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Modular scalable control electronic system

Modern trapped-ion experiments frequently utilize hundred(s) of trap electrodes and ten(s) of laser beams which have to be operated in a precise and synchronous manner. Akkodis is developing the required control electronic system. Within the IQUAN project [1] we design a modular, scalable electronic system consisting of precision pulse generators and real-time control logic. Within the ATIQ project [2] we extend the software to operate within a heterogeneous systems and provide diagnostic services for the overall system. We present the design and performance of the new RF- and DC-AWG pulse generators and describe the interfaces for heterogeneous systems and diagnostic services. Further information can be found under the Akkodis quantum computing website [3].

[1] https://iquan.physik.uni-mainz.de/
[2] https://www.quantentechnologien.de/forschung/foerderung/quantencomputer-demonstrationsaufbauten/atiq.html
[3] https://www.akka-technologies.com/quantum-computing/

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