

# GENTEX CORPORATION

## Gentex to Demonstrate New Dimmable Glass, Connected Car and Digital Vision Systems at CES 2019

January 8, 2019

Gentex's booth will highlight:



To enhance the security of connected car features, Gentex's in-vehicle biometrics system authenticates the driver with an iris scan to deliver customized security, comfort and convenience features. The system consists of a mirror-integrated display, 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, personalize the cabin (adjust seat position, HVAC controls, music favorites, etc.) and sanction safe, secure access to a host of cloud-based, connected-vehicle services, like home automation control, tolling, and in-vehicle payments.



An all-new Gentex-designed vehicle simulator allows 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.



This year at CES, Gentex will demonstrate large-area dimmable devices for in-vehicle lighting, sunload, and privacy control. The Company's booth will feature multiple vehicles equipped with fully functioning dimmable sunroofs, which can darken on demand or in conjunction with system intelligence. Gentex will also demonstrate dimmable head-up displays, privacy panels, sun visors, and sensor shrouds.



HomeLink consists of vehicle-integrated programmable buttons that can operate virtually any type of home automation device. It utilizes two transmission modes: radio frequency (RF) to activate entry-critical appliances such as garage doors and security gates, and cloud-based wireless transmission to operate home lighting, thermostats, smart outlets, security systems, and other IOT devices. At CES, Gentex will demonstrate HomeLink Connect, its new home automation app that pairs with the vehicle and allows drivers to operate home automation devices from the vehicle's touch screen or Bluetooth-enabled rearview mirror.

- **The latest dimmable glass systems for automotive and aerospace applications, including a new dimming window for Boeing's 777X**
- **Vehicle-integrated, iris-scanning systems for enhanced vehicle security, comfort and convenience**
- **Multi-camera, intelligent rear vision systems**
- **All-new vehicle simulator that demonstrates dimmable glass features, in-vehicle payments, biometrics, digital vision, and more**

LAS VEGAS, Jan. 08, 2019 (GLOBE NEWSWIRE) -- At CES® 2019, [Gentex Corporation](#) (NASDAQ: [GNTX](#)) will demonstrate the latest in dimmable glass systems, connected car features and digital vision technologies ready for automaker implementation.

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.

“As our capabilities continue to expand, our focus is to develop scalable technology paths through automotive features that are ready for immediate automaker implementation, yet are based on technology platforms that can grow, advance and adapt, especially as new mobility models and the autonomous age emerge,” said Gentex President & CEO Steve Downing.

### **Dimmable Glass Systems**

One such technology path is [dimmable glass](#). Gentex is the world’s leading supplier of dimmable devices, shipping over 40 million units annually. The Company’s current product portfolio consists of glare-eliminating interior and exterior rearview mirrors, and electronically dimmable windows for the aerospace industry.

This year at CES, Gentex will demonstrate large-area dimmable devices for in-vehicle lighting, sunload, and privacy control. The Company’s booth will feature multiple vehicles equipped with fully functioning dimmable sunroofs, which can darken on demand or in conjunction with system intelligence. Gentex will also demonstrate dimmable head-up displays, privacy panels, sun visors, and sensor shrouds.

As the autonomous age emerges, dimmable glass will play a greater role in providing passenger privacy. Toward this end, Gentex provided dimmable privacy panels for microSNAP, the latest autonomous concept vehicle from car design powerhouse, Rinspeed, which also debuts at CES.

### **Car Connectivity**

Gentex is a long-time supplier of features for the connected car. One example is HomeLink, the industry’s most widely used and trusted car-to-home automation system. More than 80 million HomeLink-equipped vehicles are on the road today around the world.

HomeLink consists of vehicle-integrated programmable buttons that can operate virtually any type of home automation device. It utilizes two transmission modes: radio frequency (RF) to activate entry-critical appliances such as garage doors and security gates, and cloud-based wireless transmission to operate home lighting, thermostats, smart outlets, security systems, and other IOT devices.

At CES, Gentex will demonstrate [HomeLink Connect](#), its new home automation app that pairs with the vehicle and allows drivers to operate home automation devices from the vehicle’s touch screen or Bluetooth-enabled rearview mirror.

“HomeLink’s dual transmission makes it the industry standard for comprehensive and reliable vehicle-to-home automation,” said Downing. “Plus, we’re continually working to ensure that HomeLink is compatible with the latest smart-home devices, which makes it a robust, worry-free connectivity solution for automakers.”

At CES, Gentex will also demonstrate [Integrated Toll Module](#) (ITM), a nationwide toll collection technology for factory integration into new vehicles. The system uses a mirror-integrated multi-protocol toll tag that provides motorists with access to toll roads throughout the U.S. It allows automakers to offer yet another connected-car feature to their customers and benefit from an ideal, high-performance transponder location. Motorists benefit by convenient, unfettered access to the country’s toll roads while eliminating toll-tag windscreen clutter and the need to manage multiple toll accounts.

To enhance the security of connected car features, Gentex will demonstrate 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 mirror-integrated display, 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, personalize the cabin (adjust seat position, HVAC controls, music favorites, etc.) and sanction safe, secure access to a host of cloud-based, connected-vehicle services, like home automation control, tolling, and in-vehicle payments.

### **Digital Vision**

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.

The Gentex FDM is also central to the Company’s 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.

“When it comes to automotive rear and side vision, our goal is to help the auto industry transition from analog to digital technology,” said Downing. “We have solutions ready for immediate OEM adoption, and future solutions in development with customers. Moving forward, digital vision solutions will play a critical role in driver information delivery as the industry moves

thorough the stages of autonomous driving.”

### **All-New Vehicle Simulator**

All of Gentex’s CES technology will be integrated into hands-on product displays, functional vehicles, and an all-new Gentex-designed [vehicle simulator](#) that allows 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.

### **Aerospace**

For the aerospace industry, Gentex supplies electronically dimmable windows (EDWs) that darken on demand, allowing passengers and/or the flight crew to control the amount of light entering the airplane cabin. The Company earlier today announced that its latest generation of dimmable aircraft windows will be offered as optional content on the new Boeing 777X. This aircraft will be the first to utilize Gentex’s most current EDW technology, which is capable of eliminating more than 99.999 percent of the visible light at twice the darkening speed of the previous generation.

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 8-11 in Las Vegas, Nevada.

Gentex technologies will be on display in the Las Vegas Convention Center, Tech East, North Hall, booth #9120.

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).

Photos accompanying this announcement are available at

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Source: Gentex Corporation