```
1  /*! \class ADC
2  Interaction with the beaglebone analogue pins
3  */
4
5  #pragma once
6
7  #include "BBB.h"
8  #include "ADCReadException.h"
9
10 #define ADC0_PATH "/sys/bus/iio/devices/iio:device0/in_voltage0_raw" /*!< path to analogue pin 0*/
11 #define ADC1_PATH "/sys/bus/iio/devices/iio:device0/in_voltage1_raw" /*!< path to analogue pin 1*/
12 #define ADC2_PATH "/sys/bus/iio/devices/iio:device0/in_voltage2_raw" /*!< path to analogue pin 2*/
13 #define ADC3_PATH "/sys/bus/iio/devices/iio:device0/in_voltage3_raw" /*!< path to analogue pin 3*/
14 #define ADC4_PATH "/sys/bus/iio/devices/iio:device0/in_voltage4_raw" /*!< path to analogue pin 4*/
15 #define ADC5_PATH "/sys/bus/iio/devices/iio:device0/in_voltage5_raw" /*!< path to analogue pin 5*/
16 #define ADC6_PATH "/sys/bus/iio/devices/iio:device0/in_voltage6_raw" /*!< path to analogue pin 6*/
17 #define ADC7_PATH "/sys/bus/iio/devices/iio:device0/in_voltage7_raw" /*!< path to analogue pin 7*/
18
19 namespace Hardware
20 {
21     class ADC :
22         public BBB
23     {
24     public:
25         /*! Enumerator to indicate the analogue pin*/
26         enum ADCPin
27         {
28             ADC0, /*!< AIN0 pin*/
29             ADC1, /*!< AIN1 pin*/
30             ADC2, /*!< AIN2 pin*/
31             ADC3, /*!< AIN3 pin*/
32             ADC4, /*!< AIN4 pin*/
33             ADC5, /*!< AIN5 pin*/
34             ADC6, /*!< AIN6 pin*/
35             ADC7 /*!< AIN7 pin*/
36         };
37
38         ADCPin Pin; /*!< current pin*/
39
40         ADC(ADCPin pin);
41         ~ADC();
```

```
42
43          int GetCurrentValue();
44          float GetIntensity() { return Intensity; }
45          int GetMinIntensity() { return MinIntensity; }
46          int GetMaxIntensity() { return MaxIntensity; }
47
48          void SetMinIntensity();
49          void SetMaxIntensity();
50
51          int WaitForValueChange();
52          int WaitForValueChange(CallbackType callback);
53          void WaitForValueChangeCancel() { this->threadRunning = false; }
54
55      private:
56          string adcpath;     /*!< Path to analogue write file*/
57          float Intensity;    /*!< Current intensity expressed as percentage*/
58          int MinIntensity;   /*!< Voltage level which represent 0 percentage*/
59          int MaxIntensity;   /*!< Voltage level which represent 100 percentage*/
60
61          friend void *threadedPollADC(void *value); /*!< friend polling function*/
62
63      };
64
65      void *threadedPollADC(void *value);
66  }
67
```