

Experience with the MTCA.4 LLRF System at FLASH

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The Free Electron Laser in Hamburg (FLASH) provides ultra-short laser pulses down to a wavelength of 4.2 nm. Precision regulation of the RF fields is done by a fast digital LLRF system which has been recently upgraded to the MTCA.4 based platform. Installations inside the acceleration tunnel require a stable and reliable system due to a radiated environment and limited access. Installation routines and platform related issues have been investigated to gain experience for the next larger scale installation at the European XFEL. For the first time it has been shown that the MTCA.4 based LLRF system is capable to run at a user facility for permanent operation with outstanding performance.

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