

# Automotive Human-Machine Interfaces Report

Part of the AI & Intelligent Automation  
Service Area Package

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Published On 2Q 2019

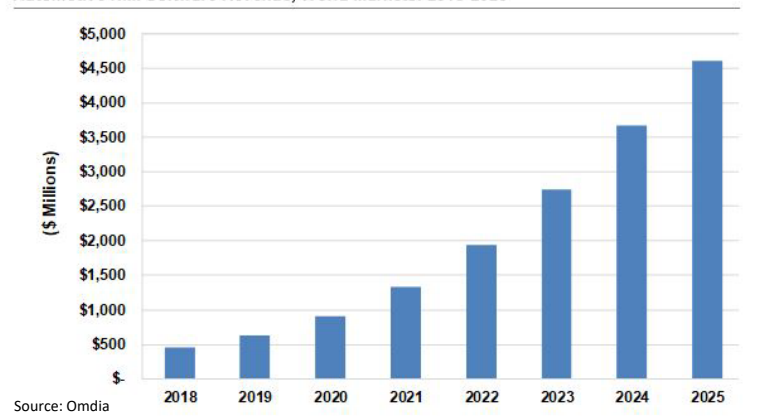
## AI-Based Voice-Enabled Virtual Assistants, Emotion Recognition, Gesture Control, and 3D Augmented Reality: Global Market Analysis and Forecasts

As vehicles grow increasingly connected and become packed with sensors, artificial intelligence (AI)-based technologies have the potential to play a significant role in the human-machine interface (HMI). Voice-enabled smart assistants for car controls, infotainment, and more will likely become the leading HMI in the coming era of the connected car. With momentum and regulatory demand for driver and occupant monitoring, emotion recognition and gesture recognition will become more prominent elements of HMI. Due to increasingly sophisticated computer vision algorithms, onboard compute power, and next-generation windscreen and other display technology, 3D augmented reality (AR) will become an integral component of the connected car experience.

For the connected car, AI-based HMI focuses on driver controls, driver/occupant monitoring/safety, and infotainment. For Level 5 autonomous vehicles, AI-based HMI focuses on occupant monitoring and infotainment. Most experts believe the connected car market will, with the help of aftermarket devices, grow rapidly for a number of years, then slowly decline. The fully autonomous vehicle era will likely grow more slowly due to regulatory and technical challenges. It will eventually eat away at connected car market share to a point where autonomous vehicle transportation represents the majority of the automotive market. Fast-forward several years to when humans become passengers and vehicles become moving entertainment centers in the autonomous vehicle era, and AI-based automotive HMI technologies will prove invaluable and morph into different use cases.

This report examines the market ecosystem and conditions for AI-based automotive HMI, including global market trends, drivers, and barriers. Global market forecasts, segmented by use case and region, extend through 2025. The study also explores the use cases and AI technologies related to AI-based automotive HMI and provides profiles of key industry players.

Automotive HMI Software Revenue, World Markets: 2018-2025



# Report Coverage

KEY ISSUES ADDRESSED	COVERAGE	APPLICABLE TO
<ul style="list-style-type: none"> <li>What is the current state of the market for AI-based human-machine interfaces (HMI) and how will it develop over the next decade?</li> <li>Which key use cases will drive greater AI-based automotive HMI adoption around the world?</li> <li>What are the significant challenges faced by AI-based automotive HMI players?</li> <li>Which companies are the key players in the market today and which are poised for the greatest success in the years ahead?</li> <li>What is the size of the global market opportunity for AI-based automotive HMI?</li> </ul>	<p><b>Automotive HMI Software Revenue, World Markets: 2018-2025</b></p> <ul style="list-style-type: none"> <li>By Use Case</li> <li>By Region</li> </ul> <p><b>Technologies</b></p> <ul style="list-style-type: none"> <li>Voice/Speech Recognition</li> <li>Gesture Recognition</li> <li>Emotion Recognition</li> <li>Driver Face Analytics</li> <li>Augmented Reality</li> <li>Deep Learning</li> <li>Machine Learning</li> <li>Natural Language Processing</li> <li>Computer Vision</li> </ul>	<p><b>Use Cases</b></p> <ul style="list-style-type: none"> <li>Connected Car           <ul style="list-style-type: none"> <li>Driver &amp; Occupant Controls</li> <li>Driver &amp; Occupant Monitoring</li> <li>Infotainment</li> </ul> </li> <li>Autonomous Car           <ul style="list-style-type: none"> <li>Occupant Monitoring</li> <li>Infotainment</li> </ul> </li> </ul> <p><b>Regions</b></p> <ul style="list-style-type: none"> <li>North America</li> <li>Europe</li> <li>Asia Pacific</li> <li>Latin America</li> <li>Middle East and Africa</li> </ul>
		<ul style="list-style-type: none"> <li>Automotive HMI solutions providers</li> <li>Tier 1 automotive vendors</li> <li>Automotive OEMs</li> <li>Voice and speech recognition software companies</li> <li>Gesture control solutions providers</li> <li>Emotion recognition solutions providers</li> <li>Other AI hardware and software companies</li> <li>Investor community</li> </ul>

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