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; Author : ADI - Apps

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; Date : April 2002

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; Filename : blk2\_831.asm

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; Hardware : ADuC831

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; Description : Blinks LED continuously at 5Hz

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

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

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

; always run code from E000H after download is

; selected.

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$MOD831

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; BEGINNING OF CODE

CSEG

ORG 0000H

AJMP MAIN

;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

; INT0 ISR

ORG 0003H

; wait to receive a character from the UART

JNB RI, $ ; wait for reception

CLR RI

MOV A, SBUF

CJNE A, #'U', ERROR

; plan to upgrade new code => set BOOTEN

MOV EADRH, #0

MOV EADRL, #0

MOV ECON, #1 ; read page

ORL EDATA1, #1 ; SET LSB

MOV ECON, #5 ; ERASE page

MOV ECON, #2 ; program page

MOV ECON, #4 ; verify page

MOV A, ECON

JNZ ERROR

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

SETB WDWR

MOV WDCON, #82h

ERROR: RETI

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; MAIN

MAIN:

; enable INT0

SETB IT0 ; INT0 edge triggered

SETB EA ; enable inturrupts

SETB EX0 ; enable INT0

; configure UART for 115200

MOV T3CON, #81h

MOV T3FD, #20h

MOV SCON, #52H

BLINK:

CPL P3.4

CALL DELAY

CALL DELAY

CALL DELAY

CALL DELAY

CALL DELAY

AJMP BLINK

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; DELAY

DELAY:

; 70ms DELAY

MOV R0,#255

DLY:

MOV R1,#255 ; 255 x 255 x 1.08us

DJNZ R1,$

DJNZ R0,DLY

RET

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END