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## An IQ-based low-level RF prototype for ALBA

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An analog Low-level RF prototype based on IQ demodulation has been designed and developed at CELLS which should regulate the amplitude of the cavity voltage with a stability of 1% and the phase with a stability of 1°. The LLRF is controlled and monitored by an industrial PC with cPCI data acquisition cards for the I/O signals. A series of tests have already been done to evaluate the performance of the open-loop system and the individual parts including the IQ mod/dem, the differential amplifiers and the electronic phase-shifter. To test the closed-loop system, a pill-box mock-up cavity has been designed and built at CELLS which later will be driven and controlled by the LLRF. A general overview of the design and some test results will be presented.

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