1. An ADC conversion process can be initiated by any of the following: a program running on the processor, an external signal on a programmer-specified GPIO pin, or periodically by a general purpose timer. The ADC Sample Sequence Control registers are set to determine how many consecutive samples should be taken for each conversion on the ADC module. After each set of samples is taken, an interrupt occurs to signal the conversion is finished.
2. It is important to connect bypass capacitors across power pins in analog IC components to act as a low-pass filter on the voltage lines so that the reference voltages don’t fluctuate rapidly, skewing analog samples and circuitry.