



Calibrating Analog to Digital Conversion

— Analog Input Range of a pixel (from CCD)
— Digital Output Range of a pixel (out of ADC)

Analog Input of a pixel from CCD

Analog White - Full Charge



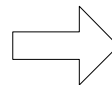
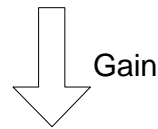
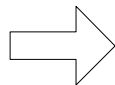
Analog Black - No Charge (0e)

Digital Output of a pixel without Gain and without Offset

Digital White - 4095



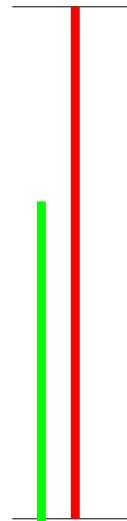
Digital Black - 0



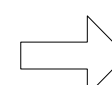
Gain Applied (analog input multiplied by a factor)

Digital Output of a pixel with Gain but without Offset

Digital White - 4095



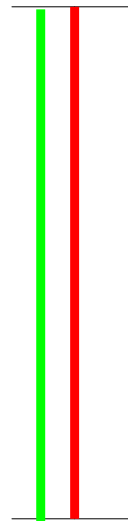
Digital Black - 0



Offset Applied (analog input added to a factor)

Digital Output of a pixel with Default Gain and Offset

Digital White - 4095



Digital Black - 0

The Default gain and offset settings are calibrated to map the full analog input range from the CCD to the full digital output range of the camera