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C51 COMPILER V7.04, COMPILATION OF MODULE TICRTC

OBJECT MODULE PLACED IN ticrtc.OBJ

COMPILER INVOKED BY: C:\Keil\C51\BIN\C51.EXE ticrtc.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 : TIC.c

8 //

9 // Hardware : ADuC841

10 //

11 // Description : Demonstrates the use of the Time Interval Counter as

12 // a 24 hour Real Time Clock. The program asks the user to provide

13 // the current time and prints out the time every 10 seconds

14 //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

15

16 #include <stdio.h>

17 #include <ADuC841.h>

18

19 sbit LED = 0x0B4;

20

21 void DELAY(int);

22 void TIC\_int () interrupt 10

23 {

24 1 LED ^= 1;

25 1 TIMECON = 0x53; // clear TII bit

26 1

27 1 }

28

29 void main (void)

30 {

31 1 int temp\_hour,temp\_min,temp\_sec;

32 1 char answer;

33 1

34 1 PLLCON = 0x06;

35 1 //Configure the baud rate 9600

36 1 T3CON = 0x80;

37 1 T3FD = 0x08;

38 1 SCON = 0x52;

39 1

40 1

41 1 printf("\nThe time is now %02BD:%02BD:%02BD\n",HOUR,MIN,SEC);

42 1 printf("Do you wish to change the time? Y/N\n");

43 1 scanf("%c",&answer);

44 1

45 1 if (answer=='Y')

46 1 {

47 2 printf("\nEnter the current time in Hours:Mins:Seconds, then press a key to continue\n");

48 2 scanf("%d:%d:%d",&temp\_hour,&temp\_min,&temp\_sec);

49 2

50 2 TIMECON = 0x01;

51 2 SEC = temp\_sec;

52 2 MIN = temp\_min;

53 2 HOUR = temp\_hour;

54 2 }

55 1 //Configure Time Interval Counter

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56 1 INTVAL = 0x0A; // 10 seconds

57 1 TIMECON = 0x53; // configure the Time Interval Counter to count seconds in clock mode

58 1

59 1 //Configure External Interrupt

60 1 IEIP2 = 0xA4; // enable TIC interrupt

61 1 EA = 1; // enable interrupts

62 1

63 1 while (1)

64 1 {

65 2 printf("\nThe time is now %02BD:%02BD:%02BD\n",HOUR,MIN,SEC);

66 2 DELAY(1700); // wait for tx to complete

67 2 PCON = 0x22; // power down mode

68 2 }

69 1 }

70

71 void DELAY(int length)

72 {

73 1 while (length >=0)

74 1 length--;

75 1 }

MODULE INFORMATION: STATIC OVERLAYABLE

CODE SIZE = 190 ----

CONSTANT SIZE = 162 ----

XDATA SIZE = ---- ----

PDATA SIZE = ---- ----

DATA SIZE = ---- 7

IDATA SIZE = ---- ----

BIT SIZE = ---- ----

END OF MODULE INFORMATION.

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