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LEDs secure bright future in automotive sector

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TALK TO US

CMOS-based isolated FET drivers reduce system cost

Silicon Labs has introduced a CMOS-based isolated field effect transistor (FET) driver family that enables developers to use their choice of application-specific, high-volume FETs to replace outmoded electromechanical relays (EMRs) and optocoupler-based solid-state relays (SSRs).

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TSMC Expands its 3D Menu

Taiwan's largest semiconductor kitchen released its latest menu, a 3D matrix that spans process, packaging and applications-specific options.
TSMC described at an event here FinFET processes down to 7nm it will serve up over the next few months as well as an expanding set of 3D packaging options.

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Arm's Next Chips To Drive Autonomous Cars

Arm, the chip designer that has dominated smartphones, is making a significant move into autonomous driving, with its first major product aimed at controlling driverless cars.

Its new processor design is the first to be announced since the UK-based company's £24.3bn ($31bn) acquisition by SoftBank. The Japanese corporation has a separate robotics division to build humanoid robots and has teamed up with carmakers such as Honda to build smart cars and its own driverless trucks.

"Certainly there are lots of potential projects we are looking at with our new owners, including projects on robotics and automotives," Richard York, Arm's vice-president of embedded marketing, said.

Apple Motivates Interest In Fan-Out Packaging

A wave of new players and fan-out wafer level packaging (FO WLP) technologies are poised to enter the market, following the high volume adoption of InFO and further development of eWLB technology, according to a report from Yole Developpement. Taiwan Semiconductor Manufacturing Company's (TSMC) FO WLP solution called InFO will be used to package the Apple A10 application processor, implemented in the new iPhone 7 series.

Production starts in 2016 and represents a big change in the fan-out industry for several reasons. First of all, in terms of volume, capturing the Apple processor market is a big asset for fan-out technology. iPhone 7 phones are expected to be sold in more than 200 million units. In terms of technology capability it is also a major turn: processors require thousands of connections while the fan-out market was essentially focused on limited IO count applications so far. Eventually, the potential for market spread is very high—the Apple brand brings more interest to the fan-out platform.

LEDs Secure Bright Future In Automotive Sector

One of the best bets for future innovations in the automotive lighting market segment, LED technology has already spread through interior lighting and exterior back lighting applications. The next big challenge will probably focus on exterior front lighting, mostly headlamp systems.

"We expect LED technology's penetration rate in this sector to continue growing in the coming years," said Pierric Boulay, technology & market analyst at Yole Développement. "As cost decreases, OEMs expertise Tier 1s will increase and novel functionalities will emerge, especially for advanced front lighting systems."

CMOS-Based Isolated FET Drivers Reduce System

Silicon Labs has introduced a CMOS-based isolated field effect transistor (FET) driver family that enables developers to use their choice of application-specific, high-volume FETs to replace outmoded electromechanical relays (EMRs) and optocoupler-based solid-state relays (SSRs).

The Si875x family features isolated FET drivers designed to transfer power across an integrated CMOS isolation barrier, eliminating the need for isolated secondary switch-side power supplies and reducing system cost and complexity. When paired with a discrete FET, the Si875x drivers provide an EMR/SSR replacement solution for motor and valve controllers, HVAC relays, battery monitoring, AC mains line and communications switches, HEV/EV automotive charging systems, and other industrial and automotive applications.

TSMC Expands Its 3D Menu

Taiwan's largest semiconductor kitchen released its latest menu, a 3D matrix that spans process, packaging and applications-specific options.

TSMC described at an event here FinFET processes down to 7nm it will serve up over the next few months as well as an expanding set of 3D packaging options. "We are getting into a 3D x 3D era that will carry us into the next decade, said Jack Sun, chief technologist and vice president of R&D at TSMC.

The foundry will have volume production of its 10nm process before the end of the year and be ready to take orders for its 7nm process by April, said Sun. He showed two new variants in the works for the so-called InFO stacks analysts say Apple is now using for its A10 Fusion SoC. And he sketched out a handful of other 3D packaging options for different uses.