

```
1  /*****
2  * Name:      GPIO.c
3  * Description: STM32 GPIO initialization and functions
4  * Version: V1.00
5  * Author: Ammar Alvi & Shannon D'Souza
6  *
7  * This software is supplied "AS IS" without warranties of any kind.
8  *
9  *****/
10 #include "stm32f10x.h"
11 #include "GPIO.h"
12
13 /*
14 * Name:      void GPIO_config()
15 * Paramaters: none
16 * Description: This function will configure the outputs of
17                the GPIO pins A8, A9, A10, A11, B4, B8, B10, B13, C8
18 *
19 */
20
21 void GPIO_config(void)
22 {
23
24
25
26     //Set the config and mode bits for Port B, pin 10 so they will
27     // be AFIO outputs (up to 50 MHz)
28     GPIOB->CRH |= GPIO_CRH_MODE10 | GPIO_CRH_CNF10_1;
29     GPIOB->CRH &= ~GPIO_CRH_CNF10_0;
30
31     //Ultrasonic Trigger Outputs Pushpull configuration (up to 50 MHz)
32     GPIOC->CRH |= GPIO_CRH_MODE8;
33     GPIOC->CRH &= ~GPIO_CRH_CNF8;
34     GPIOB->CRH |= GPIO_CRH_MODE13;
35     GPIOB->CRH &= ~GPIO_CRH_CNF13;
36     GPIOB->CRL |= GPIO_CRL_MODE4;
37     GPIOB->CRL &= ~GPIO_CRL_MODE4;
38     //Configuring the A8 to A11 as AFIO outputs for TIM1
39     GPIOA->CRH |= GPIO_CRH_MODE8 | GPIO_CRH_CNF8_1 | GPIO_CRH_MODE9 | GPIO_CRH_CNF9_1 | GPIO_CRH_MODE10 |
GPIO_CRH_CNF10_1 | GPIO_CRH_MODE11 | GPIO_CRH_CNF11_1;
40     GPIOA->CRH &= ~GPIO_CRH_CNF8_0 & ~GPIO_CRH_CNF9_0 & ~GPIO_CRH_CNF10_0 & ~GPIO_CRH_CNF11_0;
41
42
43 }
44
45
46
47
48
49
50
```