C51 COMPILER V7.04 ADCSINGL 09/30/2003 10:54:52 PAGE 1

C51 COMPILER V7.04, COMPILATION OF MODULE ADCSINGL

OBJECT MODULE PLACED IN ADCSINGL.OBJ

COMPILER INVOKED BY: C:\Keil\C51\BIN\C51.EXE ADCSINGL.C BROWSE DEBUG OBJECTEXTEND

stmt level source

1 /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2

3 Author : ADI - Apps www.analog.com/MicroConverter

4

5 Date : October 2003

6

7 File : ADCsingl.c

8

9 Hardware : ADuC842

10

11 Description : Performs repeated single ADC conversions and moves

12 results to UART. Sets the red LED on the eval

13 board upon completion of each conversion.

14 All rate calculations assume an 2.097152MHz Mclk.

15

16 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

17

18 #include<stdio.h>

19 #include<aduc842.h>

20

21 sbit LED = 0x0B4; //P3.4 drives red LED on eval board

22

23 void adc\_int() interrupt 6{

24 1 printf("\n%02BX%02BX\n",ADCDATAH,ADCDATAL);

25 1 return;

26 1 }

27 void DELAY(int); // Function prototype

28 void main(void)

29 {

30 1 int CHAN=0;

31 1

32 1 /\* Set up UART \*/

33 1 T3CON = 0x083;

34 1 T3FD = 0x02D;

35 1 SCON = 0x052;

36 1

37 1 /\* PRECONFIGURE...\*/

38 1

39 1 ADCCON1 = 0x0AC; // power up ADC

40 1 ADCCON2 = CHAN; // select channel to convert

41 1 EA = 1; // enable interrupts

42 1 EADC = 1; // enable ADC interrupt

43 1

44 1 /\* PERFORM REPEATED SINGLE CONVERSIONS...\*/

45 1

46 1 for(;;)

47 1 {

48 2 DELAY(17000);

49 2 LED ^= 1; // Complement LED

50 2 SCONV = 1; // Perform single conversion

51 2 while (ADCI == 0)

52 2 {

53 3 } // wait for interupt

54 2 }

55 1

C51 COMPILER V7.04 ADCSINGL 09/30/2003 10:54:52 PAGE 2

56 1 }

57

58 void DELAY(int length)

59 {

60 1 while (length >=0)

61 1 length--;

62 1 }

63

64

MODULE INFORMATION: STATIC OVERLAYABLE

CODE SIZE = 125 ----

CONSTANT SIZE = 13 ----

XDATA SIZE = ---- ----

PDATA SIZE = ---- ----

DATA SIZE = ---- ----

IDATA SIZE = ---- ----

BIT SIZE = ---- ----

END OF MODULE INFORMATION.

C51 COMPILATION COMPLETE. 0 WARNING(S), 0 ERROR(S)