RF FETs in the process to achieve higher power and reliability. Active FETs can be "tuned for very high Ft/Fmax" for mmwave circuits in 5G products and front-ends for car radar.

DSP Catches Up With 5G, LTE Tech Demands

CEVA has developed a communication DSP, the CEVA-XC12, to implement 5G, gigabit LTE, MU-MIMO Wi-Fi and other multi-gigabit modems. Already licensed to a wireless OEM, the CEVA-XC12 delivers up to 8x more efficiency and consumes 50% less power than the CEVA-XC4500 for a 5G baseband modem.

Technologies designed for wireless standards such as 5G will be capable of delivering a peak data rate of up to 20Gbps under 1ms latency. This is achieved by utilising processing techniques such as Massive-MIMO and advanced 3D dynamic beamforming. DSP processors deployed for LTE-Advanced Pro and multi-gigabit wireless standards are incapable of delivering the speed, latency and overall DSP performance required to address the massive technology leap to 5G.

How Power Tech Fuels Wearables' Growth

With an estimated figure of 600 million devices to be sold in the coming years and a future certainly optimistic also linked to the advent of IoT and the upcoming industry 4.0, the market for wearable devices is growing strongly. Today, wearable devices are not just gadgets but also include health monitoring tools used in many fields of medicine.

Yet an obstacle for their full deployment in these markets is their energy autonomy: in order to reinforce the concept of "wearable," small batteries are necessary and improvements should be made in energy efficiency and power management.

The amount of information managed by a normal wearable device, the visual LED interface and the BLE communication protocol require efficient power management solutions for long-life products, but also provide new opportunities for recharging by using energy harvesting solutions.

Falling Prices Plague Smart Sensor Sales Growth

The demand for smart sensors has been growing for years, as these kinds of sensors start to play an important part in several sectors, including automotive, IoT, Industry 4.0 and other application areas such as modern health monitoring systems. They collect data and automatically connect themselves with machines and robots to ensure constant systems monitoring and optimised processes.

This strong demand means that sales of smart sensors are growing at a rate of 17% per year. According to a new Roland Berger study the number of units sold is likely to double to 30 billion between 2015 and 2020. However, the increasing competition in the market and the growing demand for low-cost products, particularly in the consumer electronics sphere, combine to exert downward pressure on prices.

The market price that manufacturers receive for each sensor unit they make is falling by 8% per year on average. It is expected to halve between 2010 and 2020 in a trend that leaves manufacturers with no choice but to act, according to Roland Berger experts.

Smartphone Makers Line Up Devices To Challenge Samsung

Seeking to press their advantage, with rival Samsung Electronics humbled by the Note 7 recall fiasco, LG and Huawei revealed their latest flagship devices on Sunday a day before the Mobile World Congress kicks off in Barcelona.The annual event has in recent years been used by Samsung to showcase new releases of its Galaxy S series. But following the high-profile termination of its fire-prone Note 7 device last year at a cost of more than $5bn, the South Korean company delayed the rollout of its latest flagship smartphone.Samsung's plight has been thrown into stark relief again as the smartphone maker — which in the fourth quarter was edged out of the world's top spot by Apple for the first time in two years — faces the industry's biggest conference without a new handset with which to woo customers and analysts, instead introducing two new tablets.