

```
1  /*! \class BBB
2  The core BeagleBone Black class used for all hardware related classes. Consisting of universal used method, functions and variables.
   File operations, polling and threading
3  */
4
5  #pragma once
6
7  #define SLOTS "/sys/devices/bone_capemgr.9/slots" /*!< Beaglebone capemanager slots file*/
8
9  #include <fstream>
10 #include <sstream>
11 #include <string>
12 #include <sys/stat.h>
13 #include <pthread.h>
14 #include <unistd.h>
15 #include <sys/epoll.h>
16 #include <fcntl.h>
17 #include <regex>
18 #include <stdexcept>
19
20 #include "GPIOReadException.h"
21 #include "FailedToCreateGIOPollingThreadException.h"
22 #include "ValueOutOfBoundsException.h"
23
24 using namespace std;
25
26 namespace Hardware
27 {
28     typedef int(*CallbackType)(int); /*!< CallbackType used to pass a function to a thread*/
29
30     class BBB
31     {
32     public:
33         int debounceTime; /*!< debounce time for a button in milliseconds*/
34
35         BBB();
36         ~BBB();
37
38     protected:
39         bool threadRunning; /*!< used to stop the thread*/
40         pthread_t thread; /*!< The thread*/
```

```
41     CallbackType callbackFunction; /*!< the callbakcfuction*/
42
43     bool DirectoryExist(const string &path);
44     bool CapeLoaded(const string &shield);
45
46     string Read(const string &path);
47     void Write(const string &path, const string &value);
48
49     /*! Converts a number to a string
50     \param Number as typename
51     \returns the number as a string
52     */
53     template <typename T>    string NumberToString(T Number)
54     {
55         ostringstream ss;
56         ss << Number;
57         return ss.str();
58     };
59
60     /*! Converts a string to a number
61     \param Text the string that needs to be converted
62     \return the number as typename
63     */
64     template <typename T>    T StringToNumber(string Text)
65     {
66         stringstream ss(Text);
67         T result;
68         return ss >> result ? result : 0;
69     };
70 };
71 }
```