

```
1  #include "interrupt.h"
2
3  struct keys key[4] = {0};
4
5  void HAL_TIM_PeriodElapsedCallback(TIM_HandleTypeDef *htim)
6  {
7      if(htim->Instance == TIM6)
8      {
9          key[0].value = HAL_GPIO_ReadPin(GPIOB, GPIO_PIN_0);
10         key[1].value = HAL_GPIO_ReadPin(GPIOB, GPIO_PIN_1);
11         key[2].value = HAL_GPIO_ReadPin(GPIOB, GPIO_PIN_2);
12         key[3].value = HAL_GPIO_ReadPin(GPIOA, GPIO_PIN_0);
13
14         for(int i=0; i<4; i++)
15         {
16             switch(key[i].state)
17             {
18                 case 0:
19                     if(key[i].value == 0) key[i].state = 1;
20                     break;
21                 case 1:
22                     if(key[i].value == 0) key[i].state = 2;
23                     else key[i].state = 0;
24                     break;
25                 case 2:
26                     if(key[i].value == 1) //松开
27                     {
28                         key[i].short_flag = 1;
29                         key[i].state = 0;
30                     }
31                     break;
32             }
33         }
34     }
35 }
36
37 }
```