



## Gentex to Demonstrate New Connected Car, Biometrics and Digital Rear Vision Technologies at CES 2018

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### Gentex to highlight:

- **HomeLink Connect™**, an all-new car-to-home automation system that allows drivers to operate home automation devices from the vehicle's touch screen
- **The latest automotive biometrics system** that authenticates the driver and delivers custom security, comfort and convenience features
- **The next-generation Full Display Mirror®**, an intelligent rear-vision system using a camera and mirror-integrated video display to optimize a vehicle's rearward view
- **A new camera monitoring system** using multiple cameras and displays to enhance the driver's side and rear vision
- **Dimmable glass for privacy, combiner head-up displays and sensor shrouds**
- **Custom-designed vehicle demonstrator** that provides an immersive connected-car experience, including a demonstration of in-vehicle payments using Visa payment solutions

LAS VEGAS, Jan. 02, 2018 (GLOBE NEWSWIRE) -- At CES® 2018, Gentex Corporation (NASDAQ:GNTX) will demonstrate new connected car features, digital rear vision systems, biometric-based vehicle security, in-vehicle payments with Visa, and other emerging automotive features ready for automaker implementation into new vehicles.

Gentex is a long-time supplier of electro-optical products for the global automotive industry. It supplies nearly every major automaker with connected-car technologies and advanced electronic features that optimize driver vision and enhance driving safety.

"Last year at CES, we unveiled several new prototype technologies that garnered lots of attention from automakers," said Steve Downing, Gentex president and chief operating officer. "This year we'll be demonstrating fully functional, vehicle-integrated versions of these same features, along with exciting new technology that is currently under development."

### Car-to-Home Automation

Among the features Gentex will demonstrate at CES is HomeLink Connect, an all-new home automation app that pairs with the vehicle and allows drivers to operate home automation devices from the vehicle's center console display. Drivers of HomeLink Connect compatible vehicles will be able to download and configure the app to control a myriad of individual home automation devices, or set up entire home automation "scenes." For instance, when heading home, one HomeLink button press could adjust a thermostat, turn on home lighting, disarm the security system, unlock the door, and begin playing music.

HomeLink Connect is an extension of Gentex's popular HomeLink feature, which consists of in-vehicle buttons that can be programmed to operate radio-frequency controlled devices like garage doors and security gates. More than 80 million HomeLink-equipped vehicles are on the road today.

"By adding cloud-based wireless control to HomeLink's traditional RF functionality, the feature stands to remain the industry's most versatile, reliable, and comprehensive in-vehicle home automation system," said Downing. "It also opens the feature to new markets and new users by providing an ever-expanding number of use cases."

### In-Vehicle Biometrics

At CES, Gentex will also demonstrate its latest version of an in-vehicle biometrics system that authenticates the driver with an iris scan to deliver customized security, comfort and convenience features. The system consists of a rearview mirror that houses near-infrared emitters, an iris-scanning camera, and system-level intelligence.

Upon entering the vehicle, a glance to the mirror by an authorized user would allow the vehicle to operate, and then personalize setup by automatically adjusting seat position, HVAC controls, music favorites, GPS locations, and other cabin amenities, according to user-determined presets. The biometric system could then sanction safe, secure access to a host of cloud-based, connected-vehicle services, like home automation control, tolling, in-vehicle payments, etc.

"The driver's eyes are key to securing and customizing the in-vehicle, connected-car experience," said Downing. "By knowing exactly who is behind the wheel, automakers can implement vehicle security, personalize the vehicle cabin, and secure access to cloud-based accounts, apps, and additional connected-car services."

### Digital Vision/Full Display Mirrors

Gentex's CES booth will also showcase the Company's next-generation Full Display Mirror (FDM), an intelligent rear-vision system that uses a custom camera and mirror-integrated video display to optimize a vehicle's rearward view. The system captures video from a rearward-facing camera and streams it to a unique mirror-integrated LCD that provides the driver with an unobstructed, panoramic view behind the vehicle.

The mirror offers bi-modal functionality. In mirror mode, the product functions as a standard rearview mirror, but with the flip of a lever, the mirror enters display mode, and a clear, bright, LCD display appears through the mirror's reflective surface, providing a wide, unobstructed rearward view.

Gentex's next-generation FDM features an all-new frameless design with a larger, higher-resolution display, and is accompanied by a 1.7-megapixel camera. The result is an elegantly styled, digital rearview mirror that not only improves the driver's rearward view but also contributes to the sophistication of the vehicle's interior.

### **Digital Vision/Camera Monitoring Systems**

The Gentex FDM is a critical component in the Company's new camera monitoring system (CMS), which uses three cameras to provide comprehensive views of the sides and rear of the vehicle. The side-view cameras are discretely housed in reduced-sized, exterior mirrors. Their video feeds are combined with that of a roof-mounted camera and stitched together into multiple composite views that are streamed to the driver in the Full Display Mirror.

By housing the side-view cameras in downsized exterior mirrors, the entire system fails safe. Should weather conditions or system failure disrupt the digital view, drivers can still use the interior and exterior mirrors. It also supports user preference by permitting drivers to use standard mirror views, camera views, or both. The downsized mirrors also provide the automaker with significant weight savings and fuel efficiency improvements.

By using different types of flat and curved glass, combined with simple alterations to the video viewing modes, Gentex's CMS system can be tuned to meet the various regulatory field-of-view requirements around the world.

For CES 2018, Gentex will unveil new exterior mirror assemblies that pivot (as opposed to just the glass moving) to adjust the sideward field of view. This allows for smaller, lighter exterior mirrors.

### **Dimmable Glass**

Gentex currently supplies the aerospace industry with electronically dimmable windows that darken on demand so passengers can control the amount of light entering the airplane cabin. This year at CES, the Company will demonstrate new uses for its dimmable glass that transfer the aerospace-passenger cabin experience to automotive.

For the first time, Gentex will be demonstrating large-area dimmable devices for in-vehicle lighting, sunload, and privacy control. In addition, the Company will debut a dimmable head-up display and sensor shrouds – dimmable glass panels that darken on-demand or automatically according to sensor function.

Today's vehicles are increasingly being outfitted with sensors and cameras for various ADAS features. Autonomous vehicles will undoubtedly be equipped with cameras, radar, LIDAR and a host of other safety-related sensor systems. It's challenging to integrate these into a vehicle in a manner that optimizes performance while maintaining a clean design aesthetic. Sensor shrouds work to conceal and optimize the operation of cameras, optical systems and the autonomous sensor farm.

### **All-New Product Demonstrator**

All the technology discussed above will be integrated into hands-on product displays, functional vehicles, and an all-new Gentex-designed product demonstrator. The demonstrator is designed to allow Gentex customers to experience all the Company's technology – and better understand how it interacts together – in a vehicle-like setting. Customers will be able to experience various driving scenarios that showcase in-vehicle biometrics, automatic toll road transactions, dimmable glass, and more.

One driving scenario demonstrates in-vehicle payments for items like gas, which is made possible through [Visa Token Service](#), a security technology that replaces sensitive payment card account information with a unique digital identifier to process payments without exposing actual account details. When low on fuel, the driver would be directed to a nearby gas station, where paying for the fill-up would be as easy as choosing Visa on the vehicle's touchscreen.

"Gentex and Visa are working together to show the ways that our technology and in-vehicle payments can complement one another," said Downing. "When you combine Visa's leadership in digital payments with our connected car features and in-vehicle displays, we can work together to help automakers implement unique and robust in-vehicle payments solutions."

CES (the Consumer Electronics Show) is the world's gathering place for all who thrive on the business of consumer technology. Owned and produced by the Consumer Technology Association™, it has served as the proving ground for innovators and breakthrough technologies for over 50 years. This year's show runs January 9-12 in Las Vegas, Nevada.

Gentex technologies will be on display in the Las Vegas Convention Center, Tech East, North Hall, booth #9123.

Founded in 1974, Gentex Corporation (NASDAQ:GNTX) is a supplier of automatic-dimming rearview mirrors and electronics to the automotive industry, dimmable aircraft windows for aviation markets, and fire protection products to the fire protection market. Visit the company website at [www.gentex.com](http://www.gentex.com).

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