Frequency Measurements

The iNet-200 PCI controller counter/timer channels support frequency measurement with a 64 bit counter (one 64bit counter for each of 10 channels) that counts a .25us or 1ms timebase during a gate time, and returns the frequency. It is more accurate than traditional frequency measuring devices since the gate time is rounded up the the nearest integer number of incoming pulses. For example, if you set the gate to 0.1sec and measure 101Hz with a traditional freq counter, it will tell you 10 cycles occured in that 0.1 sec time, not 10.1, and error by 1%. With instruNet, in this case, it would resolve the period of 10 cycles (e.g. in the 99ms duration) accurate to 0.25us and then divide by the number of cycles, and give you the frequency accurate to 0.00025%.