BLK1\_831 PAGE 1

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

2 ;

3 ; Author : ADI - Apps

4 ;

5 ; Date : April 20001

6 ;

7 ; Filename : blk1\_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

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 UART for 115200

0032 759E81 65 MOV T3CON, #81h

0035 759D20 66 MOV T3FD, #20h

0038 759852 67 MOV SCON, #52H

68

003B 69 BLINK:

003B B2B4 70 CPL P3.4

003D 120042 71 CALL DELAY

0040 013B 72 AJMP BLINK

73

74

75 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

76 ; DELAY

0042 77 DELAY:

78 ; 70ms DELAY

0042 78FF 79 MOV R0,#255

0044 80 DLY:

0044 79FF 81 MOV R1,#255 ; 255 x 255 x 1.08us

0046 D9FE 82 DJNZ R1,$

0048 D8FA 83 DJNZ R0,DLY

84

004A 22 85 RET

86 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

87

88

89 END

VERSION 1.2h ASSEMBLY COMPLETE, 0 ERRORS FOUND

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

DELAY. . . . . . . . . . . . . . C ADDR 0042H

DLY. . . . . . . . . . . . . . . C ADDR 0044H

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