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1 ;======================================================================

2 ;

3 ; Author : ADI - Apps

4 ;

5 ; Date : April 2002

6 ;

7 ; Filename : blk2\_832.asm

8 ;

9 ; Hardware : ADuC832

10 ;

11 ; Description : Blinks LED continuously at 5Hz

12 ; Pressing INT0 followed by a UART reception of 'U'

13 ; (for upgrade code) allows the code to be upgraded

14 ;

15 ; NOTE: This program will only work if the option to

16 ; always run code from E000H after download is

17 ; selected.

18 ;

19 ;======================================================================

20 ;

21 $MOD832

22 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

23 ; BEGINNING OF CODE

---- 24 CSEG

0000 25 ORG 0000H

26

0000 012C 27 AJMP MAIN

28

29 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

30 ; INT0 ISR

0003 31 ORG 0003H

32 ; wait to receive a character from the UART

0003 3098FD 33 JNB RI, $ ; wait for reception

0006 C298 34 CLR RI

0008 E599 35 MOV A, SBUF

000A B4551E 36 CJNE A, #'U', ERROR

37

38 ; plan to upgrade new code => set BOOTEN

000D 75C700 39 MOV EADRH, #0

0010 75C600 40 MOV EADRL, #0

0013 75B901 41 MOV ECON, #1 ; read page

0016 43BC01 42 ORL EDATA1, #1 ; SET LSB

0019 75B905 43 MOV ECON, #5 ; ERASE page

001C 75B902 44 MOV ECON, #2 ; program page

001F 75B904 45 MOV ECON, #4 ; verify page

0022 E5B9 46 MOV A, ECON

0024 7005 47 JNZ ERROR

48 ; use the watchdog timer to reset part...run from E000H after reset

0026 D2C0 49 SETB WDWR

0028 75C082 50 MOV WDCON, #82h

51

002B 52 ERROR:

002B 32 53 RETI

54

55

56 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

57 ; MAIN

002C 58 MAIN:

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59 ; enable INT0

002C D288 60 SETB IT0 ; INT0 edge triggered

002E D2AF 61 SETB EA ; enable inturrupts

0030 D2A8 62 SETB EX0 ; enable INT0

63

64 ; configure at fastest freq

0032 75D700 65 MOV PLLCON, #0

66

67 ; configure UART for 115200

0035 759E82 68 MOV T3CON, #82h

0038 759D09 69 MOV T3FD, #09h

003B 759852 70 MOV SCON, #52H

71

003E 72 BLINK:

003E B2B4 73 CPL P3.4

0040 120051 74 CALL DELAY

0043 120051 75 CALL DELAY

0046 120051 76 CALL DELAY

0049 120051 77 CALL DELAY

004C 120051 78 CALL DELAY

004F 013E 79 AJMP BLINK

80

81

82 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

83 ; DELAY

0051 84 DELAY:

85 ; 92ms DELAY

0051 78FF 86 MOV R0,#255

0053 87 DLY:

0053 79FF 88 MOV R1,#255 ; 255 x 255 x 1.43us

0055 D9FE 89 DJNZ R1,$

0057 D8FA 90 DJNZ R0,DLY

91

0059 22 92 RET

93 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

94

95

96 END

VERSION 1.2h ASSEMBLY COMPLETE, 0 ERRORS FOUND

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BLINK. . . . . . . . . . . . . . C ADDR 003EH

DELAY. . . . . . . . . . . . . . C ADDR 0051H

DLY. . . . . . . . . . . . . . . C ADDR 0053H

EA . . . . . . . . . . . . . . . B ADDR 00AFH PREDEFINED

EADRH. . . . . . . . . . . . . . D ADDR 00C7H PREDEFINED

EADRL. . . . . . . . . . . . . . D ADDR 00C6H PREDEFINED

ECON . . . . . . . . . . . . . . D ADDR 00B9H PREDEFINED

EDATA1 . . . . . . . . . . . . . D ADDR 00BCH PREDEFINED

ERROR. . . . . . . . . . . . . . C ADDR 002BH

EX0. . . . . . . . . . . . . . . B ADDR 00A8H PREDEFINED

IT0. . . . . . . . . . . . . . . B ADDR 0088H PREDEFINED

MAIN . . . . . . . . . . . . . . C ADDR 002CH

P3 . . . . . . . . . . . . . . . D ADDR 00B0H PREDEFINED

PLLCON . . . . . . . . . . . . . D ADDR 00D7H PREDEFINED

RI . . . . . . . . . . . . . . . B ADDR 0098H PREDEFINED

SBUF . . . . . . . . . . . . . . D ADDR 0099H PREDEFINED

SCON . . . . . . . . . . . . . . D ADDR 0098H PREDEFINED

T3CON. . . . . . . . . . . . . . D ADDR 009EH PREDEFINED

T3FD . . . . . . . . . . . . . . D ADDR 009DH PREDEFINED

WDCON. . . . . . . . . . . . . . D ADDR 00C0H PREDEFINED

WDWR . . . . . . . . . . . . . . B ADDR 00C0H PREDEFINED