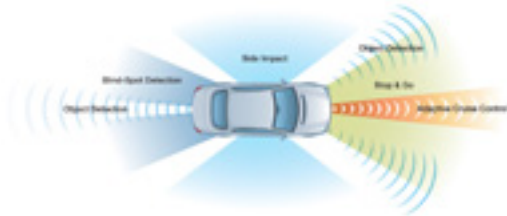


Chipset Enables Vehicles to Sense Potential Crash Situations



Freescal Semiconductor's 77 gigahertz (GHz) silicon germanium (SiGe) integrated chipsets are intended for use in automotive radar systems. These radar solutions provide long- and mid-range functionality, allowing automotive systems to monitor the environment around the vehicle to help prevent crashes. They consist of a transmitter and a multi-channel receiver with an integrated phase-locked loop (PLL). The company's 77 GHz technology allows a device to switch between long- and short-range functionality simply by issuing a serial peripheral interface (SPI) command. This enables the same radar module to be used for multiple safety systems, such as adaptive cruise control, headway alert, collision warning and mitigation. Freescal's radar system is based on multi-channel receivers and transmitters that allow high-level integration and complex signal generation and processing. A typical Freescal RF front-end solution consists of a transmitter chip with an integrated PLL, power amplifier and local oscillator (LO) output and an on-chip ramp generator, along with one or several multi-channel receivers that provide the low-noise down-conversion of the radar signals into the intermediate frequencies (IF) domain. The chips are manufactured in 0.18 μ BiCMOS technology, which allows the combination of high-speed bipolar devices with the high integration level of CMOS.

Freescal Semiconductor

512-895-7675, www.freescal.com [1]

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