Advances in electronics technology have led to remarkable improvements in higher energy efficiency, reduced emissions of environmental pollutants, and increased safety, comfort and convenience of automobiles. The use of electronic technology in automobiles is expected to increase in the future.

Semiconductors such as Sensors, Microcomputers, Memory, System LSI chips, Analog ICs, Power ICs and Power devices are core technologies of car electronics.

Automotive industry has been undergoing a sea change with respect to the implementation of semiconductors into vehicles. The conventional automobiles consisted of heavy mechanical systems, but the advent of semiconductor technology has powered the future of automotive design. With inclusion of electronic systems/control into the automobiles, the overall performance and efficiency of an automobile is enhanced to great heights.

Semiconductor technology has enabled many automotive systems manufactures to integrate various applications on a single chip by reducing the board area and optimizing performance. Integrated electronics solutions have been one of the key drivers for growth for the automotive industry. A modern car may have up to 100 semiconductor parts and a commercial vehicle up to 40.

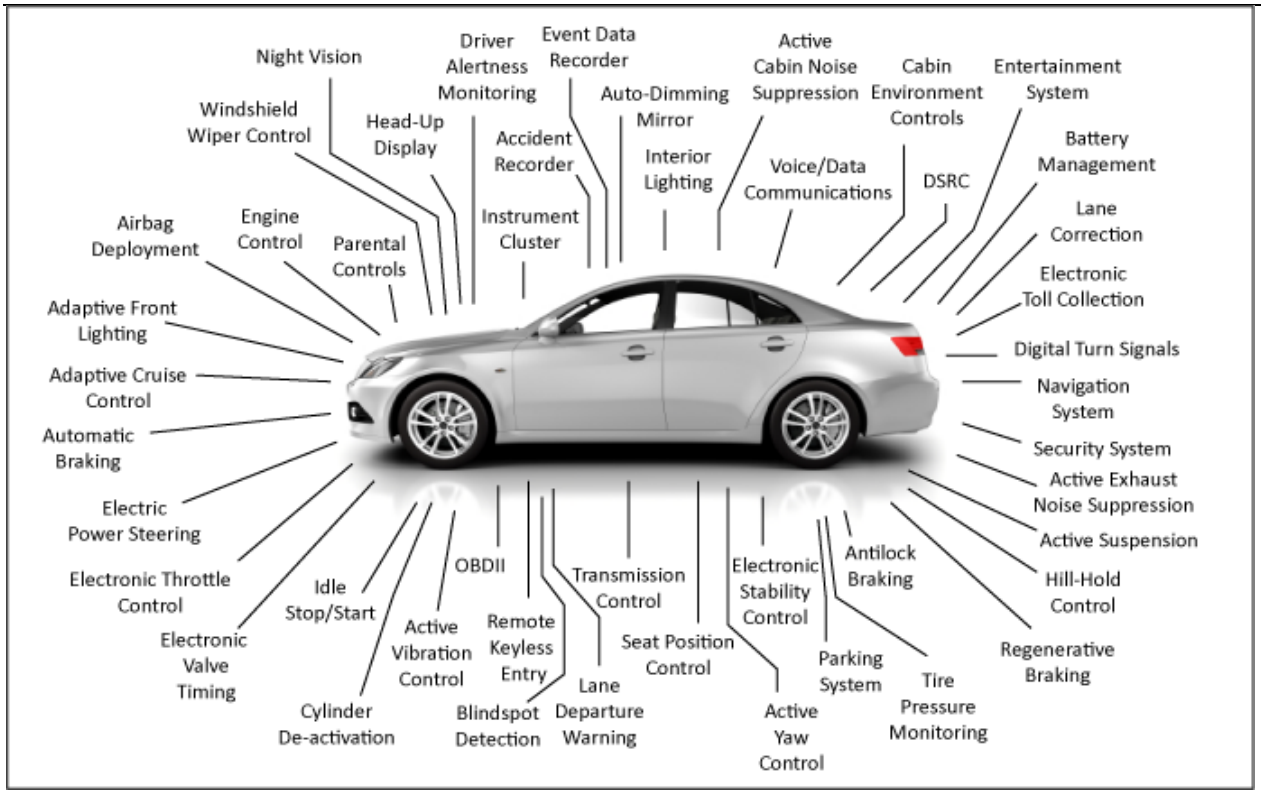
Today the automotive industry is buzzing with the vision of achieving the self-driving car. The seriousness of outsiders like Google, taxi service-provider Uber and probably Apple in contributing to the development of autonomous cars is forcing traditional car makers to deploy self-driving cars faster than planned. Also, BMW in conjunction with Google equivalent Baidu announced to deploy autonomous cars in China. In addition companies like Tesla and Nissan already intend to deploy autonomous cars five to six years from now.

Few of the key reason for increased use of semiconductor content in automobiles are:

- Critical safety systems
- For producing fuel efficient cars
- Lighter automotive designs
- A key factor of differentiation for automotive manufacturers. For example, providing navigational and communications systems
- Demand from consumers for comfort and entertainment features

The main areas of applications in which semiconductors are used in automobiles are:

- Powertrain Control
- Body Electronics
- Safety
- Driver Information Systems
- Automotive Networking



Auto Electronics use a variety of Semiconductor Packages. SPEL has capability for and QFN/SOIC/TSSOP packages that are widely used in Automotive applications.

SPEL Semiconductor has positioned itself well in the Automotive Supply chain. SPEL has its Automotive Customer base in Europe & Japan. The products assembled and tested at SPEL are used in steering control & engine control applications. SPEL is certified for IATF16949:2016 – Automotive Quality Management System standard.