



Gentex to Showcase Driver & Cabin Monitoring at CES 2022

January 5, 2022

LAS VEGAS, Jan. 05, 2022 (GLOBE NEWSWIRE) -- In-person CES is back and so is [Gentex Corporation](#) (NASDAQ: [GNTX](#)), which will once again exhibit at the event to highlight its growing driver and in-cabin monitoring solutions for the automotive industry, as well as demonstrate its ever-expanding portfolio of vision systems, dimmable devices, connectivity, and sensing solutions for a variety of industries.

Gentex is a technology company and long-time supplier of electro-optical products for the global automotive, aerospace and fire protection industries. It's best known for supplying nearly every major automaker with connected-car technologies and advanced electronic features that optimize driver vision and enhance driving safety.

"Monitoring the driver and vehicle occupants becomes increasingly important as we move through the levels of driving automation," said Gentex Vice President of Engineering and Chief Technology Officer Neil Boehm. "At this year's CES, we're demonstrating a scalable and comprehensive driver and cabin monitoring system derived not only from our internal machine vision expertise, but also recent technology acquisitions."

This past September, Gentex announced the acquisition of Israel-based Guardian Optical Technologies, which developed an infrared-sensitive, high-resolution camera combining machine vision, depth perception, and micro-vibration detection. This proprietary sensor configuration allows the system to not only monitor the driver, but also the entire vehicle cabin and all its objects and occupants, assessing their behavior, gestures, and activities.

In January of 2021, Gentex announced the acquisition of Vaporsens, which developed a nanofiber chemical sensing technology capable of monitoring the vehicle's cabin air quality and identifying potential airborne contaminants.

Both technologies will be highlighted in a new driver and cabin monitoring demonstrator that will be featured prominently at Gentex's booth. The demonstrator will provide an immersive experience that allows visitors to see what the system's machine vision camera sees, understand its decision-making processes, and learn about corresponding features sets.

The Gentex driver and cabin monitoring system tracks the driver's head pose, eye gaze, and other vision-based metrics to determine driver distraction, drowsiness, and readiness for return of manual control in semi-autonomous vehicles. It can also track passengers and their behavior, as well as objects and other environmental factors. It can even turn the vehicle into a mobile communications center for making a video phone call, conducting a meeting, or capturing an in-cabin selfie.

"Our goal is to provide automakers with holistic cabin monitoring solutions, from simple driver monitoring through complete cabin monitoring and machine olfaction," continued Boehm. "We're engineering a comprehensive and scalable platform based on robust sensor fusion techniques that will allow us to provide features for today's vehicles as well as transitional and completely autonomous vehicles."

Digital Vision

Gentex's CES booth will also highlight its expertise in digital vision. The company will demonstrate new features for its industry-leading [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.

Newer FDM add-on features include a [mirror-integrated digital video recorder](#) (DVR), scalable [trailer cam](#) system, touch screen display, lane-line projection overlays, and mirror-integrated selfie cam for capturing photos within the vehicle cabin.

Dimmable Glass Systems

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 once again 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 darken on demand or in conjunction with system intelligence.

In addition, Gentex will demonstrate a new dimmable sun visor concept. The Gentex visor folds down like a traditional visor but includes a clear, dimmable panel that can darken on demand or in conjunction with sunload sensors.

Car Connectivity

Gentex's CES 2022 booth will also highlight connectivity features, including [Integrated Toll Module](#) (ITM), the Company's nationwide toll collection technology for factory integration into new vehicles. Gentex recently began shipping ITM for a second European automaker.

ITM customers will soon benefit from Gentex's partnership with [PayByCar](#), an innovative provider of transactional vehicle solutions, that will allow an increasing number of drivers to pay for gas and other essentials directly from their vehicle. PayByCar uses the driver's toll transponder to identify the vehicle upon entering a participating gas station, turns on the pump, registers the transaction, charges the driver's credit card, and issues an email receipt.

To help automakers increase customer engagement and brand loyalty, Gentex is also partnering with [Simplenight](#), a provider of e-concierge and travel booking services that can be custom-branded and easily integrated into OEM vehicle apps, center consoles, and customer engagement web sites.

Aerospace

Gentex's aerospace products will also be featured at CES, including [electronically dimmable windows](#) (EDWs) that allow passengers to selectively darken the aircraft windows while still enabling them to view the outside scenery.

Additional aerospace concepts will also be on display, including [in-cabin sensing](#) systems tuned to identify hazardous airborne contaminants, a [smart lighting](#) system that optimizes cabin lighting, and a concept [seatback biometrics](#) system to identify passengers and provide a personalized flight experience.

Innovation Lab

Recent Gentex technology acquisitions, partnerships, and prototypes will be showcased in a special Innovation Lab at the Gentex booth, including the most recent iteration of the company's smart lighting system for surgical and patient care environments.

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 5-7 in Las Vegas.

Gentex technologies will be on display in the Las Vegas Convention Center, West Hall, booth #6327.

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.

Gentex Media Contact

Craig Piersma
(616) 772-1590 x4316
craig.piersma@gentex.com

Gentex Investor Relations Contact

Josh O'Berski
(616) 772-1800 x5814
josh.oberiski@gentex.com

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Gentex Driver Monitoring



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Gentex Cabin Monitoring



Gentex's driver and cabin monitoring system not only monitor the driver, but also the entire vehicle cabin and all its objects and occupants, assessing their behavior, gestures, and activities.

Gentex Structured Light



Gentex has developed an infrared-sensitive, high-resolution camera combining machine vision, depth perception, and micro-vibration detection.

Source: Gentex Corporation