Under-Display Camera Integration

Invisible Design — Full, Road-Ready DMS Performance

Under-display camera integration allows Smart Eye's Driver Monitoring System (DMS) to operate from a completely concealed position. The camera and IR illumination remain hidden from view, with the optical system and algorithms optimized for this placement, enabling cleaner display designs without changing how the system performs.

/ Design Without Trade-Offs

By placing the DMS behind the display, OEMs can remove visible camera cutouts and dark zones on the instrument cluster while maintaining reliable, real-time driver monitoring. The approach delivers the same tracking accuracy and responsiveness as a conventional installation, offering a smooth path to more minimalistic and design-driven interiors.

/ Smart Eye's CES 2026 Demo

At CES 2026, visitors can see Smart Eye's DMS running behind the display.

The demo shows live driver monitoring operating through the display surface, illustrating how the system maintains performance even when the hardware is fully hidden.

smart eye

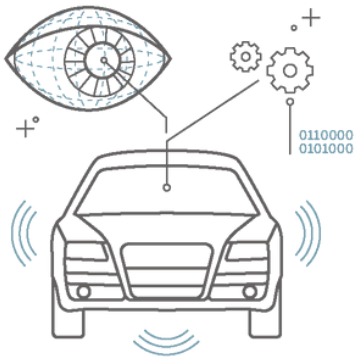
Technical Overview

In this setup, the DMS camera and IR illumination operate through an IR-transparent region of the display stack. The panel is engineered to allow near-infrared light to pass through at the camera's position, enabling consistent tracking without altering the display's appearance or brightness.

This method gives OEMs a way to preserve interior aesthetics while retaining the full capabilities of Smart Eye's driver monitoring software.

Key Specifications

- **12.2" LCD demo panel**
- **1.6 MP NIR DMC**
- **~6 mm optical window (hidden)**
- **Mini-LED backlight optimized for under-display use**
- **940 nm IR LEDs (invisible)**
- **40° Field of View**



Flexible Placement for OEM Designs

The integration supports the complete DMS feature set — including distraction, drowsiness, impairment detection, and unresponsiveness — without changes to camera placement or behavior. It offers a flexible, design-friendly option for programs aiming for cleaner clusters, unified surfaces, or premium interior executions.