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# Overview and experience related to MicroTCA applications at the European XFEL Experiments

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Since start of user operation two years ago, the European X-Ray Free Electron Laser facility (European XFEL) is relying on the MicroTCA platform for timing distribution, data processing from large 2D detectors, fast digitization and processing of pulse signals as well as low latency communication protocol for VETO and Machine Protection System. To cope with the experiments that use the generated ultra short coherent X-Ray flashes, spaced by 220 ns and with a duration of less than 100 femtoseconds, almost 40 individual MicroTCA systems are used at the photon beam lines and experiments, all fully integrated in our control and DAQ systems and monitoring solution to immediately identify problems if they occur.

Our experience with the platform grows in parallel with user requests for more particular and challenging case studies and tailor made hardware algorithms. This requires integration of new hardware and, at the same time, taking advantage of MicroTCA features that where not in use before.

In this presentation, we will provide an overview of the MicroTCA platform in our environment, results and experience from last years experiments, as well as an outlook to future developments.

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