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Radiation tolerant wireless IoT system for Radiation Monitoring

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The BatMON is a wireless, battery-powered radiation monitoring system for particle accelerators. The system is based on radiation qualified COTS that allow the device to survive in radiation areas. The system can measure TID and High-Energy Hadron and Thermal Neutron fluences, thanks to the Floating-Gate dosimeter and SRAMs embedded on the sensor mezzanine.

Data are saved in a non-volatile memory and are transmitted using LoRaWAN, which enables long communication range without excessive infrastructure costs. The entire system is modular, allowing the reuse of the microcontroller-based platform, also known as “minIOT platform”, for other radiation tolerant applications.

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