

ALBA DLLRF using commercial uTCA platform

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The Digital LLRF of ALBA has been implemented using commercial cPCI boards with Virtex-4 FPGA, fast ADCs and fast DACs. The firmware of the FPGA is based on IQ demodulation technique and the main feed-back loops adjust the phase and amplitude of the cavity voltage and also the resonance frequency of the cavity. But the evolution of the market is moving towards uTCA technology and due to the interest of this technology by several labs, we have developed at ALBA a DLLRF using a HW platform based on uTCA commercial boards and Virtex-6 FPGA. Also, a new approach based on commercial AMC boards modified to be used as standalone products has been studied. Stand-alone boards can be a good solution for low budget projects where no interconnections between different modules are needed. This presentation will cover these development and the main differences between them.

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