



AN803

MicroBolt

Blink the MicroBolt's onboard LED

10/7/2005

Introduction:

This application notes demonstrates how to blink the MicroBolt's onboard LED.

Background:

The MicroBolt has an onboard LED that is user accessible. This LED can serve as a debug tool or as a means of verifying the MicroBolt is alive and well.

How it works:

This ImageCraft ICCARM demo program sets up the MicroBolt first and then simply toggles the onboard LED in an endless loop.

Program Listing:

```
/*
-----
File Name           : MicroBoltBlinkLed.c
Author              : Micromint, Inc.
Copyright           : Copyright © 2005, Micromint, Inc.
Creation Date       : 4/2/05
Version             : 1.00
Spaces per tab     : 2
Description         : Main C file
Revision            : Initial
-----
*/

/*
-----
Includes
-----
*/

#include <ARM/philips/lpc210x.h>
#include <arm_macros.h>

#include "MicroBoltBlinkLed.h"

/*
-----
Function           : main
Inputs             : None
Outputs            : None
Purpose            : Main function for system
Author             : Micromint, Inc.
-----
*/

void main(void)
{
    unsigned int Delay;
```

```

/*
-----
MicroBolt hardware setup
-----
*/

__DISABLE_INTERRUPT(); // Disable all interrupts

SCB_PLLCFG |= 0x23; // Set to 59 MHz (0x03 is multiply value of 4)
SCB_PLLFEED = 0xAA; // Shadow register copy for PLL Feed
SCB_PLLFEED = 0x55;
SCB_PLLCON |= 0x03; // Lock and Connect the PLL

PCB_PINSEL0=0x00000000; // JTAG is via secondary port
PCB_PINSEL1=0x55400000;
GPIO_IODIR=(0x00000000<<16)|
            0x00000000;

GPIO_IOCLR=0xffffffff;
GPIO_IOSET=(0x00000000<<16)|
            0x00000000;

GPIO_IODIR |= MICROBOLT_LED; // Setup MicroBolt LED as output

/*
-----
Start of application
-----
*/

while(1) // Do this forever
{
    GPIO_IOSET = MICROBOLT_LED; // MicroBolt LED On
    for (Delay = 0; Delay < 780000; Delay++); // Delay for 1 Second
    GPIO_IOCLR = MICROBOLT_LED; // MicroBolt LED Off
    for (Delay = 0; Delay < 780000; Delay++); // Delay for 1 Second
}
}

```