13TF125 IEEE1588 V2 Clock Distribution in FlexRIO Devices: Clock Drift Measurement

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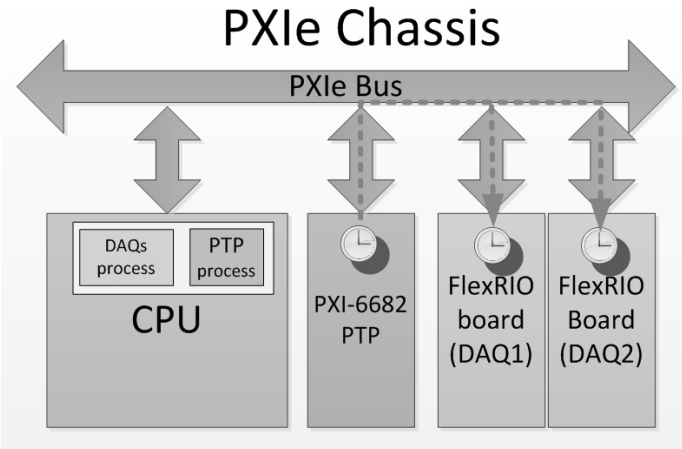
At every time, all FlexRIO cards are adjusting its internal clocks trying to put in phase with the PXI-6682 timing card, by a hardware mechanisim. This method makes easy to obtain static measurement errors in the drift. Avoiding the use of software elements makes the system an accurate solution to distribute the IEEE1588 Clock to every DAQ in the system. The maximum absolute value of drift obtained between PTP timing card and every RIO/FlexRIO devices is less than 200 ns. The value for the sampling rate can be up to 2.5MS/s without Time-Stamp overlaping.



Synchronized DAQ system prototype architecture.

13TF154 Double Squirrel Cage Induction Motors: a New Approach to Detect Rotor Bar Failures

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The purpose of this paper is to present a diagnosis technique, for rotor broken bar in double cage induction motor, based on a combined use of frequency sliding and wavelet transform analysis, to isolate the contribution of the rotor fault components issued from vibration signals in a single frequency band. The validity of the proposed diagnosis approach is not limited to the analysis under steady-state operating conditions, but also for time-varying conditions where rotor fault components are spread in a wide frequency range.