Steady growth for semiconductor used in Body and convenience applications

An increase in attachment rate of body and convenience applications such as keyless entry, automatic air-conditioning, power seat, power window and LED lighting systems is accounting for a firm growth of semiconductor content in the car.

Overall semiconductor revenue for body and convenience applications has grown by 6% in 2014 and is estimated to reach $5.4 billion by 2019. Among others, lighting systems are accounting for a sharp growth of optical semiconductors. Revenue for LEDs alone grew by 34% in 2014.

This market tracker examines the semiconductor market by ECU type and by ECU manufacturer in body electronics applications from the body control module to LED lighting through seat electronics and HVAC systems.

![Body & Convenience Semiconductor Market](source: IHS Body & Convenience Semiconductor Market Tracker © 2015 IHS)

Key Issues Addressed

- What is the semiconductor spending of ECU suppliers like Bosch, Continental, Denso, Lear, etc?
- What are the growth drivers for semiconductor ICs in body electronics beyond LED lighting?
- How does the semiconductor content vary by vehicle segment (A, B, C, D, E & F)?
- Which body electronics applications will drive semiconductor revenue in emerging markets such as China and India?
- Do integrated chips (SBCs or LIN LED driver ICs) hold potential revenue growth against discrete components?

Applicable To

- Semiconductor Suppliers
- Automotive OEMs
- Automotive tier-1s & tier-2s
- Semiconductor Foundries

Actuals and Forecast

Frequency, Time Period

- Bi-annual update
- 5-year annual forecast + 3-year historical (2012 - 2019)

Semiconductor Measures

- Shipments
- Revenue
- ASPs
- Supplier market shares in revenue
- Spending by ECU supplier

Semiconductor Forecast:

- Vehicle segments
  - A,B,C,D,E, F & HVAN
- ECU Suppliers
  - More than 100 ECU suppliers (Delphi, Bosch, Denso, Continental, Visteon, Valeo …)
- ECU Modules
  - Body control ECU, HVAC ECU, Seat recliner ECU and 28 other ECUs (see next page)
- Regions of car production
  - North America, Europe, Japan, South Korea, China, India and Brazil
- ECU functionality integration level
  - Stand-alone
  - Integrated (e.g. lighting, wiper, seat and HVAC functions integrated in a single ECU)
- Semiconductor category (Detailed features on the next page)
  - Power Management ICs, Driver ICs, Microcomponent ICs, Discrete, Sensors and Integrated ICs (SBCs, LIN LED Driver IC)

Technologies Covered

- Semiconductor used in Body & convenience ECUs
- Sensors used for different types of motors and other body & convenience applications
Lead Analysts

Akhilesh Kona, Analyst, Automotive Semiconductors

Akhilesh Kona covers the area of automotive semiconductor, with focus on Advanced Driver Assistance Systems and Body Electronics. He is responsible for market research on sensors and semiconductor content including various technology trends in the field of automotive electronics.

Before joining IHS, he has worked in the fields of Automotive semiconductor with Freescale semiconductors and also on embedded systems for Industrial automation.

Akhilesh is a Masters graduate in Electrical Engineering from Deggendorf Institute of Technology, Germany.

Luca De Ambroggi, Principal Analyst, Automotive Semiconductor

Luca De Ambroggi is responsible for all aspects of semiconductor research for telematics, infotainment, ADAS and related automotive applications. He also supports sales and marketing as well as strategic business development endeavors in the growing European automotive segment.

Luca joined the company with 16 years of semiconductor industry experience, including product and design management and technical marketing. Having served a broad range of functions throughout his tenure, he possesses deep technical comprehension as well as an ability to address strategic market and business scenarios. He began his career as a design engineer with STMicroelectronics and has held various technical and marketing positions within both STMicroelectronics and Infineon.

Luca graduated from the University of Catania in Electro-Technic Engineering, and he is fluent in Italian, English, and German.

About IHS

IHS (NYSE: IHS) is the leading source of information, insight and analytics in critical areas that shape today’s business landscape. Businesses and governments in more than 165 countries around the globe rely on the comprehensive content, expert independent analysis and flexible delivery methods of IHS to make high-impact decisions and develop strategies with speed and confidence. IHS has been in business since 1959 and became a publicly traded company on the New York Stock Exchange in 2005. Headquartered in Englewood, Colorado, USA, IHS is committed to sustainable, profitable growth and employs 8,000 people in 31 countries around the world.

Unique Product features

• Unique coverage based on IHS vehicle production data by region, vehicle brand, vehicle model, ECU supplier and Body & convenience application.
• 35 different semiconductor categories covered

Table of Contents - Sample

• Body & convenience semiconductor market overview
  ◦ Shipments
  ◦ Revenue
  ◦ Average Selling Price
  ◦ 6-year annual forecast + 2-year historical
• Executive Summary
  ◦ Key findings & implications of semiconductors used body & convenience applications
• Market trends in Body & convenience semiconductor
  ◦ Semiconductor for stand-alone ECUs
  ◦ Semiconductor for multi-function ECUs
  ◦ Semiconductor integration trends
• Semiconductor analysis by key segments
  ◦ ECU Modules
    ◦ Central body ECUs
    ◦ Gateway ECUs
    ◦ Keyless entry ECUs
    ◦ Power systems (sunroof & window) ECUs
    ◦ Seat ergonomics and thermal seat ECUs
    ◦ HVAC ECUs
    ◦ Other ECUs
  ◦ Sensors used for different types of motors
• Semiconductor forecast (includes revenue & shipments by vehicle segment, region of vehicle production, ECU supplier and ECU type):
  ◦ Analog ICs
  ◦ Power management
  ◦ Vehicle networking ASSPs
  ◦ Microcomponent ICs
  ◦ Memory ICs
  ◦ Sensors
  ◦ Analysis of top ECU suppliers
    ◦ Top customers (OEMs)
    ◦ Vehicle segments covered (A,B,C,D,E,F & HVAN)
    ◦ Semiconductor spending

Database (Sample)

• Body & convenience semiconductor market analysis from 2012-2019 with shipment & revenue based on:
  ◦ Region of vehicle production
  ◦ Vehicle segment
  ◦ ECU supplier
  ◦ Different ECU modules
  ◦ Stand-alone & Multi-function systems
  ◦ Body & convenience applications
• Pivot table with shipments & revenue according to the following semiconductor category:
  ◦ Analog ICs
    ◦ Data Converters
    ◦ Voltage Regulator
    ◦ System basis chips (SBC)
    ◦ LED driver (for low-current and high-current applications)
    ◦ Low-side drivers
    ◦ High-side drivers
    ◦ H-Bridge driver
    ◦ Power MOSFET
    ◦ CAN
    ◦ LIN
  ◦ Discrete
    ◦ Power Transistor & Thyristor
    ◦ Power MOSFET
    ◦ Rectifier & Power Diodes
  ◦ Microcomponent IC
    ◦ MCU (Single-core)
    ◦ MCU (Multi-core)
  ◦ Optical Semiconductor
    ◦ LEDs
    ◦ Other sensors
  ◦ Memory IC
    ◦ DRAM
    ◦ Flash
  ◦ Flash

technology.ihs.com
© 2015 IHS