

```

1  #ifndef __IOEXPANDER_H__
2  #define __IOEXPANDER_H__
3  #include "stm32f3xx.h"
4  #include "spi.h"
5
6  #ifdef __cplusplus
7  extern "C" {
8  #endif /* __cplusplus */
9
10 /*Defines for IO extender*/
11 #define OPWRITE 0x40
12 #define OPREAD 0x41
13 #define IODIRA 0x00
14 #define IODIRB 0x01
15 #define IPOLA 0x02
16 #define IPOLB 0x03
17 #define GPINTENA 0x04
18 #define GPINTENB 0x05
19 #define DEFVALA 0x06
20 #define DEFVALB 0x07
21 #define INTCONA 0x08
22 #define INTCONB 0x09
23 #define IOCONA 0x0A
24 #define IOCONB 0x0B
25 #define GPPUA 0x0C
26 #define GPPUB 0x0D
27 #define INTFA 0x0E
28 #define INTFB 0x0F
29 #define INTCAPA 0x10
30 #define INTCAPB 0x11
31 #define GPIOAEXT 0x12
32 #define GPIOBEXT 0x13
33 #define OLATA 0x14
34 #define OLATB 0x15
35
36 typedef void (*mcpCallback)();
37 typedef enum {PORTA = 0, PORTB = 1} port;
38 typedef enum {OUTPUT = 0, INPUT = 1, INPUT_PULLUP = 2} mode;
39
40 extern void writeReg(uint8_t reg, uint8_t val);
41 extern uint8_t readReg(uint8_t reg);
42 extern void setBitInReg(uint8_t reg, uint8_t bit);
43 extern void clearBitInReg(uint8_t reg, uint8_t bit);
44 extern void pinMode(port p, uint8_t pin, mode type);
45 extern void digitalWrite(port p, uint8_t pin, uint8_t state);
46 extern uint8_t readBits(port p);
47
48 #ifdef __cplusplus
49 }
50 #endif /* __cplusplus */
51
52
53 #endif
54

```