**IncuScope PIC18F2455 program information**

Date: 10/12/2011

Required files for project:

IncuScope.c

IncuScope\_HIDdesc64.h

Dependencies (part of CCS compiler):

pic18\_usb.h

usb.c

HID identity:

The PIC will identify itself on the HID bus as INCUSCOPE

Usage:

It is best to open the device each time before sending the 65 byte string.

NOTE: 65 bytes are needed since the 1st byte must be a NULL (acsi 0) character. The PIC only sees the following 64 bytes. Although we are sending 65 bytes total (64 to the PIC) through the bus only the 1st and 2nd bytes are needed in this implementation.

IncuScope PIC code command set:

Query command: q - returns a byte which lists the status of the LEDS as a bitfield :

(1=on 0=off)

bit 0 = Dark Field

bit 1 = white LED

bit 2 = Red LED

bit 3 = Green LED

bit 4 = blue LED

bits 5-7 are unused for now.

All LEDS off: a

Step motor forward for n cycles: fn, where n = 0 to 255

Step motor in reverse for n cycles: rn, where n = 0 to 255

Toggle dark field illuminator ON/OFF: d

Toggle white LED ON/OFF : w

Toggle red LED ON/OFF : 1

Toggle green LED ON/OFF : 2

Toggle blue LED ON/OFF : 3