

Components for the Control System of a Future Pixel Detector

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Upgrades of the LHC and the ATLAS experiment will include a new pixel detector. To operate a future pixel detector a completely new detector control system (DCS) is needed, that is embedded in the pixel electronic systems. Next to high reliability the requirements for the detector control system are low mass, less usage of material and cable and radiation hardness to always guarantee a safe operation of the experiment. To meet these requirements we propose a DCS network which consists of a DCS chip and a DCS controller. With a special focus on the communication interface, radiation hardness and robustness against single event upsets, we present the development of the first prototypes and the plans for testing.

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