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Holographic Dash Displays Are Coming to Your Next Car

Hyundai, **GM**, Stellantis, and Jaguar Land Rover have all invested in Envisics' holographic technology

Head-up displays aren't new, with cars as old as the 1988 Oldsmobile Cutlass displaying information on the windshield, and they are increasingly found in mainstream vehicles. A recent OEM investment of $50 million in augmented-reality dash displays could end up leaving the traditional HUD behind.

At least Stellantis, General Motors, Hyundai, and even Jaguar Land Rover are betting on it, as all of these manufacturers are now strategic shareholders in Envisics, a UK company dedicated to producing holographic displays. Envisics is just one of many technology partners employed by these brands, but it might be the one that drivers will interact with the most. Specifically, the company is set to produce Augmented-Reality Head-Up Displays (AR HUDs), in an effort to further increase driver awareness and road safety.

Based on graphics provided by Envisics, the incoming holographic HUDs will display speed, direction, local landmarks, and potential collision points. Additionally, the technology outlines pedestrians and cyclists to help drivers identify them more easily. One graphic even shows the system identifying hazardous off-road obstacles, such as poles and bodies of water. These features are the result of years of engineering by researchers at the University of Cambridge starting in 2004, who eventually worked with Envisics to bring the product to market.

Envisics says augmented reality and automotive technology are intersecting rapidly, with an expected AR-market compound annual growth rate of 28%. The company expects a total of 1.6 million AR HUD units to be available in 2022 (most of them from Envisics), while it projects around 19.1 million units will be available by 2032.

With the exception of Envisics-equipped vehicles, most HUDs are image-based, meaning a virtual image is projected from a micro display onto the windshield. Holographic HUDs, however, use custom-developed spatial light modulators that allow for a higher-resolution, more reliable display of information. By design, these holographic displays are more dynamic, meaning it moves with the road ahead of them. This also means the holographic display will continue to function even if a pixel or two is missing.