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DOS C51 COMPILER V5.50, COMPILATION OF MODULE ADC842

OBJECT MODULE PLACED IN ADC842.OBJ

COMPILER INVOKED BY: C:\ADUC\BIN\C51.EXE ADC842.C DB

stmt level source

1 //adc842.c

2 /\*

3 Author: Eckart Hartmann Date:17/10/2003

4 Description of Software:

5 This program demonstrates the <A HREF="/mcc/softw/842/adc/Adc842D.html">SAR ADC</A> functions.

6 ; <A HREF="/mcc/softw/842/adc/Adc842Cfg.html">AdcCfg()</A>, <A HREF="/mcc/softw/842/adc/Adc842Go.html">Ad

-cGo()</A>,

7 ; <A HREF="/mcc/softw/842/adc/Adc842Bsy.html">AdcBsy()</A>, <A HREF="/mcc/softw/842/adc/Adc842Rd.html">Ad

-cRd()</A>

8 ; <A HREF="/mcc/softw/842/adc/Adc842Cal.html">AdcCal()</A> and <A HREF="/mcc/softw/842/adc/Adc842Get.html

-">AdcGet()</A>.

9 Software communicates with a terminal at 9600 baud. Program shows

10 help screen with a command list. Then continuous conversions are

11 started and displayed. While measurements are output the user can

12 issue single key commands to change settings.

13 Also included are a help and wait option.

14 Development progress: <A HREF="/mcc/softw/842/adc/Adc842Df.html">Adc842.df</A>

15 \*/

16 //#include"..\kei842.h" //;<A HREF="/mcc/softw/842/Kei842Sfr.html">SFR definition file</A>.

17 #include"..\lib842.h" //;<A HREF="/mcc/softw/842/Lib842H.html">Function and variable declaration file</A>.

18 #include<stdio.h> //"stdio.h"

19 #include<ctype.h> //"ctype.h"

20 #include<stdlib.h> //"stdlib.h"

21

22 void PrintHelp(void);

23

24 void main(void)

25 {

26 1 char c1; //Temporary variable.

27 1 char cXRef; //External ref flag ('R' pressed).

28 1 char cGain; //Gain calibration flag ('G' pressed).

29 1 char cSys; //System calibration flag ('S' pressed).

30 1 int piV[14]; //Conversion results.

31 1

32 1 cXRef = 0;

33 1

34 1 UrtCfg(0x33,0x832d); //<A HREF="/mcc/softw/834/urt/Urt834Cfg.html">UrtCfg</A> configures UART.

35 1 printf("%04x \n",AdcRd());

36 1 AdcCfg(0x0ac);

37 1 AdcGet(0);

38 1

39 1 PrintHelp();

40 1

41 1 while(1)

42 1 {

43 2 if(UrtBsy()&1) //If key pressed.

44 2 { // Act on command.

45 3 while((c1 = \_getkey())=='w'); //Wait if 'w'.

46 3 if(c1=='s' || c1=='S' || c1=='g' || c1=='G')

47 3 { //Calibrate.

48 4 if(c1=='s') cSys = 0;

49 4 else if(c1=='S') cSys = 1;

50 4 else if(c1=='g') cGain = 0;

51 4 else if(c1=='G') cGain = 1;

52 4 AdcCal(4\*cSys+2\*cGain+1);

53 4 while(AdcBsy()) printf(".");

54 4 }

55 3 if(c1=='r' || c1=='R')

56 3 {

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57 4 if(c1=='r') cXRef = 0;

58 4 else cXRef = 1;

59 4 AdcCfg(0x80+0x40\*cXRef);

60 4 }

61 3 else if(c1=='h') PrintHelp();

62 3 }

63 2 for(c1=0; c1<11;c1++)

64 2 {

65 3 if(c1==6) c1 = 8;

66 3 AdcGo(c1,1);

67 3 while(AdcBsy()) printf(".");

68 3 piV[c1] = AdcRd();

69 3 // piV[c1] = AdcGet(c1);

70 3 // printf("%05d ",piV[c1]\*6);

71 3 printf("%05d ",piV[c1]);

72 3 }

73 2 printf(" %c%c%c\n",cSys?'S':'s',cGain?'G':'g',

74 2 cXRef?'R':'r');

75 2 } }

76

77 void PrintHelp(void)

78 {

79 1 printf("To change settings during conversions press one of:\n");

80 1 printf("\t s for internal calibration.\n");

81 1 printf("\t S for system calibration.\n");

82 1 printf("\t g for zero calibration.\n");

83 1 printf("\t G for gain calibration.\n");

84 1 printf("\t r for internal reference.\n");

85 1 printf("\t R for external reference.\n");

86 1 printf("\t w to wait.\n");

87 1 printf("\t h for this help screen.\n");

88 1 printf("\tResults line will show 12 measured values in hex format\n");

89 1 printf("\tplus s or S, g or G and r or R depending on selection.\n");

90 1 printf("Press a key to end help.\n\n");

91 1 \_getkey();

92 1 }

93

MODULE INFORMATION: STATIC OVERLAYABLE

CODE SIZE = 449 ----

CONSTANT SIZE = 433 ----

XDATA SIZE = ---- ----

PDATA SIZE = ---- ----

DATA SIZE = 2 32

IDATA SIZE = ---- ----

BIT SIZE = ---- ----

END OF MODULE INFORMATION.

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