

5 Analog signals.

In this chapter we will be reading analog signals and converting them to digital. A digital signal consists of zeros and ones, where a zero is represented by 0 volt and a one is represented by +5 volt, or +3.3 volt for some microcontrollers. So digital signals can only have two values. Analog signals can have any value between 0 and +5 volt, for example 3.87 volt. Peripheral devices such as light dependent resistors and negative temperature resistors are analog.

An analog signal can have any value between 0 and +V volt.

The analog converters in the 18F4455 can convert an analog signal to a digital value in 10 bit accuracy. The converter is connected to various pins on port A, B and E via the databus. In this course we use a default configuration settings that switches the pins on port B to digital. We will normally only use port A and E.

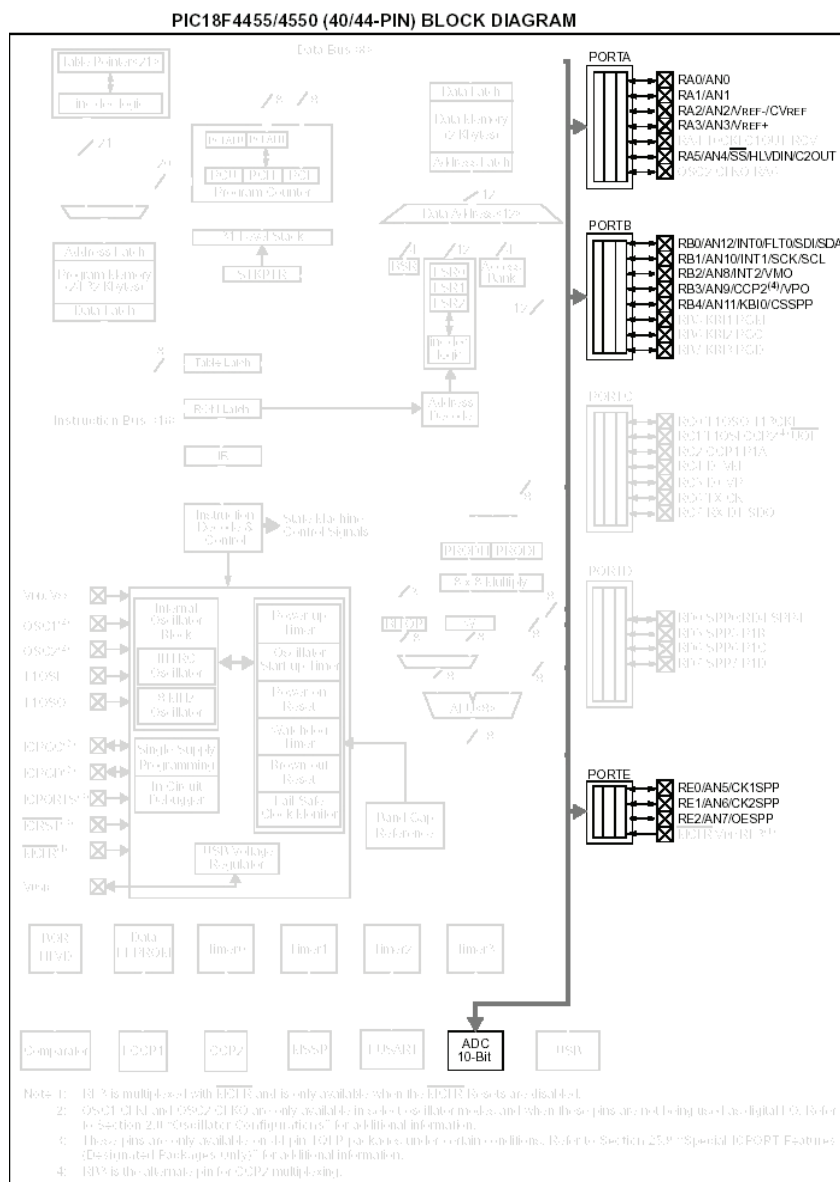


Figure 150. The analog converter.