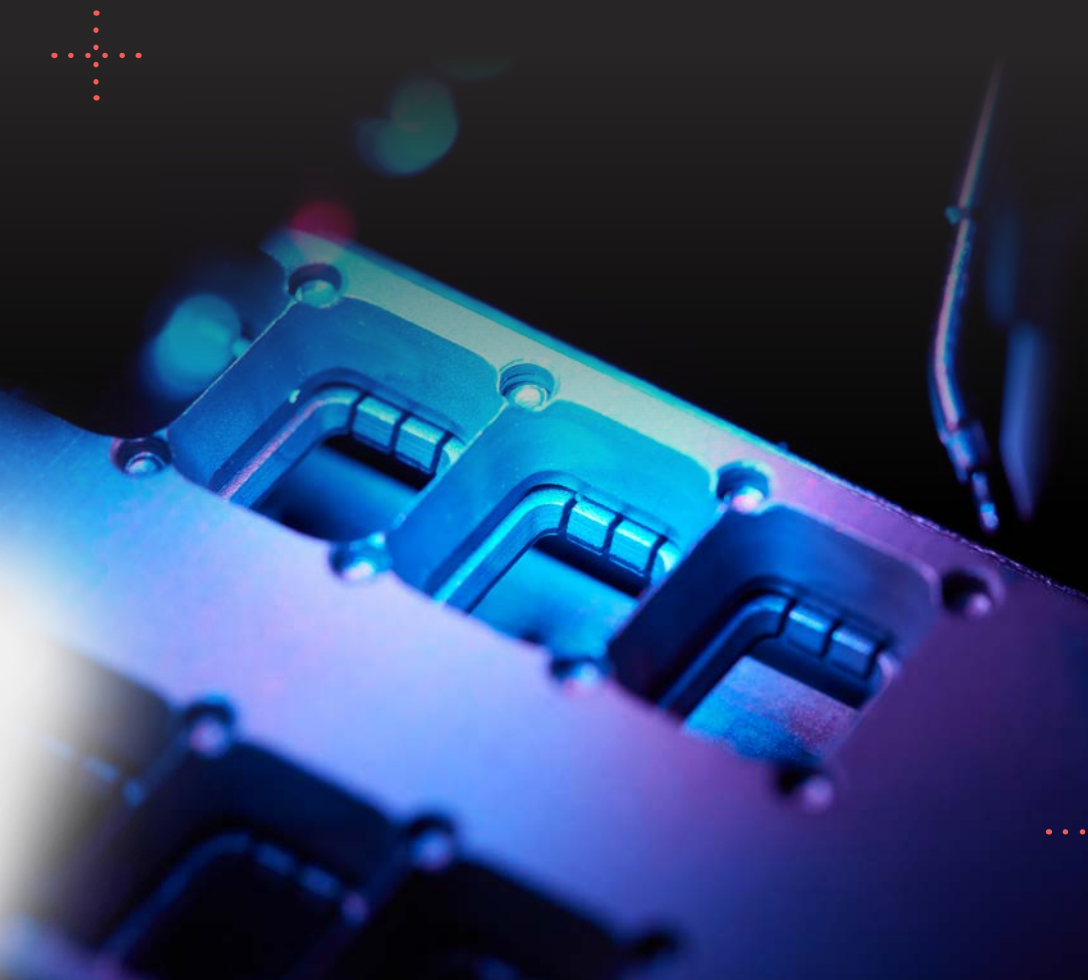


TODAY'S FEATURES.
TOMORROW'S TECHNOLOGY.



GENTEX
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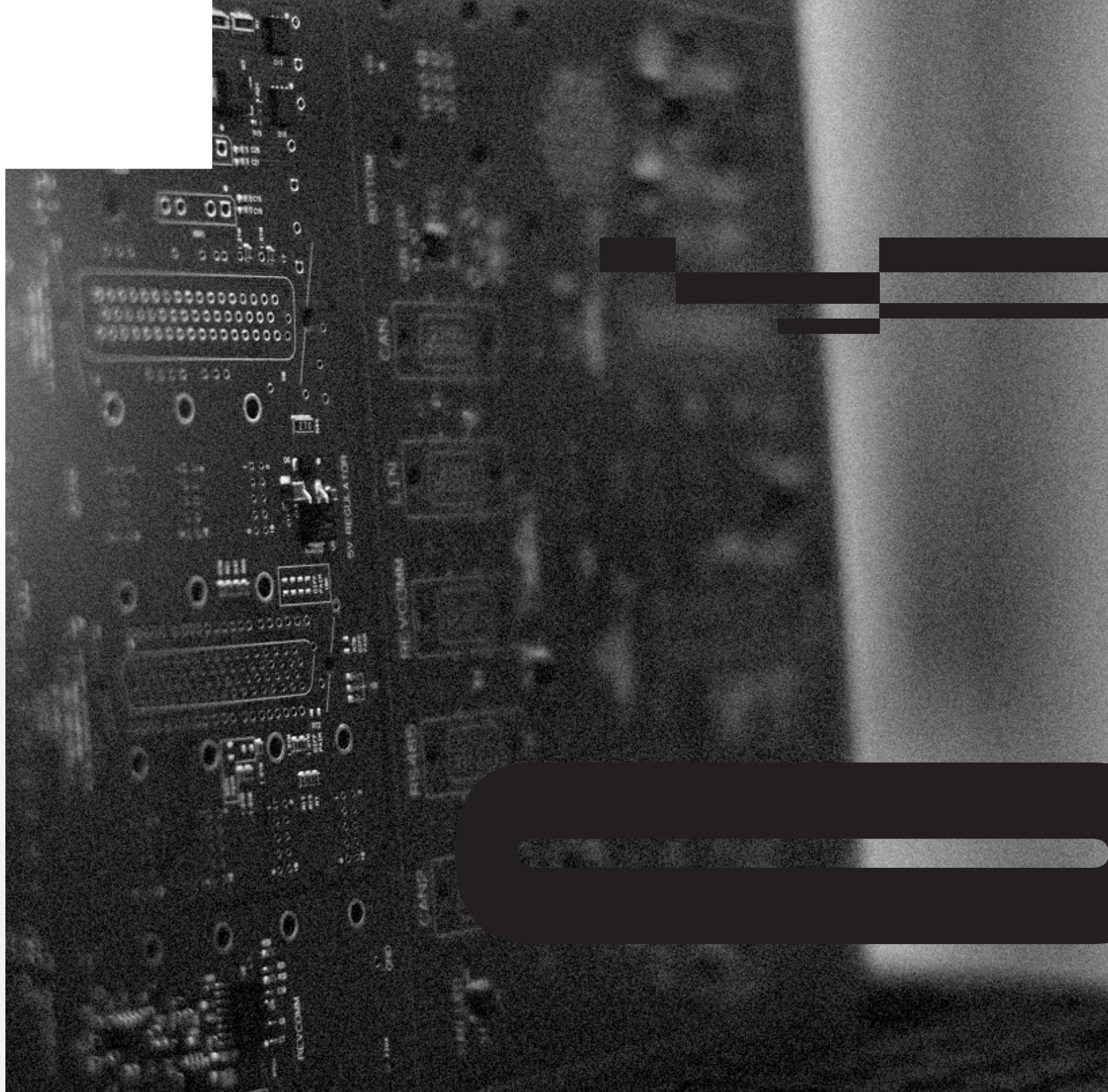


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BRINGING THE FUTURE INTO SIGHT



ABOUT GENTEX

Gentex is first and foremost a technology company, proficient in a wide range of core competencies that yields a unique fusion of technologies. We currently develop and manufacture custom, high-tech electronic products for the automotive, aerospace, and commercial fire protection industries, with growing competency in the medical field.



CORE COMPETENCIES

GLASS HANDLING + PROCESSING

SOFTWARE DEVELOPMENT

AUTOMATED ASSEMBLY

ELECTRONICS + MICROELECTRONICS

CAMERAS + VISION SYSTEMS

DISPLAYS, INDICATORS + ALERTS

CHEMICAL DEVELOPMENT + COATINGS

DESIGN + ENGINEERING

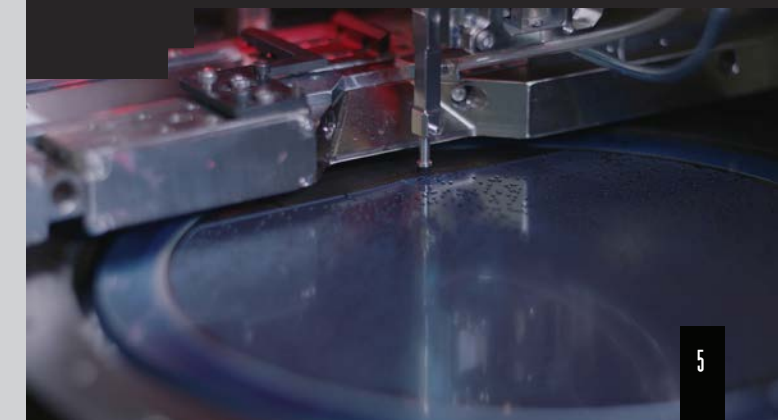


TODAY'S FEATURES. TOMORROW'S TECHNOLOGY.

"Gentex's strategy is to cultivate emerging technologies that address the industry's macro trends and also act as innovation platforms for today's vehicles.

In short, we look to introduce features for today based on tomorrow's emerging technology paths."

- PRESIDENT + CEO STEVE DOWNING



SECTION I

Automotive

Gentex supplies nearly every major automaker with advanced electronic features that optimize driver vision and enhance driving safety.

Specifically, we design, develop, manufacture, market, and supply digital vision, connectivity, sensing, and dimmable glass products.

DIGITAL VISION



CONNECTIVITY



DIMMABLE GLASS



SENSING



AUTOMOTIVE

DIGITAL VISION

Gentex is helping the auto industry manage the evolution from analog to digital vision, using custom cameras and displays to see behind, beside and around the vehicle.

SCAN FOR
MORE INFO



Full Display Mirror® (FDM®)

Digital Platform for Vision-Related Technology

The Gentex Full Display Mirror (FDM) is 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. It can operate either as a standard automatic-dimming rearview mirror or a rear video display.



Scalable Functionality

A mirror-integrated display allows for additional scalable functions.

- Touchscreen Interface
- Driver Alerts and Notifications
- Lane Line Projections



Custom System Integration

Gentex is your complete rear vision solution supplier. Imager, processor and software, display, camera lens, vehicle integration—Gentex can supply the entire integrated system.



Camera Monitoring Systems

Comprehensive View Behind the Vehicle

Gentex's FDM is central to our camera monitoring systems (CMS), which use three cameras to provide comprehensive views of the sides and rear of the vehicle.

Benefits:

- Expanded field of view
- Aerodynamic improvement
- Modern appearance



FULLY DIGITAL CMS

Exterior mirrors replaced with side-view camera pods and curved interior OLED displays.

HYBRID CMS

Side-view cameras integrated into downsized exterior mirrors with video streamed to inside mirror.

Additional FDM Features

Platform for Added Value

Once the mirror becomes a display, it paves the way for additional functions and features.

Multi-View Trailer Cam

Vision When You Need It, Where You Need It

Using multiple wired or wireless cameras that stream video to the Full Display Mirror, our multi-view trailer camera system allows drivers to see around, behind, and even inside their trailer.

Digital Video Recorder (DVR)

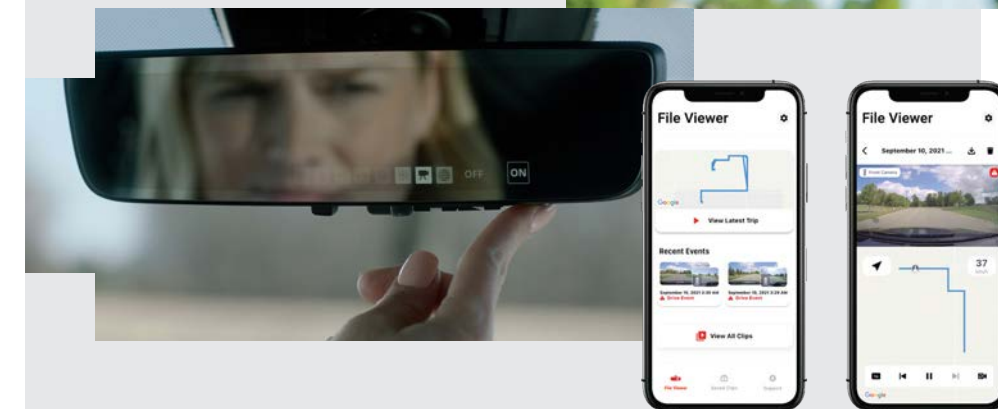
Providing Drivers Added Safety and Security

Gentex's mirror-integrated DVR is capable of continuously recording what's in front of, behind, and even inside the vehicle, delivering security and added peace of mind.

Communication Features

Turn Your Vehicle Into a Mobile Communications Center

With a mirror-borne camera, you can offer communication and social features like in-cabin selfies and video calls.



AUTOMOTIVE

CONNECTIVITY

Gentex is a long-time supplier of features for the connected car. Gentex provides robust V2I (vehicle to infrastructure) and transactional technologies that connect the vehicle to surrounding infrastructure while keeping data safe and secure.

SCAN FOR
MORE INFO



HOW GENTEX'S CONNECTIVITY FEATURES CAN MAKE YOUR LIFE EASIER

Control your garage door and smart home devices from your vehicle.

Breeze conveniently through toll collection points.

Complete contactless in-vehicle fueling transactions.

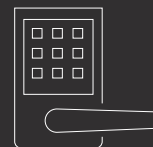
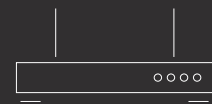
Use attractive discounts in the OEM e-concierge and booking services.



HomeLink®

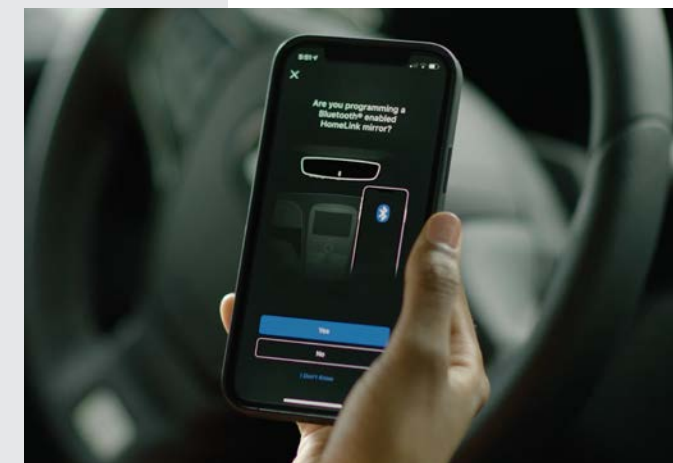
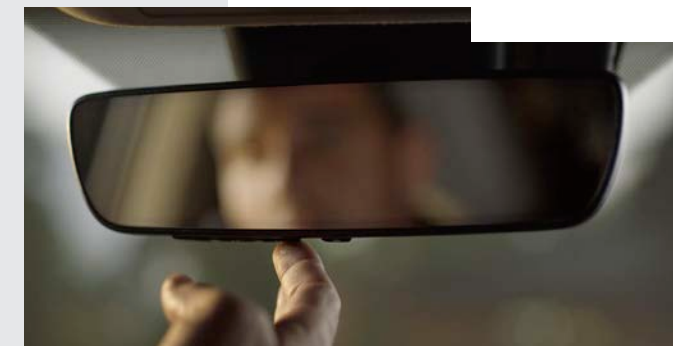
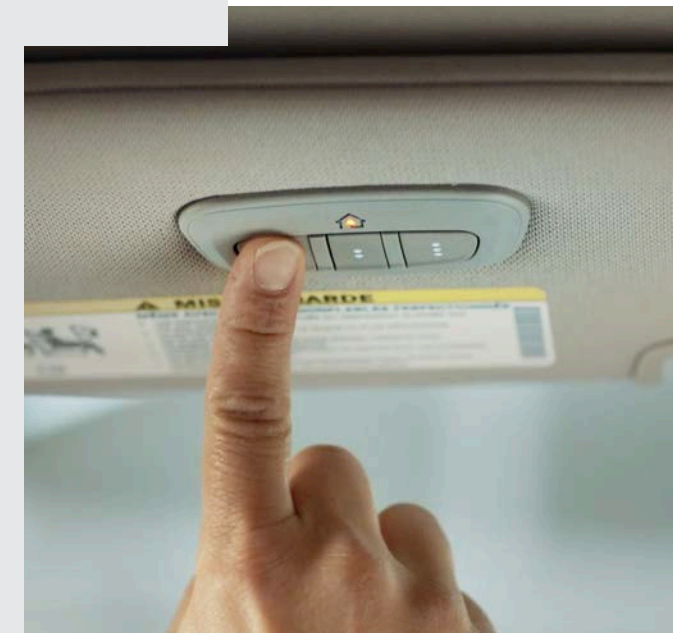
Comprehensive Car-to-Home Automation

HomeLink by Gentex is the most widely used and trusted car-to-home automation system, with over 100 million HomeLink-equipped vehicles on the road today. HomeLink consists of vehicle-integrated, programmable buttons that use radio frequency (RF) and/or cloud-based wireless control.



HOMELINK CAN OPERATE

- Garage door openers
- Security gates
- Door locks
- Interior/exterior lighting
- Security systems
- Appliances
- Thermostats
- Smart outlets



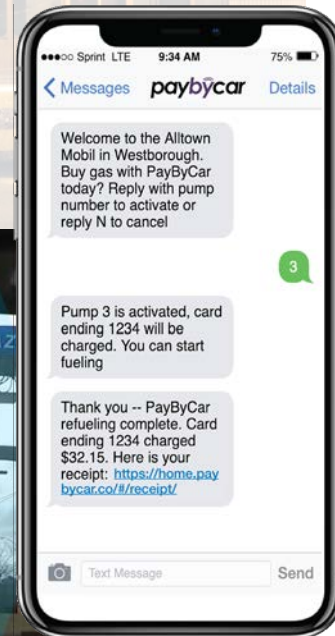
Integrated Toll Module® (ITM®)

Our Integrated Toll Module, or ITM, is the industry's first toll collection technology that comes conveniently integrated into the vehicle, allowing drivers to breeze through toll collection points across the U.S., all under one account.

PayByCar

Gentex is partnering with PayByCar, an innovator in contactless, in-vehicle payment technology. PayByCar will use Gentex's ITM to identify vehicles at gas stations and complete fueling transactions with the driver's smartphone.

1. Users register for PayByCar online.
2. Toll transponder locates vehicles at gas station.
3. Pump number confirmed via text message.
4. PayByCar turns on pump and executes transaction.



itm



Simplenight

Gentex is partnering with Simplenight to provide automakers with OEM-branded e-concierge and booking services for travel, entertainment, and more. It allows automakers to easily integrate branded concierge and booking services into their:

- Mobile apps
- Center console
- Customer engagement websites



AUTOMOTIVE

SENSING

Gentex is shaping the future with innovative sensing technologies for today's vehicles and through the autonomous age, keeping occupants safe and vehicles up and running.

SCAN FOR
MORE INFO



Biometrics

Enhancing Security, Comfort and Convenience

Driver identification is critical to securing the connected car and optimizing core driver monitoring features.

Mirror-Integrated Iris Scan

Gentex's mirror-integrated iris scan system combines the camera, near-IR emitters, and system intelligence into a cross-car-line module that provides custom security, comfort, and convenience features.

Multimodal Biometrics

Fingerprint, facial identification, voice recognition—Gentex can provide multiple modes of biometric authentication for authorizing various vehicle functions.



Driver and In-Cabin Monitoring

A Holistic Approach to Monitoring the Entire Vehicle

Our goal is to provide automakers with holistic cabin monitoring solutions, from core driver monitoring through complete cabin monitoring and machine olfaction.

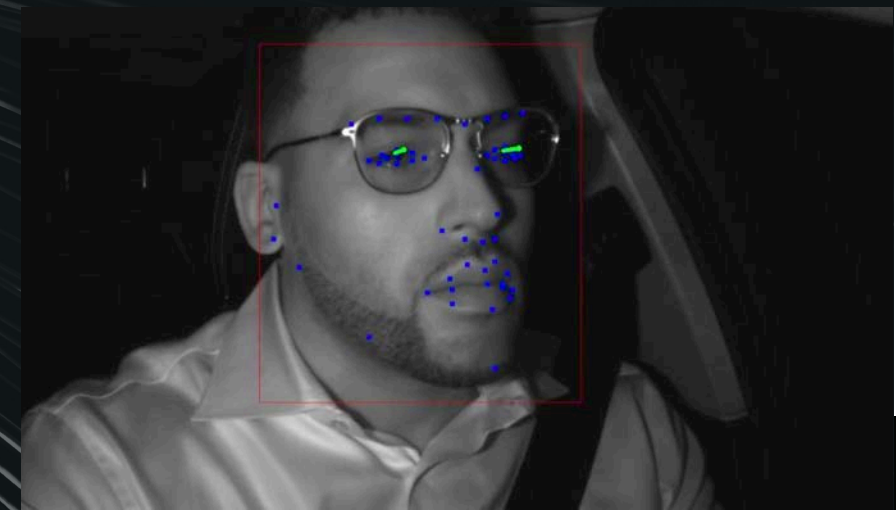
Driver Monitoring

Gentex's driver monitoring system (DMS) consists of a high-resolution imager and near-infrared emitters discretely hidden behind the glass of an interior rearview mirror. The system monitors the driver's head pose, eye gaze, and other vision-based metrics to determine driver distraction, drowsiness, sudden sickness, and readiness for return of manual control in semi-autonomous vehicles.

DRIVER
MONITORING

IN-CABIN
MONITORING

IN-CABIN
SENSING





In-Cabin Monitoring

Gentex utilizes 2D and 3D in-cabin monitoring techniques to monitor not only the driver, but also the entire vehicle cabin, enabling features like occupant detection, objects left behind, and body pose.

Structured Light

Gentex's unique 3D depth-mapping techniques utilize structured light, a projected laser dot system that produces a highly accurate map of the vehicle cabin. It enables enhanced features like mass- and distance-optimized airbag deployment, hands on steering wheel, and much more.

Microvibration

Our structured light system also monitors the microvibration of each dot projected, making it the ideal foundation for child presence detection.



In-Cabin Sensing

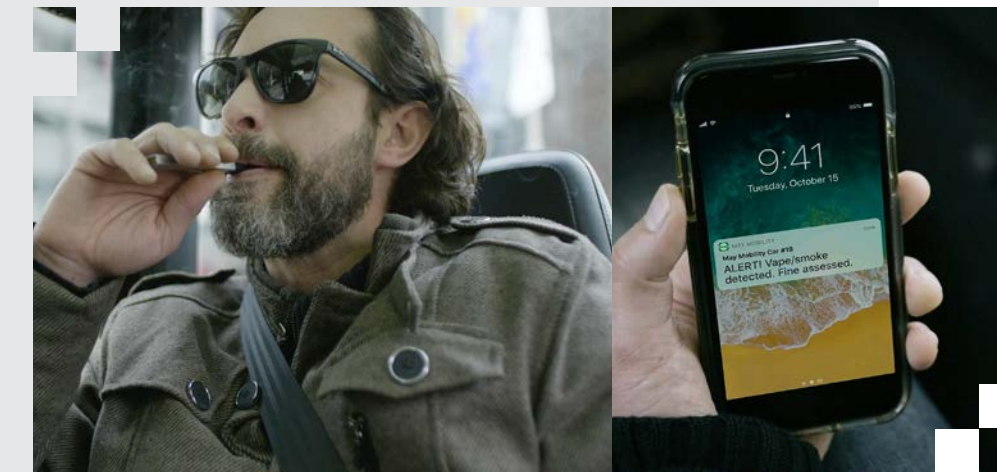
Gentex has nearly 50 years of sensing technology experience. Our particulate and chemical detection technologies offer complete, holistic sensing applications for the automotive industry and other key markets.

Particulate Sensing

To monitor cabin air quality, Gentex has developed in-cabin sensing units that detect smoke or vape within the vehicle.

Chemical Sensing

Gentex's chemical sensing technologies can detect a wide variety of chemicals, including biohazards, explosives, and VOCs, with widespread application in a multitude of industries.



AUTOMOTIVE

DIMMABLE GLASS

Gentex is the world's leading supplier of dimmable smart glass that manipulates light for safety, comfort, and performance.

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MORE INFO



Interior and Exterior Auto-Dimming Mirrors

Core Safety Technology with Global Appeal

During nighttime driving, Gentex mirrors use sophisticated light sensors, proprietary gels, and microprocessor-based algorithms to detect mirror glare and automatically darken to the precise level necessary to preserve driver vision. They are must-have automotive active-safety features.

Over the years, Gentex has helped automakers deliver dozens of additional features through its mirrors, including:

- Displays, alerts and signals
- Lighting
- Microphones
- Forward-facing cameras
- ADAS components
- Car-to-home automation

Sunload Control

Gentex is developing a wide variety of dimmable devices for in-vehicle lighting, sunload, privacy control, and much more. Large or small, curved or flat, rigid or flexible, we have dimming technologies and techniques to accommodate a wide variety of applications.

Dimmable Sunroofs

Self-dimming sunroofs help keep the vehicle cool and increase the life of interiors. They can darken on demand or automatically when combined with system intelligence.

Dimmable Sun Visors

Dimmable sun visors fold down like a traditional visor but include a clear, dimmable panel. In their darkened state, drivers can still see through without being blinded by the sun.



Dimmable Combiner Head-Up Displays

Dimmable combiner HUDs prevent sunlight, glare, and stray reflections from interfering with the display.

Concealment

Optimized Operation of Cameras, Sensors, and Displays While Enhancing Aesthetics

Sensor Shrouds

Dimmable sensor shrouds consist of reinforced glass panels that darken on demand or automatically according to sensor function. They work to conceal and optimize the operation of cameras, optical systems, and the ADAS sensor farm.



Pillar Display

Dimmable glass can conceal vehicle pillar-integrated displays and cameras. The illumination upon approach is ideal for various driver alerts and scenarios, especially for electric, rideshare, and autonomous vehicles.



Passenger Privacy

Autonomous vehicles will allow passengers new freedoms while traveling. Gentex's large-area dimmable panels will afford passengers privacy, especially during evening travel.



SECTION II

Aerospace

Gentex is the leading supplier of electronically dimmable windows for the aerospace industry. Through innovation and technological advancements, Gentex is reimagining air travel for passengers, crew, and manufacturers alike.

To our aerospace customers, we offer:

- Electronically Dimmable Windows
- Premium Glass Laminates
- Concept Aerospace Technologies

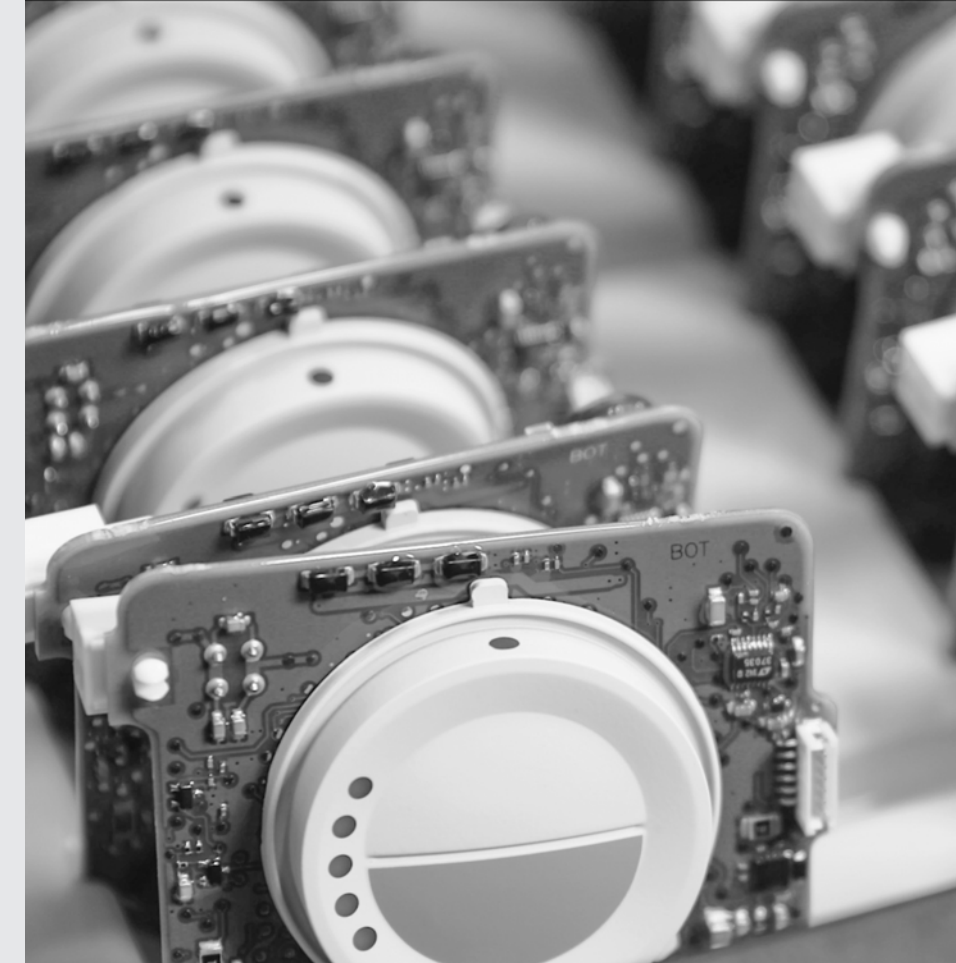


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MORE INFO

Electronically Dimmable Windows

Gentex is the world leader in electrochromic (auto-dimming) technology, designing and manufacturing over 40 million dimmable products annually. We are the leading supplier of electronically dimmable windows (EDWs) for the aerospace industry.

Gentex's EDWs darken on demand to cut sunlight and glare while still providing an exterior view. They improve the flying experience and aircraft design flexibility, and they enable airlines to give their customers and crew more control over the view out of their windows.



Electronically Dimmable Windows

Passenger Benefits

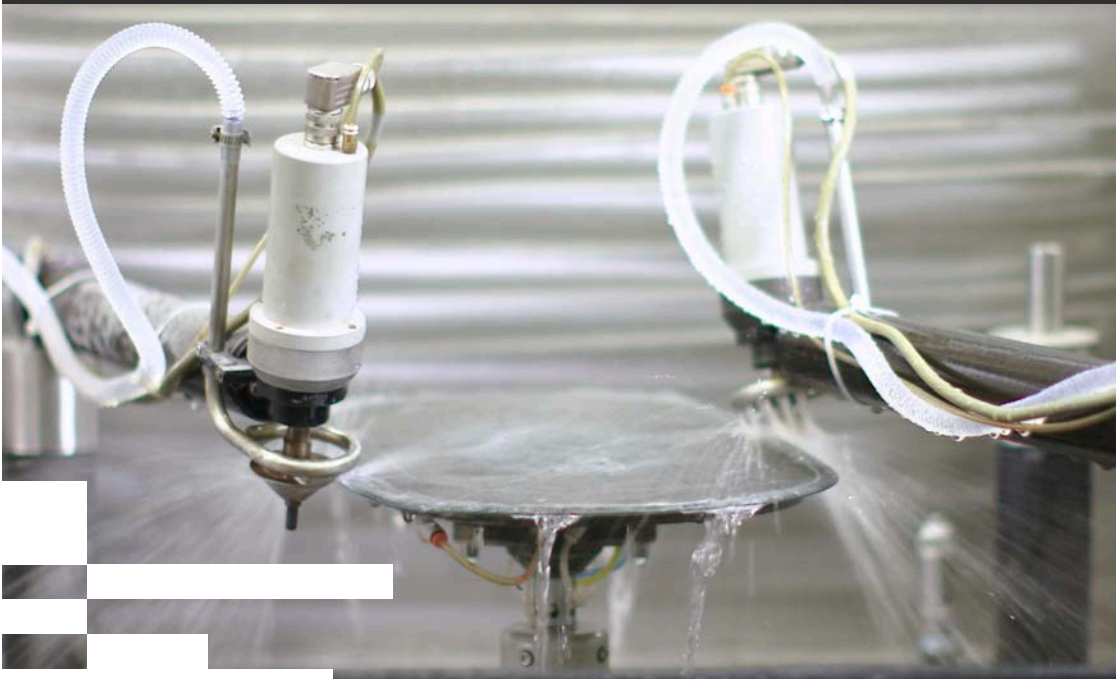
For higher passenger comfort

- Cuts sunlight glare
- Still affords an outside view
- Infinitely variable states of darkening
- Seamless passenger control
- Reduced acoustic transmission

OEM Benefits

For increased operating efficiency

- Proven reliability with 10+ million flight hours (MTBF)
- Highly durable and easy to maintain
- Flexibility due to centralized control option
- FAA compliant for emergency exit integration
- Greatest dynamic light transmission range
- Reduced cabin heat load

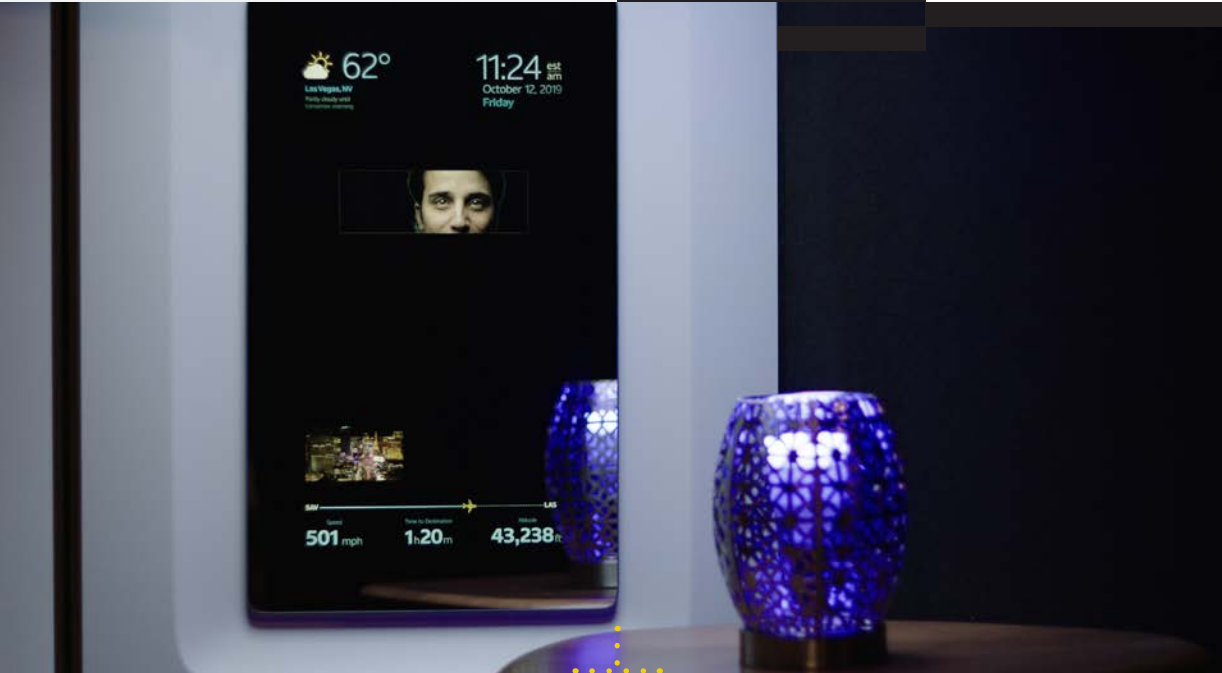


Premium Glass Laminates

Gentex manufactures glass laminates using a special laminating technique that allows us to produce ultra-thin laminated glass sheets. Our glass is chemically tempered, which makes the final product incredibly strong and almost impossible to scratch.

Benefits over Polycarbonate

Our glass laminates have many advantages over polycarbonate. Not only do they have a luxurious look and feel, but our glass for the aviation industry outperforms polycarbonate in every aspect.



- 1 **Transparencies:** Ultra-thin and ultra-light glass that is scratch-resistant, custom-made, and curved in the radius required
- 2 **Smart Glass:** Ultra-thin and ultra-light glass for mirrors that provide unparalleled optical quality
- 3 **Laminates:** Ultra-thin, fire-resistant veneer between glass for a stunning finish and appearance of the aircraft interior



ULTRA STRONG



LIGHTWEIGHT



SCRATCH RESISTANT



ANTI-STATIC



NOISE REDUCING



UV RESISTANT



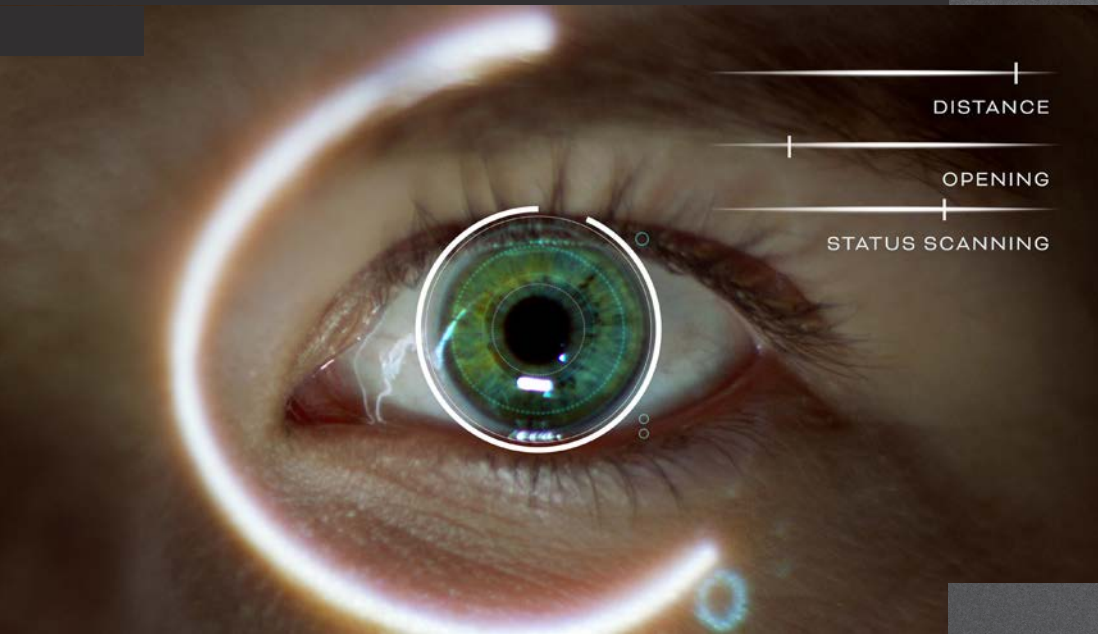
ANTI-BACTERIAL



ECO-FRIENDLY

Concept Aerospace Technologies

Gentex is working to evolve its core technologies for aerospace to enhance security, comfort, and convenience.



Pre-Boarding

IRIS SCANNING

Use cases:

- Crew identification
- Cockpit access security



Boarding

CHEMICAL SENSING

Use case:

- Identify explosive or incendiary components during the boarding process

After Seated

IRIS SCANNING

Use cases:

- Provide passenger-specific travel information
- Access to personal entertainment accounts
- Auto-payment for in-flight purchases

In the Air

PARTICULATE SENSING

Use case:

- Monitor cabin air quality while detecting smoke, vape, and other airborne contaminants

SMART LIGHTING

Use cases:

- Track the flight crew, selectively illuminating task areas without bothering passengers
- Track passenger activities while seated and automatically optimize seat lighting for reading, eating, and working



SECTION III

Fire Protection

Gentex was originally founded as a manufacturer of high-quality fire-protection products.

The market had long recognized the need for better smoke detection, and in 1974, Gentex introduced the world's first dual-cell photoelectric smoke detector. It quickly became the commercial industry benchmark because it was less prone to false alarms and designed to quickly detect slow, smoldering fires.



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MORE INFO



This technology became the foundation for our current products, and today, millions of Gentex smoke detectors and signaling devices can be found in schools, dormitories, hotels, and hospital buildings throughout North America and the world.



SECTION IV

New Markets

Over the years, Gentex has systematically transformed itself into a technology company, vertically integrated and proficient in a wide range of unique core competencies. Today, Gentex is growing its product portfolio and transforming its tech not only for automotive uses, but also entirely new markets.



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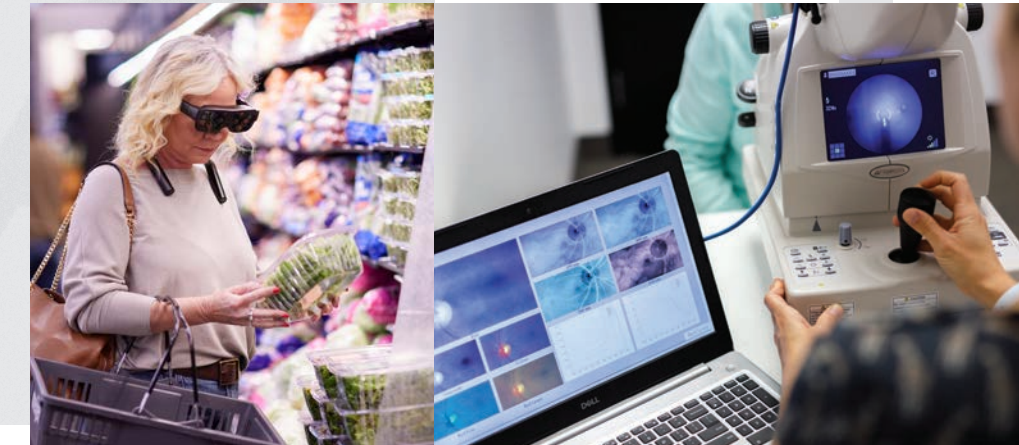
Medical Lighting

Gentex is co-developing a smart lighting system for surgical and patient-care environments that allows medical staff to place focused illumination when and where it's needed. This ongoing development combines our camera and vision systems with advanced lighting components to optimize, control, and direct light within medical and surgical environments.



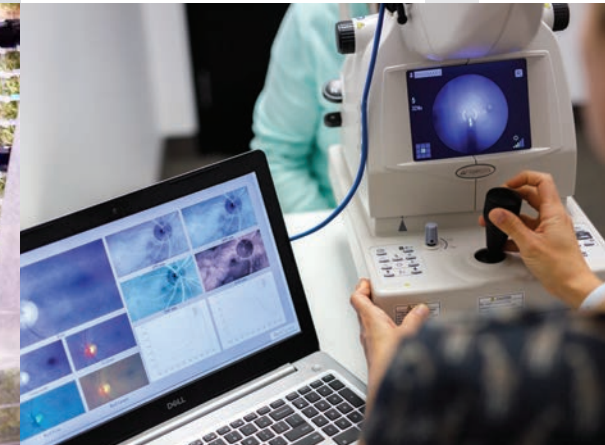
eSight

Gentex and eSight are working to develop a wearable vision-assist technology that allows people living with visual impairment to stay on the go while performing daily life tasks.



RetiSpec

Gentex is partnering with RetiSpec to commercialize technology for the early detection of Alzheimer's disease. RetiSpec is an artificial intelligence (AI) medical imaging company developing a tool for the early detection of disease biomarkers in the eye.



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