

Here's Why Head-up Displays Are Coming to a Windshield near You



Alan Rankin



Adjust the thermostat. Change the radio station. Check the speedometer and gas gauges. Glance at the kids in the back seat. Try not to spill the coffee. Grab your smartphone to see who just texted. Oh and by the way -- don't forget to keep your hands on the steering wheel.

Clearly, the daily car commute is a dizzyingly complex task many of us take for granted, and the driver's seat is a focal point for distractions.

According to the National Highway Traffic Safety Administration (NHTSA), [more than nine Americans are killed and nearly 1,200 are injured every day in crashes involving a distracted driver](#).

Clearly there's a need to consolidate and simplify the modern auto environment to help drivers focus on the road. The [head-up display \(HUD\)](#) is one such solution. The technology first emerged decades ago and is now showing up in cars.

Instead of a myriad of gauges, a HUD is a form of augmented reality that displays critical, relevant information directly in front of the driver's field of view. Ongoing advances in HUD capabilities using TI [DLP® technology](#) are delivering the widest field of view in the industry, outstanding brightness and flexible development options.

[Video: Driving the Future of Head-up Displays with DLP® Technology](#)

Just imagine the HUD as a central point for the amount of disparate pieces of driver information. Then imagine seeing everything you need to know – speed, road hazards, oncoming traffic and more – without having to take your eyes off the road or even change your focus. With a HUD display, the key information appears to float in front of the driver's eyes, somewhere between the windshield and the road.

At TI, we've developed technology that can make this dream a reality using the same proven [DLP Cinema® technology](#), which is used in more than eight out of 10 [digital movie theatre screens around the world](#).

Yesterday, we announced the [DLP3000-Q1 chipset](#). Consisting of a DLP 0.3-inch wide video graphics array (WVGA) digital micromirror device (DMD) and DLPC120 controller, the new chipset allows for the development of a HUD with the industry's widest field of view (FOV) up to 12 degrees.

Driven by improvements in FOV, image quality and brightness, head-up displays are poised to keep your eyes on the road and have a more informed experience.

DLP
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First Automotive-Qualified TI DLP® Chipset for Head-Up Display: DLP3000-Q1

OUTSTANDING COLOR ACCURACY
The same award-winning DLP Cinema® projection can be integrated into the car to enable high image quality and brightness.

WIDEST FIELD OF VIEW
Offers the industry's widest field of view of up to 12 degrees, enabling navigational indicators and real-time landmark details to be displayed in the driver's line of sight.

SCALABILITY
Because TI DLP® technology has the flexibility to use LED or laser light sources, this chipset can deliver a variety of development options customizable to support a range of field of views.

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Additional Resources

- Read our [press release](#) announcing this innovation
- Read TI's [HUD white paper](#)
- Learn more about TI's innovative [automotive portfolio](#)
- Visit the [DLP Design House Network](#)

To read more posts related to Smart Transportation, check out the blog below:

- [Cars are becoming rolling sensor platforms](#) on Behind the Wheel Already
- [Minivan or sports convertible – Whatever your style, NFC technology can make it smarter](#) on Behind the Wheel

Click [here](#) for more on how TI helps create a smarter city!

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