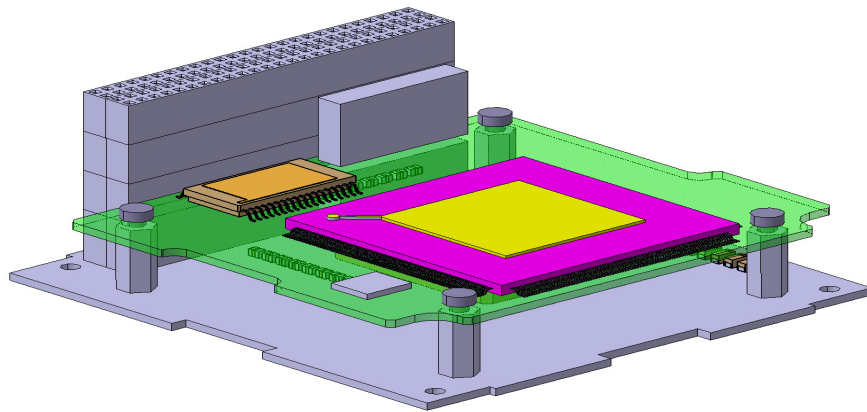
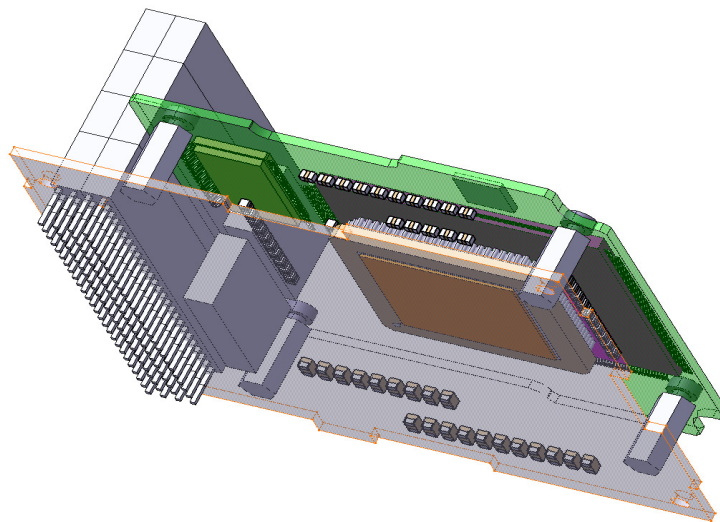


Random Number Generator using Single Event Upsets (EADS Astrium)

The objective of the EADS Astrium Payload is to demonstrate the feasibility of a patent held by EADS Astrium on using the radiation environment for true random number generation. True Random Number generation is an essential component of secure communications systems required by many satellites. A secondary objective of the mission is to fly a technology demonstrator to determine the Single Event Upset (SEU) effects on a Xilinx Field Programmable Gate Array (FPGA) device. These devices are SRAM based therefore potentially allowing in orbit reconfiguration. The ability to use these FPGA's will enable further leaps in, in-orbit functionality and data rates.



x z



x z