BLK2\_831 PAGE 1

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

2 ;

3 ; Author : ADI - Apps

4 ;

5 ; Date : April 2002

6 ;

7 ; Filename : blk2\_831.asm

8 ;

9 ; Hardware : ADuC831

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 $MOD831

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

49

0026 D2C0 50 SETB WDWR

0028 75C082 51 MOV WDCON, #82h

52

002B 32 53 ERROR: RETI

54

55 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

56 ; MAIN

002C 57 MAIN:

58 ; enable INT0

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002C D288 59 SETB IT0 ; INT0 edge triggered

002E D2AF 60 SETB EA ; enable inturrupts

0030 D2A8 61 SETB EX0 ; enable INT0

62

63 ; configure UART for 115200

0032 759E81 64 MOV T3CON, #81h

0035 759D20 65 MOV T3FD, #20h

0038 759852 66 MOV SCON, #52H

67

003B 68 BLINK:

003B B2B4 69 CPL P3.4

003D 12004E 70 CALL DELAY

0040 12004E 71 CALL DELAY

0043 12004E 72 CALL DELAY

0046 12004E 73 CALL DELAY

0049 12004E 74 CALL DELAY

004C 013B 75 AJMP BLINK

76

77

78 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

79 ; DELAY

004E 80 DELAY:

81 ; 70ms DELAY

004E 78FF 82 MOV R0,#255

0050 83 DLY:

0050 79FF 84 MOV R1,#255 ; 255 x 255 x 1.08us

0052 D9FE 85 DJNZ R1,$

0054 D8FA 86 DJNZ R0,DLY

87

0056 22 88 RET

89 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

90

91

92 END

VERSION 1.2h ASSEMBLY COMPLETE, 0 ERRORS FOUND

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BLINK. . . . . . . . . . . . . . C ADDR 003BH

DELAY. . . . . . . . . . . . . . C ADDR 004EH

DLY. . . . . . . . . . . . . . . C ADDR 0050H

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

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