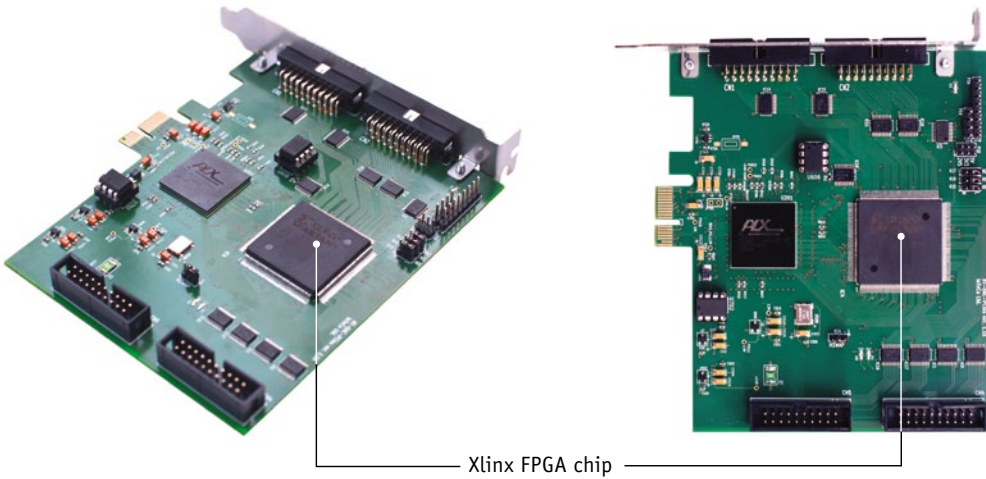


Digital RT-DAC PCI Express Board

Similar in operation to the RT-DAC board but for the PCI Express bus



PCI Express includes the freely reconfigurable FPGA chip of a flexible functionality. Board functions implemented in the hardware can be adjusted to the specific requirements of the target application. Moreover, the board hardware configuration can be changed repeatedly in a programming way.

A unique feature of the board is the ability to configure the FPGA for direct hardware implementation of certain portions of control algorithms, which typically are implemented by a software way. Reliability, speed and high accuracy of the durations of time intervals – a perfect jitter - are provided. The period of the most rapid samples can be several tens nanoseconds!

The architecture of measuring and control boards uses the PCI Express bridges. They are connected from one side to the PCI Express bus on the other side offer a local bus. The last one is connected to the reconfigurable FPGA devoted to input / output functions of the board.

The digital board has signal conditioning modules in the form of the card with galvanic isolation circuits to be imposed on the board. Dedicated board configurations often contain common combinations of channels input / output: digital inputs and outputs with an optional interrupt generation “change of state interrupt”, incremental quadrature encoders with the index, PWM wave generators, counters, frequency-meters and chronometers.