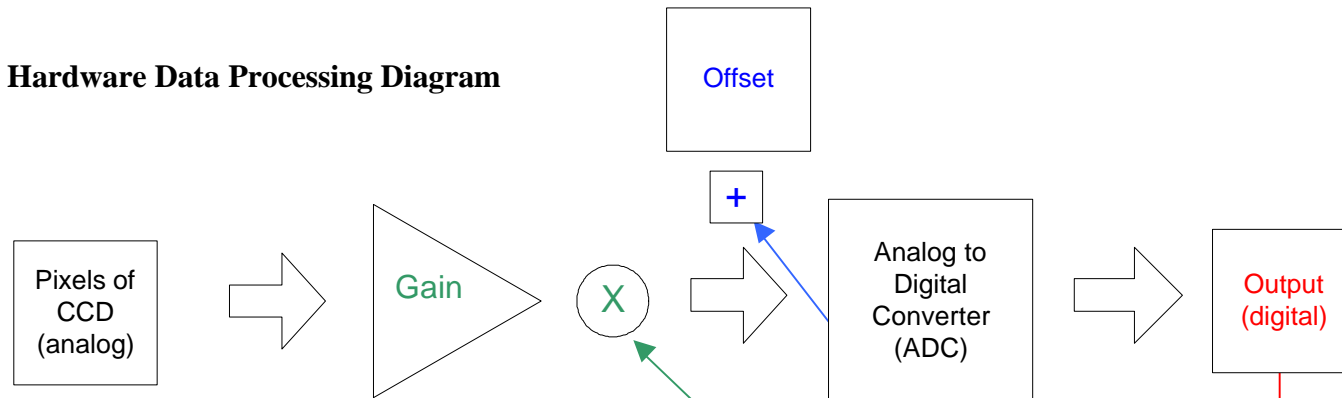


## QImaging Digital Camera Data Processing

The camera image data goes through the following steps from the analog input of the pixels on the CCD to the digital output. In hardware, analog image data from the pixels of the CCD are multiplied by a software specified gain and then added to a software specified offset. This analog data is then converted to digital bits through an analog to digital converter (ADC). Digital image data is displayed on the screen.

### Camera Hardware Data Processing Diagram



### Camera Digital Output

The histogram shown in QCapture is a histogram of the digital data outputted from the analog to digital converter (ADC)

### Gain and Offset

In Camera Settings of QCapture, the Gain and Offset controls directly change the gain and offset applied in hardware to image data.

### Default Settings

The Default Settings configure the gain and offset settings to optimally use the camera. It is recommended to use the Default Settings unless absolutely not possible.

