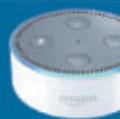




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The future of dual-clutch transmissions



Abhishek Budholiya, Future Market Insights

The future of dual-clutch transmission (DCT) as a type of automated automotive transmission will unlock multiple opportunities for automakers from all corners of the world by with enhanced vehicle performance. Considering the present alternatives for DCT technology, automobile manufacturers are anxious to replace it with something more efficient. The likelihood of advancements being incorporated in the existing DCT mechanism, however, seems plausible. Future drivers will undoubtedly prefer the smooth gear-shifting offered through dual-clutch transmission technology . DCT effortlessly secures a strong position as it... [Continued...](#)

Leveraging the Range of Sub-1 GHz Technology to Connect Ultra-Low Power Sensors to the Cloud

Sponsored by: Avnet
January 25, 2pm ET

Vision guided robots will gain ground in industrial sectors

Khusro Khan, Transparency Market Research

A vision guided robot is a robot fitted with one or more cameras used to analyze, inspect images, and provide secondary data signal to the controller. These robot systems are rapidly changing the production process, as they enable the adoption and implementation of robots into the system. The rapid change will also decrease the cost and complexity of fixed tooling in setting up of robotic cells. The vision guided robot system comprises a camera and a computer. These robots primarily capture images and transfer... [Continued...](#)

Zinn: An aggressive CEO makes a big difference



Rich Nass, Embedded Computing Brand Director

The CEO of nVidia, Jen-Hsun Huang, spends a lot of time talking about how great his company is and how great their products are. I'd likely agree with that assessment, but the discussion for this week was whether it's better to have an aggressive CEO verses



one that's very quiet and laid back and, in theory at least, more enjoyable to work with. Ray Zinn, who guided Micrel for 37 years falls into the middle of that spectrum, but leaning more toward the laid... [Continued...](#)

Designing control systems with multiple motors

Shinichi Suto, Cypress Semiconductor *and* Christian Harders, Cypress Semiconductor

In recent years, technological progress has led to rapidly growing utilization of microcontrollers (MCUs) in a wide range of applications, including washing machines, air conditioners, and other home appliances. These products strongly benefit from high efficiency and silent operation when being driven by modern motor control algorithms. The presence of an MCU also facilitates machine-to-machine communication for Internet of Things (IoT) applications, as well as control of the complete appliance. In general, manufacturers can deliver appliances offering higher efficiency, lower operational noise, and increased... [Continued...](#)



Embedded Experts Podcast: ADAS, autonomous drive, and processing horsepower



Rich Nass, Embedded Computing Brand Director *and* Brandon Lewis, Technology Editor

This week, the self-appointed Embedded Experts, that being Brandon Lewis and Rich Nass of Embedded Computing Design, discussed automotive technologies. The duo got into autonomous driving and ADAS (Advanced Driver Assistance Systems), which were both under the spotlight a few weeks ago at CES, and brought in a special guest to help fill in the gaps: John Buzsek, a Senior Manager for ADAS at Renesas. Topics include: Advanced Driver Assistance Systems (ADAS) Autonomous Vehicles Processing SAE Levels of Autonomy CES Uber [soundcloud url="https://api.soundcloud.com/tracks/303554269" params="auto_play=false&hide_related=false&show_comments=true&show_user=true&show_reposts=false&visual=true"]... [Continued...](#)



Nixie tubes: Vintage tech for today



Jeremy Cook, Engineering Consultant

Nixie tubes, if you haven't heard of them, are display devices that look like vacuum tubes, but are actually filled with gas. When electricity is applied to one of the characters inside, it appears to glow, brightly displaying this information for all to see. The Burroughs Corporation originally introduced these tubes in the 1950s, and the name Nixie came from an abbreviation for Numeric Indicator eXperimental-1. Production stopped in the U.S. and Europe in the 1970s, and continued in Russia into the 1990s, as... [Continued...](#)

A source-annotation-based framework for structural coverage analysis tool testing



Olivier Hainque, AdaCore

Automated testing of software tools always requires some way of comparing what the tool does against what we expect it to do. Testing compilers, for example, usually entails verifying the behavior of compiled programs, checking compilation error messages, or analyzing the generated machine code. For static or dynamic analysis tools, this typically involves checking the tool outputs for well-defined sets of inputs.

Distributed Trust Ecosystem key to autonomous driving future



Brian Spector, MIRACL

It's no secret that advanced driver assistance systems (ADAS) and the fast-approaching autonomous driving future are set to transform the mobility market. A countless number of devices will need talk to each other in order to ensure a safe environment: multiple sensors and systems within the car will communicate securely at lightning speed while the vehicle itself will be tuned into its surroundings via vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I) ad hoc networks, and more. Road conditions, precise position, speed, traffic signals and the location of other vehicles are just some of the data that go into this mix.



Testing overload: Where do we go from here?



Walter Capitani, Rogue Wave Software

With the recent decision by the Federal Aviation Administration (FAA) that all Boeing 787 Dreamliners must be reset every 21 days[1], it's no wonder that organizations are feeling the demands of testing – and testing efficiently. Many companies in the embedded market are already using tools like static code analysis (SCA) to help with testing, but with all the requirements and regulations you have to wonder: "Have we reached testing overload?"

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Last updated: Mon, 23 Jan 2017 19:57:08 +0000

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subject: "A Distributed Trust Ecosystem for Autonomous Drive".