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SiC power semiconductor devices

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Sic Power Semiconductor Devices Getting Into Mainstream

Power semiconductor usage in cars undergoing a major shift, silicon MOSFETs and IGBTs are replaced by Silicon Carbide power semiconductor devices. In EV and hybrid cars, the use of such devices is more relevant due to the power efficiency improvements. Not only the power efficiency and also size of the SiC semiconductor device is also smaller, and due to higher switching frequency ability, the power supply system built out of silicon carbide devices requires smaller inductors and capacitors saving space significantly. SiC does not require freewheeling diodes which are required in case of IGBT Power circuits. Due to lower switching losses, SiC devices generate lesser heat saving heatsinks. SiC also withstand higher voltages.

ARM Launches Cores For Virtual And Augmented Reality

ARM has brought out Cortex and Mali processors to address upcoming smartphone features like augmented and virtual reality on 10nm processes.

They will be in SoCs this year and in handsets in 2017.

The Cortex processor – A73 – is the smallest 64-bit v8 core ARM has done – at under 0.65mm2 per core on a 10nm finfet process.

The small size has been achieved by architectural improvements rather than by physical means like shrinking interconnects. It simply uses less transistors to achieve greater functionality – delivering 30% higher performance than Cortex-A72.

Foxconn To Upskill 60,000 Workers Thanks To Robotic Tech

New autonomous manufacturing technology has enabled Taiwanese electronics manufacturer Foxconn to significantly reduce its worker numbers.

Foxconn has reportedly replaced 60,000 human workers with robots at its huge factory in Kunshan in Jiangsu Province.

“The Foxconn factory has reduced its employee strength from 110,000 to 50,000, thanks to the introduction of robots. It has tasted success in reduction of labour costs,” said Xu Yulian, the head of Jiangsu’s publicity department according to South China Morning Post.

Automation AABTLN Plug & LinkFoxconn itself has confirmed that it has been working towards automating many routine ‘manufacturing tasks’, however has denied that the move will create long-term job losses.

Smaller Chips May Depend on Vacuum Tube Technology

The silicon transistor, the tiny switch that is the building block of modern microelectronics, replaced the vacuum tube in many consumer products in the 1970s. Now as shrinking transistors to even more Lilliputian dimensions is becoming vastly more challenging, the vacuum tube may be on the verge of a comeback.

In a darkened laboratory here, two stories beneath the California Institute of Technology campus, two students stare through the walls of a thick plastic vacuum chamber at what they hope will be the next small thing — a computer chip made from circuits like vacuum tubes whose dimensions are each roughly one-thousandth the size of a red blood cell.

Norway Moves To Ban Petrol Car Sales By 2025

Norway could claim the title of the first country in the world to ban the sale petrol-fueled cars.

According to reporting by Norwegian newspaper Dagens Næringsliv several of the country’s main political parties have agreed on a deal to ban the sale of these cars by 2025.

These reports have reporetedly been confirmed by two of the country’s major political parties however, another coalition partner, the FRP, is so far yet to commit to the proposal.

Should this ban become law, it would be a world-first and pave the way for Norway to become a leading market for electric vehicles.

Anticipating this, Tesla Motors CEO, Elon Musk tweeted: “Just heard that Norway will ban new sales of fuel cars in 2025. What an amazingly awesome country. You guys rock!”