

```
1  #include "ADC1.h"
2
3  void ADCinit()
4  {
5      RCC->APB2ENR |= RCC_APB2ENR_AFIOEN | RCC_APB2ENR_ADC1EN
6          | RCC_APB2ENR_IOPAEN ;
7
8      GPIOA->CRL &= ~GPIO_CRL_CNF2_0 & ~GPIO_CRL_CNF1_0;
9
10     ADC1->CR2 = 0x00000001;
11 }
12
13 uint32_t ADCread(int channel)
14 {
15     //If zero then selects LM35 on PA1 the temperature
16     if (channel == 0)
17     {
18         ADC1->SQR3 = 0x00000001;
19         ADC1->CR2 = 0x00000001;
20
21         while ((ADC1->SR & ADC_SR_EOC) != 0x00000002)
22         {
23             if ((ADC1->SR & ADC_SR_EOC) == 0x00000002)
24             {
25                 return ADC1->DR;
26             }
27         }
28     }
29
30     //If 1 Then select 10Kpot on PA2
31     else if (channel == 1)
32     {
33         ADC1->SQR3 = 0x00000002;
34         ADC1->CR2 = 0x00000001;
35
36         while ((ADC1->SR & ADC_SR_EOC) != 0x00000002)
37         {
38             if ((ADC1->SR & ADC_SR_EOC) == 0x00000002)
39             {
40                 return ADC1->DR;
41             }
42         }
43     }
44 }
45
46
```