

Radiation Test of 8 Bit Microcontrollers ATmega128 & AT90CAN128

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We have performed heavy ion radiation tests of the 8-bit ATmega128 and AT90CAN128 microcontrollers by ATMEL. These COTS devices are interesting for mission-uncritical application in Low Earth Orbit, e.g. aboard the ISS. The ATMEGA architecture provides on-chip Flash, SRAM, ADCs, UARTs, CAN-bus and other peripherals. It is attractive to the user due to widely-spread charge-free and easy to use development software, packages which are easy to assemble, and a wide community of commercial users. Results of the radiation tests and recommendations on on-orbit use are presented.