

Market Analysis & Forecasts



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Under-the-hood Automotive Electronic Systems—2009 Edition

Analysis of global and regional market trends for 33 under-the-hood automotive electronic systems | Published October 2009 | 146 Pages

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Semicast Research Ltd.

Wellesley House, 204 London Road,
Portsmouth, PO7 7AN, UK

Tel: +44 23-9273-3012

Fax (UK): +44 207-806-0707

Fax (US): (408) 351-9400

info@semicast.net

www.semicast.net

Abstract

Semicast's Automotive Electronics & Entertainment Systems Service has been developed to aid suppliers to obtain a comprehensive overview of both short term and long term trends for the automotive industry. The complete service allows suppliers to obtain analysis of the market, to quantify demand for the key automotive electronics and entertainment systems, and to rationalize that demand to long term forecasts for system volumes, electronics value and semiconductor TAM.

This study is dedicated to analysis of the global market for under-the-hood automotive electronic systems, including body, chassis, powertrain, safety and security systems. For further information on the market for automotive entertainment systems, including audio-only systems, front seat infotainment, rear seat entertainment, embedded navigation systems and embedded telematics, please refer to the Semicast report "Automotive Entertainment Systems".

Additions to Scope for 2009 Edition

- Geographic analysis expanded to provide coverage of nine regions: North America, Europe, Japan, China, South Korea, India, Russia, Brazil and Rest of the World.
- Analysis of the market for electric vehicles.
- Analysis of the market for collision mitigation systems.
- Under-the-hood automotive electronic system supplier market share analysis in 2008.

Key Point Conclusions

- Global light vehicle production is forecast to decline to 54 million in 2009, from 66 million in 2008. Production is forecast to increase to 61 million in 2010, and to grow steadily to 85 million in 2017. Europe is forecast to remain the largest light vehicle production region over the period to 2017.
- Revenues for under-the-hood automotive electronic systems are forecast to decline by 16% in 2009, but to grow steadily over the period 2010 to 2017. Highest revenue growth is forecast for powertrain systems, followed by body.
- Europe is forecast to remain the largest region for under-the-hood automotive electronics over the period to 2017 and to record the highest revenue growth.
- Robert Bosch and Continental were the two largest suppliers of under-the-hood automotive electronic systems in 2008.

Under-the-hood Automotive Electronic Systems — Overview

Key features of the study include:

- Coverage of 33 “under-the-hood” automotive electronic systems, comprising body, chassis, powertrain, safety and security systems.
- Analysis of market trends for each system in nine geographic regions: North America, Europe, Japan, China, South Korea, India, Russia, Brazil and Rest of the World.
- Analysis of system installation rates, units and ECU ASP for each system, in each region. Base year is 2008, with forecasts to 2017.
- Under-the-hood automotive electronic system supplier market share analysis in 2008.
- Highly quantitative analysis, with discussion summarized in short, easy to read bullet points.
- PDF and Excel delivery options available.

System Coverage

The report analyzes the market in units and revenues for 33 under-the-hood electronic systems. Factory fit (OE) systems are included; aftermarket systems are excluded. 2008 is used as the base year with forecasts to 2017.

- | | | |
|-------------------------------|---------------------------------|----------------------------------|
| • Smart Airbag | • Passive Airbag | • Electro-hydraulic Steering |
| • Electric Power Steering | • Steer-by-wire | • Electronic Suspension |
| • Conventional Cruise Control | • Intelligent Cruise Control | • Front Door Electronics |
| • Rear Electric Windows | • Collision Mitigation | • Electronic Instrument Clusters |
| • Air Conditioning | • Seat Electronics | • Smart Junction Boxes |
| • ABS/TCS | • Exterior Solid State Lighting | • Other Body Electronics |
| • Rain & Light Sensors | • Electronic Stability Control | • Brake-by-wire |
| • Automatic Transmission | • Tire Pressure Warning | • Engine Control & Ignition |
| • Vehicle Tracking | • Keyless Entry | • Alarms/Immobilizers |
| • Blind Spot Monitoring | • Night Vision Assist | • Lane Departure Warning |
| • Electric Parking Brake | • Active Parking Assist | • Passive Parking Assist |

Regional Analysis

For each system, regional breakdowns in terms of region of vehicle production are presented as follows:

- North America
- Europe
- Japan
- China
- South Korea
- India
- Russia
- Brazil
- Rest of the World

Market Metrics

Further segmentation is provided by region, by system type, as follows:

- Installation Rate
- Units Installed
- ECU ASP (\$)
- Revenues (\$)

Additional System Analysis

For each of the following systems, additional analysis of the market is presented as follows:

- **Exterior solid state lighting** into: central high mount LED stop lamp, LED daytime running lamp, LED headlamps, other LED exterior lighting.
- **Passive parking assist** into: basic systems, advanced systems.
- **Automatic transmission** into: stepped automatic, continuously variable (CVT), other.
- **Light vehicle production by propulsion type** into: gasoline, diesel, electric vehicle.
- **Light vehicle production** into: conventional combustion, start-stop hybrid, full hybrid/plug-in hybrid, electric vehicle.
- **Tire pressure warning systems by system type** into: ABS-based, direct.
- **Keyless entry by system type** into: active entry, passive entry.

Sample Table

A sample table taken from the report showing the format used to present the market forecasts is shown below. A similar table is used to present the forecast for each system type, to enable comparisons to be made.

World Market for Engine Control & Ignition by Region

Region	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	CAGR (08/17)	DIFF (08-17)	SUM (08>17)
North America													
Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
Europe													
Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
Japan													
Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
China													
Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
South Korea													
Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
India													
Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
Russia													
Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
Brazil													
Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
Rest of the World													
Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
World Installation Rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
World Units Installed / KU	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
World ECU ASP / \$	0	0	0	0	0	0	0	0	0	0	0.0%	0	0
World Revenues / \$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0
Annual Growth Rate		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

Source: Semicast Research

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Analyst Biography

Colin Barnden - Principal Analyst



Colin joined Semicast Research in June 2006 and is principal analyst for semiconductor research and vice president of business development. Prior to joining Semicast, he worked for 12 years at IMS Research, rising to the position of Senior Research Director of its Semiconductor Research Group and responsible for analyst coverage on the analog/mixed signal, optoelectronic and embedded processing industries. Colin also set-up and established IMS Research's Automotive Electronics Group. During his tenure, Colin authored dozens of reports and became a well respected industry analyst. He holds a B.S. in Electronic Engineering from Aston University, England and has covered the automotive market since 1999.

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