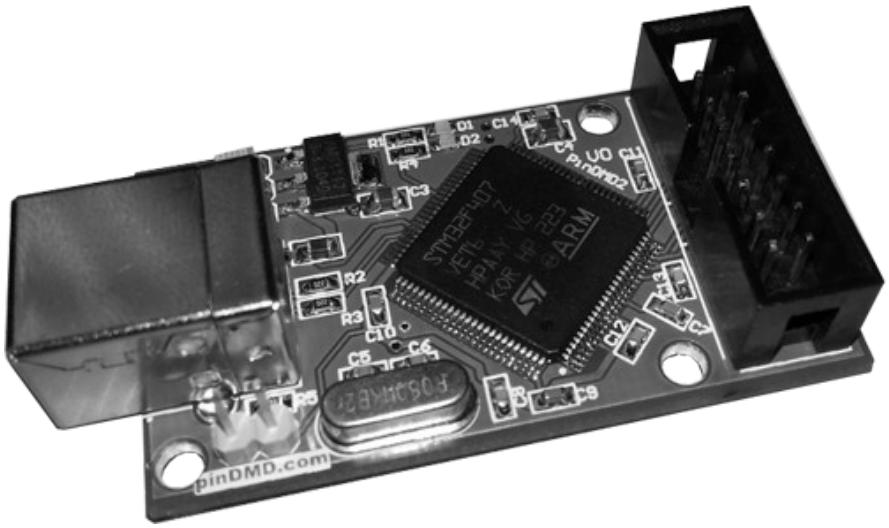
pinDMD2 Application Note AN004



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INTRODUCTION

The pinDMD2's firmware can be updated to give it new features or update bug's from a previous version of the firmware. The aim of this application note is to guide you through the process of upgrading the pinDMD2's firmware.

The pinDMD2 uses a STM32F407. This micro-controller can have its firmware updated over USB using DFU (Device Firmware Upgrade). The software used is DfuSeDemo by STM Microelectronics.
DfuSeDemo v3.0.2 can be downloaded from here.

INSTALLATION

Once downloaded, install DfuSe_Demo_V3.0.2_Setup.exe. This software can be quite tricky to get running on some systems one of the most common errors is a 'The application failed to initialize properly (0xc0150002)**' if you come across this there is a couple of solutions to resolve this error message.**

1. **DfuSeDemo seems to want java jre 6.35 installed.**
2. **Installing this windows update can help.**
3. **Running DfuSeDemo in win98 compatibility mode can help.**
4. **Make sure you have selected the correct installer 32bit / 64bit.**

UPDATING FIRMWARE

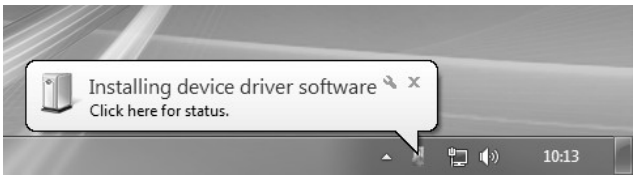
Note: Before you can update the firmware on the pinDMD2 you will need the pinDMD2 USB drivers installed. Please follow instructions in the pinDMD2 Install Guide.

Note: It is not recommended you update the firmware unless advised to do so. The pinDMD2 board can be rendered unusable from a incorrectly applied firmware update.

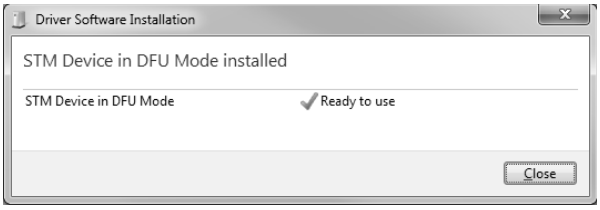
Make sure the pinDMD2 is plugged in and any tables running pinmame or any other applications that may be using pinDMD2 have be closed.

(Step1) Run 'DfuSeDemo.exe' and leave it open.

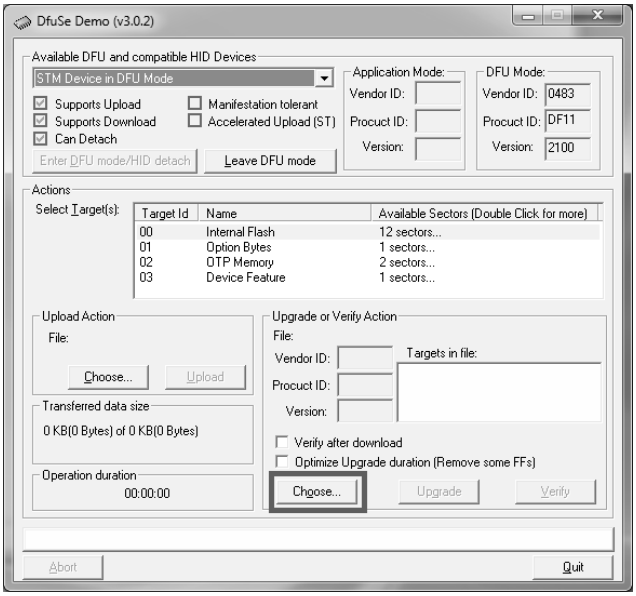
(Step2) Run setDFU.exe. Your computer should detect a new USB device.



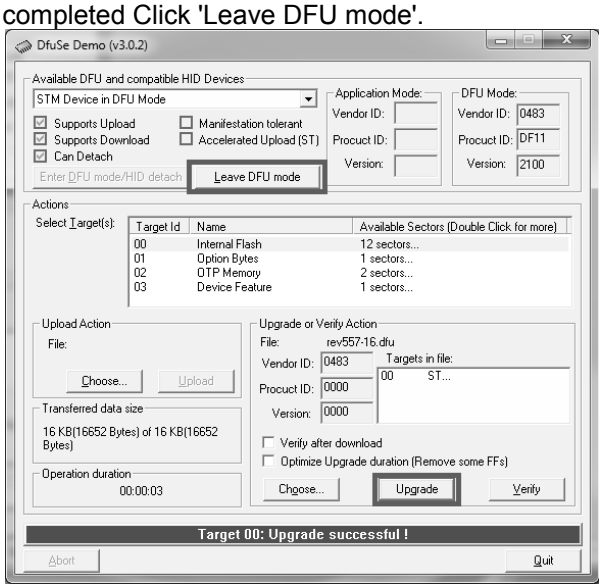
(Step3) Install the STM DFU USB drivers. Windows7 should install these for you automatically. For Windows XP you can find the drivers here 'C:\Program Files (x86)\STMicroelectronics\Software\DfuSe\Driver'



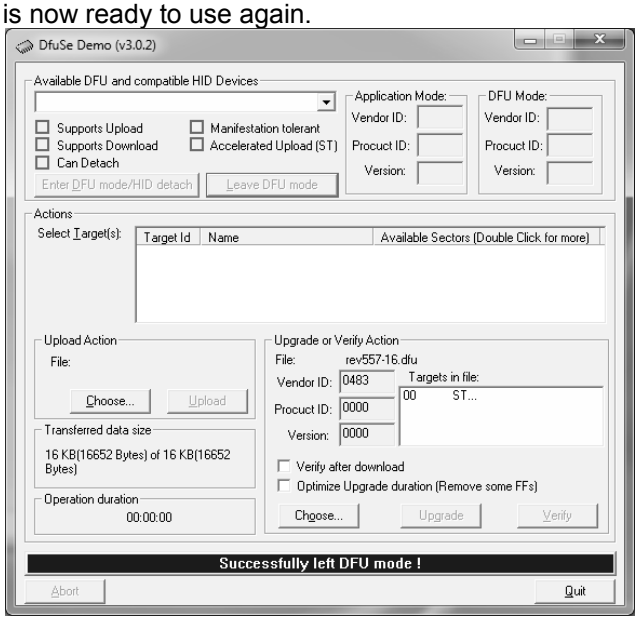
(Step4) Once the STM DFU USB drivers have been installed. The pinDMD2 should now appear in DfuSeDemo and the DMD itself should go blank. Click 'Choose' and browse to the .dfu firmware file.



(Step5) Click 'Upgrade' You should see a blue progress bar display 0% 49% 100% then go green. This should take around 2 seconds. If it does it instantly there has been an error. Once completed Click 'Leave DFU mode'.



(Step6) The DMD should come alive again showing the new revision of firmware bottom left. It should also be re-detect by your system as a pinDMD2 and is now ready to use again.



If you have any problems either installing DfuSeDemo or with the firmware updating process please contact contact@pindmd.com.

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