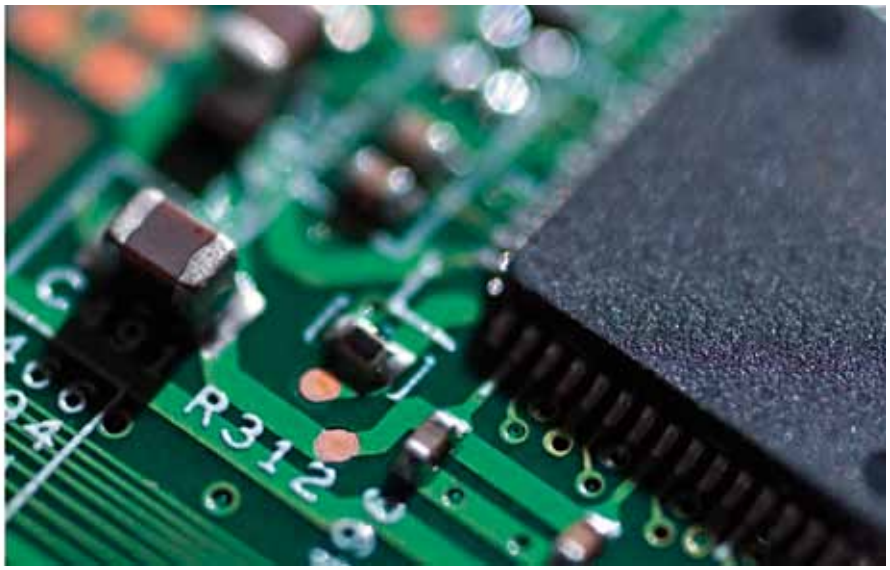

Innovation for the future

alpitronic stands for a highly qualified team of young engineers, specialized in the development of complex electronic systems in hardware and software.
alpitronic's focus is centered upon power electronics and safety-critical systems.
alpitronic's commitment and flexibility in the development of innovative systems guarantee high quality solutions and short development times, which are achieved through a consistent, process-oriented approach. Model and simulation based development methods are fundamental to alpitronic's ability of innovation.

Common Goals

alpitronic is eager to face the complex challenge of developing innovative concepts together with their customers, from the first idea to the timely implementation – with competence and consistency.
alpitronic's design experts offer support for conceptual design and dimensioning of complex power electronic systems, design of microprocessor architectures of safety-related applications (ASIL / IEC 61508), circuit simulation, power loss and tolerance calculations, thermal and cooling system design, as well as optimization of costs and power losses on existing circuits.
In the field of system engineering, especially for automotive power electronics, alpitronic develops and tests inverters for traction and range extender applications, including special solutions like high switching frequency inverters with alpitronic's ARCP technology. alpitronic's motor test bench provides the facilities to do inverter and e-machine testing, including high precision power loss determination of components and the whole system.

alpitronic provides also development and manufacturing support: schematic and layout design, production and commissioning of prototypes, handling of the certification process, handling of small series production.

Pioneering Technology

alpitronic's new resonant switching ARCP technology for half-bridges allows high frequency switching of 50kHz and more at currents of several hundred amperes. The technology was first realized in a 100 kW inverter prototype (400V DC link voltage and phase current 250Aeff).
A 550Aeff device is currently in development. Switching frequencies of 50 kHz and more enable new applications like high-revving, or high pole count, compact motors. The technology provides weight and volume reduction of currently available inverters by 30% through reduced cooling demand and small EMC filter.