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Precise central unit of the DAQ system for the n2EDM experiment at PSI

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An upgraded version of the neutron EDM experiment at the Paul Scherrer Institute is in preparation. All systems used in the present experiment version will be designed anew. The data acquisition system must be changed because of higher complexity and assumed better general quality of the whole system. The central part of the DAQ system performs three main tasks: (1) precise timing of the scheduled measurement steps, (2) generation of oscillating pulses which rotate spins of neutrons and co-magnetometer atoms, (3) precise recording of the co-magnetometer signal.
Test system based on the PXI platform was collected, programmed and tested. Details of that system and results of performed tests will be presented, together with conclusions regarding the use of such system for high-precision measurements.

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