UsbThumb Updating Firmware using the Bootloader

To update the firmware on UsbThumb first download the .hex file to your computer. If you compiled your project using C18 compiler the .hex file can be found in the project directory.

Next obtain the HIDBootLoader.exe utility. This utility is part of Microchip's Applications Libraries, that can be downloaded here:

http://www.microchip.com/stellent/idcplg?IdcService=SS_GET_PAGE&nodeId=2680&dDocName=en537 044

Your device was programmed with a custom bootloader that is activated only under certain conditions when your device is powered.

To activate the bootloader you need to:

- 1. Unplug the device from the USB port
- 2. Start HIDBootLoader.exe program
- Connect the pins VPP and GND with a 1K jumper resistor or wire. Do not confuse VPP(pin#5) with nearby VDD2(pin#3) or VDD(pin#4). Refer to the picture below. The wire is hold in place by the spring action and should make good contact with the pin holes. For safety use 1K resistor instead of the wire.



- 4. Plug the device into USB port, with the jumper resistor/wire connected. When pin VPP is shorted to ground, the bootloader will know that it has to activate instead of running the host firmware.
- 5. The software should display "Device Attached", after which you can remove the jumper wire/resistor while leaving the device plugged in.

6. Next click on **"Open Hex File"** button and select the new firmware that you want to upload to the device:

🔡 Microchip USB HID Be	ootloader v2.6	_ 🗆 🗙				
Open Hex File Program/Verify	Erase Device Read Device Export Hex Verify Reset Device					
Allow Configuration Word Programming						
Device attached.						
Open Look in	a: 🕞 Quitauti	<u>?×</u>				
My Recent Documents Desktop My Documents My Documents	Name Size Type UsbThumbImu 16a.hex 33 KB HEX File					
My Network Places	File name: Usb ThumbImu 16a.hex Files of type: Hex files (*.hex)	▶ Open Cancel				

7. Click on "Program/Verify" and wait for the process to complete

🔜 Microchip USB HID Bootloader v2.6						
Open Hex File	Erase Device	Read Device	Export Hex			
Program/Verify	Verify	Reset Device				
Allow Configuration Word Programming						
Erase Started (no status update until complete, may take several seconds) Erase Complete Programming Started Programming Complete Verify Running Erase/Program/Verify Completed Successfully						

8. Unplug the device from USB, and plug it back (without the jumper wire/resistor). Your new firmware should be now active.