



Visteon Showcases New Technology for the Digital Cockpit on the Road to Autonomous Driving

Jan. 10, 2018

Global automotive electronics leader presents latest technology at CES® 2018 -from digital instrument clusters, displays and infotainment to cockpit controller and self-driving platform

LAS VEGAS, Jan. 10, 2018 /PRNewswire/ -- Visteon Corporation (Nasdaq: VC) is showcasing technology at CES® 2018 aimed at accelerating the transition to all-digital vehicle cockpits and speeding development and commercialization of autonomous driving solutions. This is Visteon's 19th year at CES – one of the longest participation levels of any automotive technology company.



From fully reconfigurable instrument clusters and advanced digital display technologies to driver monitoring, ADAS integration and the industry's first cockpit domain controller, Visteon is displaying products that will underpin the epic shift toward connected cars and autonomous vehicles. Headlining Visteon's exhibit (CP-20) is the introduction of its DriveCore™ autonomous driving controller, a hardware/software platform that enables automakers to build autonomous driving solutions quickly in an open collaboration model.

"CES is the ideal venue to showcase how Visteon is leading the shift toward the all-digital cockpit, which is an essential step on the path to autonomous driving," said Visteon President and CEO Sachin Lawande. "As the only Tier 1 automotive supplier focused exclusively on vehicle cockpit electronics, Visteon will demonstrate solutions addressing industry trends such as digitization of the cockpit, consolidation of cockpit electronics components, and the transition to autonomous vehicles."

Highlights of Visteon technology at CES include:

Instrument Clusters

The shift toward connected cars and autonomous vehicles is driving a transition from analog and hybrid clusters to all-digital systems. Visteon is displaying digital solutions for all vehicle segments, featuring display sizes ranging from 7 inches to 20.3 inches, with embedded functionality such as camera systems and ambient lighting.

Instrument cluster highlights at CES include:

- A plastic OLED (organic light-emitting diode) instrument cluster with 1920-by-720 resolution, vivid colors and ultra-thin (5 millimeters) profile
- A 4K-by-1K instrument cluster with integrated driver monitoring infrared cameras for facial recognition and head and eye-gaze tracking, which will be important to assessing driver readiness to resume control of an automated vehicle. The cluster also features integrated side-view e-mirrors.

Displays

To deliver a connected experience and prepare for an autonomous future in which occupants will need to monitor the status of the vehicle and its surroundings, the car's interior is going digital – with more and larger displays of all types. Visteon is presenting a range of more than 40 displays that are brighter and larger than most conventional displays, with high-resolution, vivid graphics and a wider color space.

Visteon design innovations include selective dimming, curved surfaces, enhanced optics management, narrow borders and thin design. Highlights at CES include center displays with HD haptics; a new interior rearview e-mirror that can electronically transition from pure mirror mode to pure display mode; and a dimmable lens display.

Audio/Infotainment

In-vehicle infotainment is gaining more attention as cars become more connected and as the industry considers how to bring value to occupants of future automated vehicles. Display audio systems, which leverage the smartphone to bring features such as navigation and other connected services, are replacing traditional audio systems. Additionally, automakers want to leverage the global community of app developers to build infotainment apps.

Visteon is showing a range of infotainment solutions, including:

- Phoenix™ platform of display audio, embedded infotainment and SmartCore™ solutions, capable of adapting the human-machine interaction (HMI) across different screen sizes, resolution and orientation.
- Phoenix™ InfoCore™ – the in-vehicle middleware that maximizes reuse and enables seamless upgrades
- Phoenix™ Studio 2.0 – A next-generation, PC-based development tool enabling development of third-party apps that can be written once and run on any infotainment system in the car that runs on InfoCore™ – without adaptation.
- Android™ infotainment – An open-source system based on Android Automotive, with two independently controllable

displays and features such as Google Assistant.*

Head-Up Displays

Head-up displays are fast gaining popularity as a preferred interface for critical information such as vehicle speed, warnings and navigation messages. Visteon is featuring a range of windshield solutions with fields of view from 4 degrees-by-1.2 degrees, to 8 degrees-by-3 degrees, with best-in-class optical systems, tilt and picture-generating unit (PGU) technologies.

Visteon is also displaying an augmented reality solution that provides a digital layer of information to help improve safety, and which can be integrated into different electronic control units.

SmartCore™ Cockpit Domain Controller

As in-vehicle electronics proliferate, the industry recognizes the cost-, space- and power-saving benefits of consolidating electronic control units, or ECUs, across multiple electrical domains. Visteon's SmartCore™ domain controller, launching with a European-based automaker in early 2018, enables the integration of instrument cluster, infotainment and head-up displays into one ECU instead of three.

Visteon is demonstrating integration of its SmartCore™ "Gen2" cockpit electronics software stacks along with Phoenix™ or Android™ infotainment Technology on display includes:

- A SmartCore™ domain controller incorporating Visteon's driver information applications and Android™ O-based infotainment, running on Qualcomm's 820 AM Snapdragon processor.
- SmartCore™ Runtime – the middleware that enables communication between domains and apps to be shown on any display.
- SmartCore™ Studio – a PC-based configuration tool to generate hypervisor configurations.

V2X and Cybersecurity

Visteon is addressing the U.S. mandate for vehicle-to-vehicle (V2V) technology through a low-cost, stand-alone V2X (vehicle-to-everything) platform. To address growing concerns about cybersecurity, Visteon is presenting a multi-layered security approach that adopts the SAE J3061 cybersecurity framework to Visteon's own product development process.

**Android is a trademark of Google LLC.*

About Visteon

Visteon is a global technology company that designs, engineers and manufactures innovative cockpit electronics products and connected car solutions for most of the world's major vehicle manufacturers. Visteon is a leading provider of instrument clusters, head-up displays, information displays, infotainment, audio systems, SmartCore™ cockpit domain controllers, and vehicle connectivity/Visteon also supplies embedded multimedia and smartphone connectivity software solutions to the global automotive industry. Headquartered in Van Buren Township, Michigan, Visteon has approximately 10,000 employees at more than 40 facilities in 18 countries. Visteon had sales of \$3.16 billion in 2016. Learn more at www.visteon.com.

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