



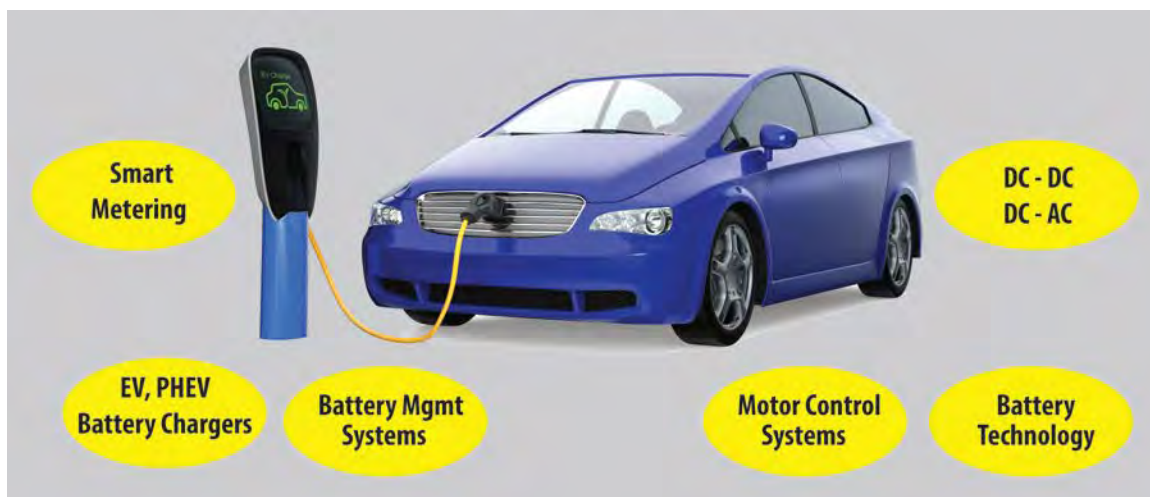
## *LTEC Corporation*

### *Newsletter*

## *APEC 2016 is around the corner...*

**March 2016.** One of the most important events in the power electronics industry, the **IEEE Applied Power Electronics Conference**, to be held during March 20-24, 2016 in Long Beach Ca., takes place at turbulent economic times. As industrialized nations continue implementing baby steps to reduce their carbon footprints, oil prices remain stuck at historically low levels due to persistent price war between oil producers. Given this backdrop, one has to wonder, what will be the impact on green energy, vehicle electrification, wide bandgap semiconductor technology, and our quest to improve energy efficiency? While low fuel prices at the pumps may temper consumer interest in green vehicles, the good news is that power electronics, semiconductor, and automotive industries (just to mention a few) have already made substantial investments into developing environmentally friendly technologies, thus generating their own momentum. Predictably, the march forward will continue and once again APEC 2016 will be a great display of leading-edge concepts, products, designs and technologies. You are invited to visit LTEC Corporation's booth No. 1519 to learn about the latest advancements in automotive electronics, vehicle electrification, SiC and GaN semiconductors, and many other fields.

The two particularly active areas of R&D in automotive electronics are vehicle electrification and Advanced Driver Assistance Systems (ADAS). Researchers at Nissan, Toyota, BMW, Tesla Motors, and others, are actively engaged in studying various aspects of this field. Figure 1 lists some of the key segments under development today.



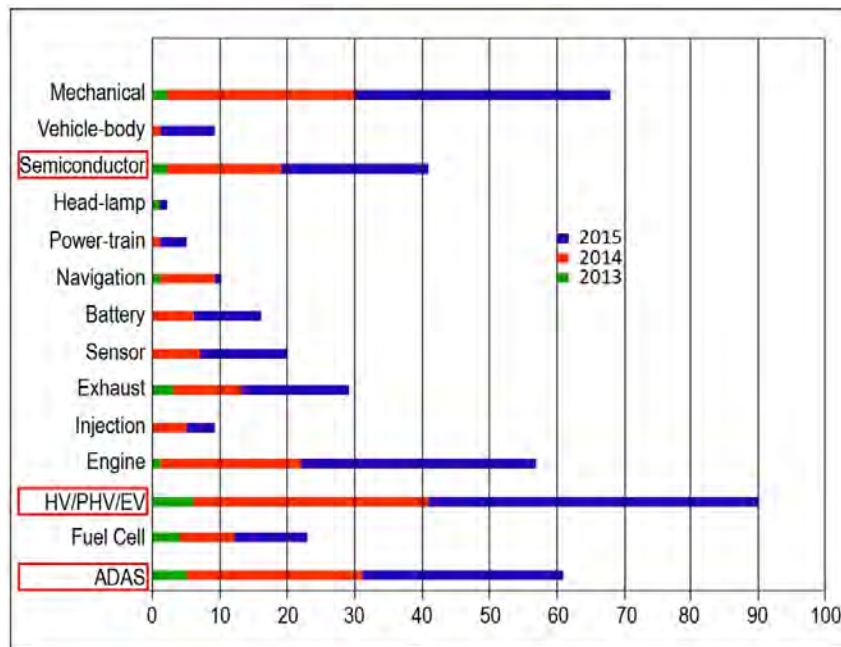
**Figure 1.** Key components of vehicle electrification technology

The race is on to develop and deploy elements of ADAS technology, for now in high-end vehicles. ADAS require advanced sensing, communication, image processing and moving around massive amounts of data for processing. Most of these involve some form of RF application. Figure 2 identifies some of the advanced automotive RF applications.



**Figure 2.** Key elements of advanced automotive RF applications

LTEC Corporation performs reverse engineering (RE) and intellectual property (IP) analysis services in both areas highlighted in Figures 1 and 2. Our analysts see robust activity in the world of patents all across the automotive industry. Year over-year growth of patent-related research projects is a good indicator of growth in related R&D activity. Figure 3 shows the year-over-year growth in the number of major automotive patent search projects performed by LTEC Corporation during the past three years.



**Figure 3.** Year-over-year growth in automotive patent search projects during 2013 – 2015

Within the field of Automotive electronics search activities related to Hybrid vehicles (HV), Plug-in Hybrid Vehicles (PHV), and Electric Vehicles (EV) showed the largest growth, ADAS was second, and semiconductors were third. It is worth noting that most sensors are used ADAS and engine control. This data leads us to conclude that R&D in these three automotive electronics segments remains to be very strong.

Given these high-growth areas, LTEC corporation compiled a number of new technical analysis reports as a response to inquiries received from R&D engineers and patent attorneys engaged with the automotive industry. These reports are helpful in assessing the competitive technology landscape, thus they can contribute to accelerating new product development cycles. We will display many of our latest report brochures at APEC 2016 in Booth No. 1519. If you plan to attend this conference, please visit us; if not, we welcome your inquiry.

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### About LTEC Corporation

LTEC, Japan's dominant intellectual property analysis company, provides in-depth competitive reverse engineering analysis services for the research and development engineering and industrial legal communities in Japan, USA, Korea, and Taiwan. LTEC helps its customers overcome intellectual property (patent) research, analysis, and protection challenges across all sectors of electronics. With Over 100 highly trained engineers and 32-years of an impeccable track record, LTEC stands ready to help retain or gain a competitive edge for its clients worldwide. [www.ltecusa.com](http://www.ltecusa.com)



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You are receiving this email because we think you are interested in vehicle electrification projects

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