

## Firmware Download with LPC2000

### Introduction:

This document describes the process to download firmware to a ViVOpay reader using the LPC2000 Flash Utility. Below is the method for this procedure.

### Necessary Equipment:

The following materials are necessary in order to complete the firmware download procedure:

- Global Reader firmware, provided by ID TECH
- LPC2000 Flash Utility v2.2.3.
- ViVOpay Reader
- PC with available COM port
- Download Dongle w/CAT5 cable: (*Use this cable to download firmware*)
  - Special DB9 to CAT5 connector provided by ID TECH which is platform specific, typically p/n 220-1233-00



- ViVOpay serial interface cabling



## Download Procedure:

### A. System Set-up

Use the Download Dongle w/CAT5 cable to download the firmware.

- 1) Unplug the power cable from the ViVOpay reader.
- 2) Connect the DB-9 side of the Download Dongle cable to the serial port of the PC.
- 3) Plug the RJ-45 connector end of the Download dongle cable into the RJ-45 socket of the ViVOpay reader.



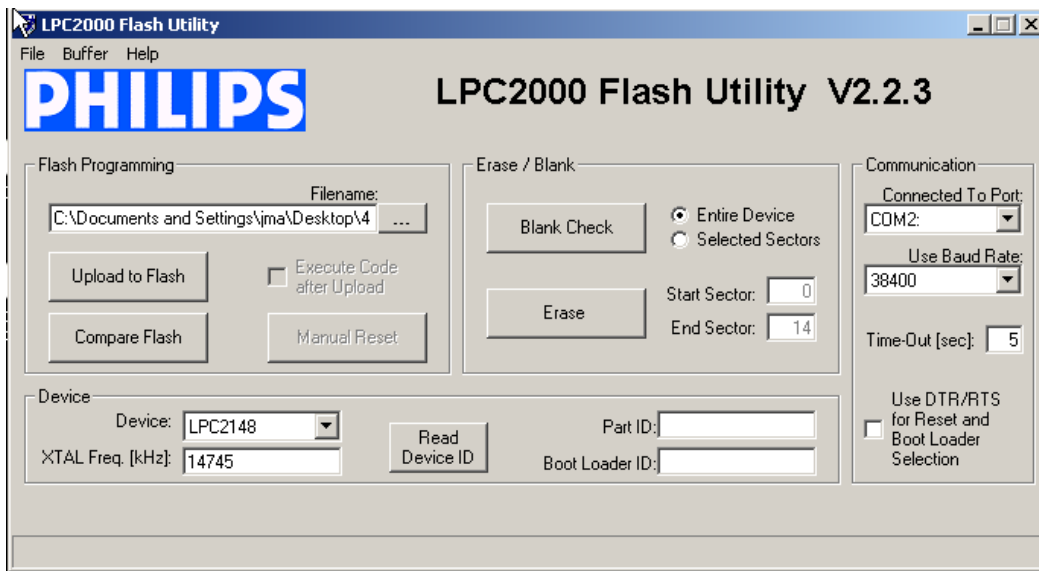
Now ViVOpay reader is connected to the PC through the Download dongle cable connector.

- 4) Reconnect the power cable to the ViVOpay reader, no tone will sound and all LEDs will remain dark.
- 5) The ViVOpay reader is now ready for firmware download.

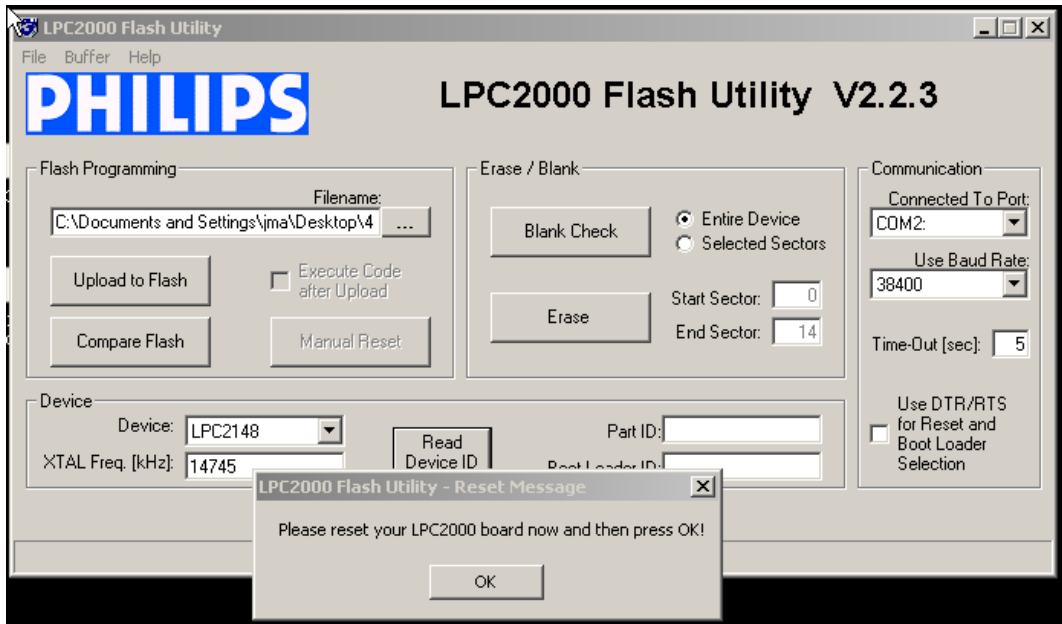
## B. Firmware Download

Once the system has been set-up, the firmware download can proceed as follows:

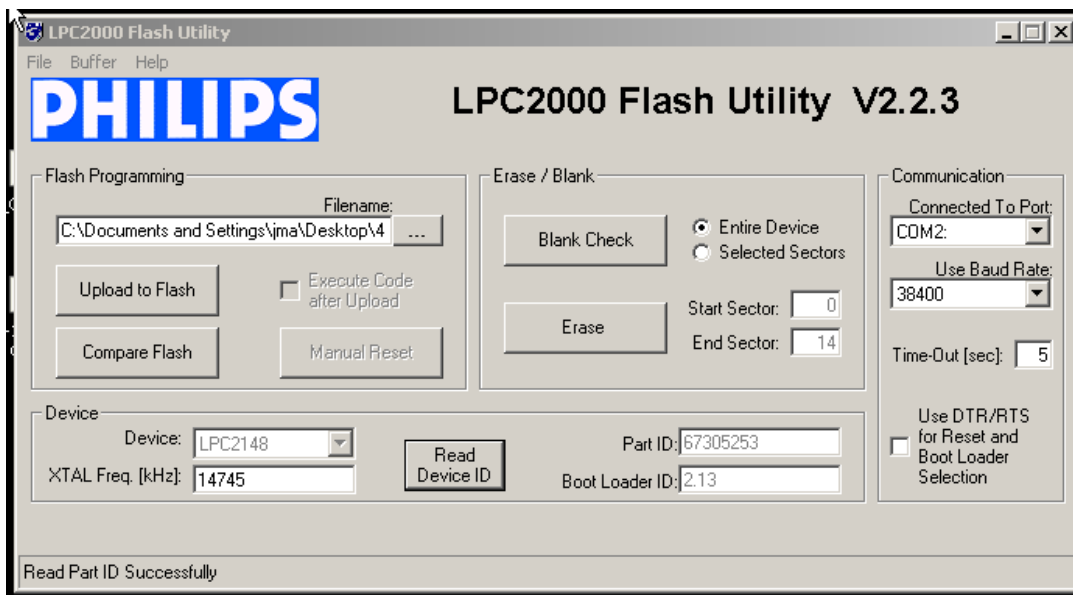
- 1) Run LPC2000 Flash Utility.
- 2) Select the COM Port to which the download cable is connected, typically COM2.  
Set the baud rate to 38400.
- 3) Set the XTAL Freq field to 14745 KHz
- 4) Set the Time-Out field to 5, and ensure “Use DTR/RTS for Reset and BootLoaderSelection” is unchecked



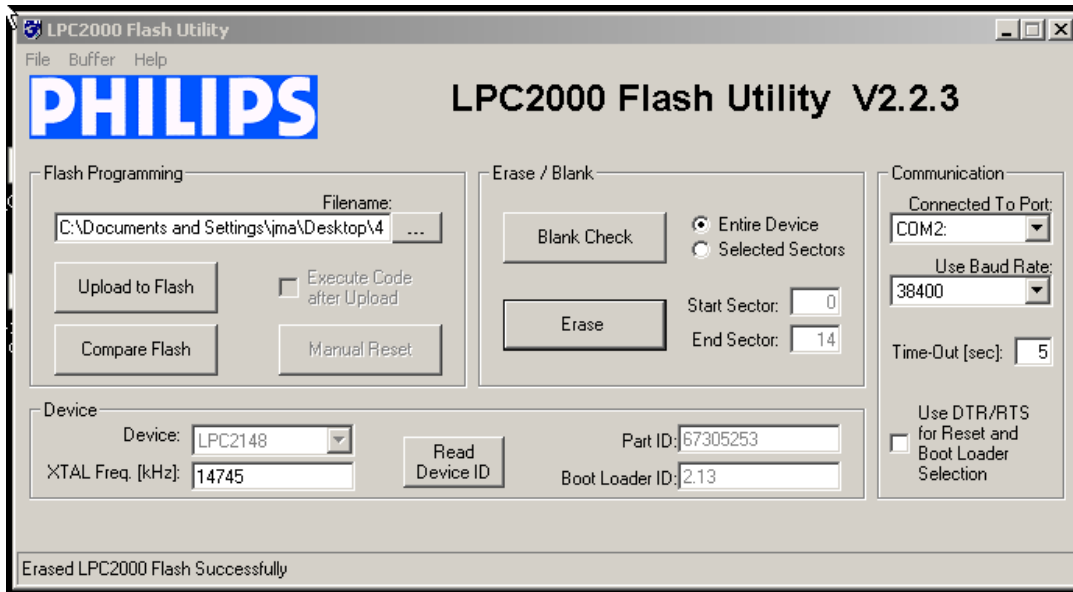
- 5) Load the Part ID, BootLoader ID, and Device by selecting the Read Device ID button. This utility will prompt you to power cycle the reader. Power the reader and select “ok”.



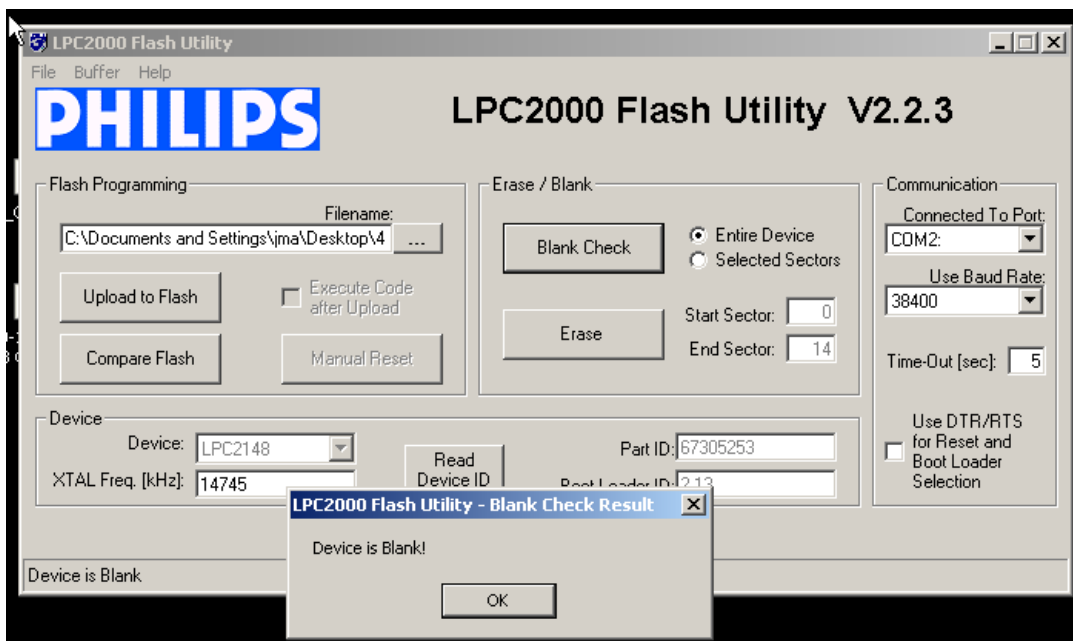
- 6) The PartID and BootLoader ID should be displayed in the appropriate fields. Set the Time-Out field to 5, and ensure “Use DTR/RTS for Reset and BootLoaderSelection” is unchecked.



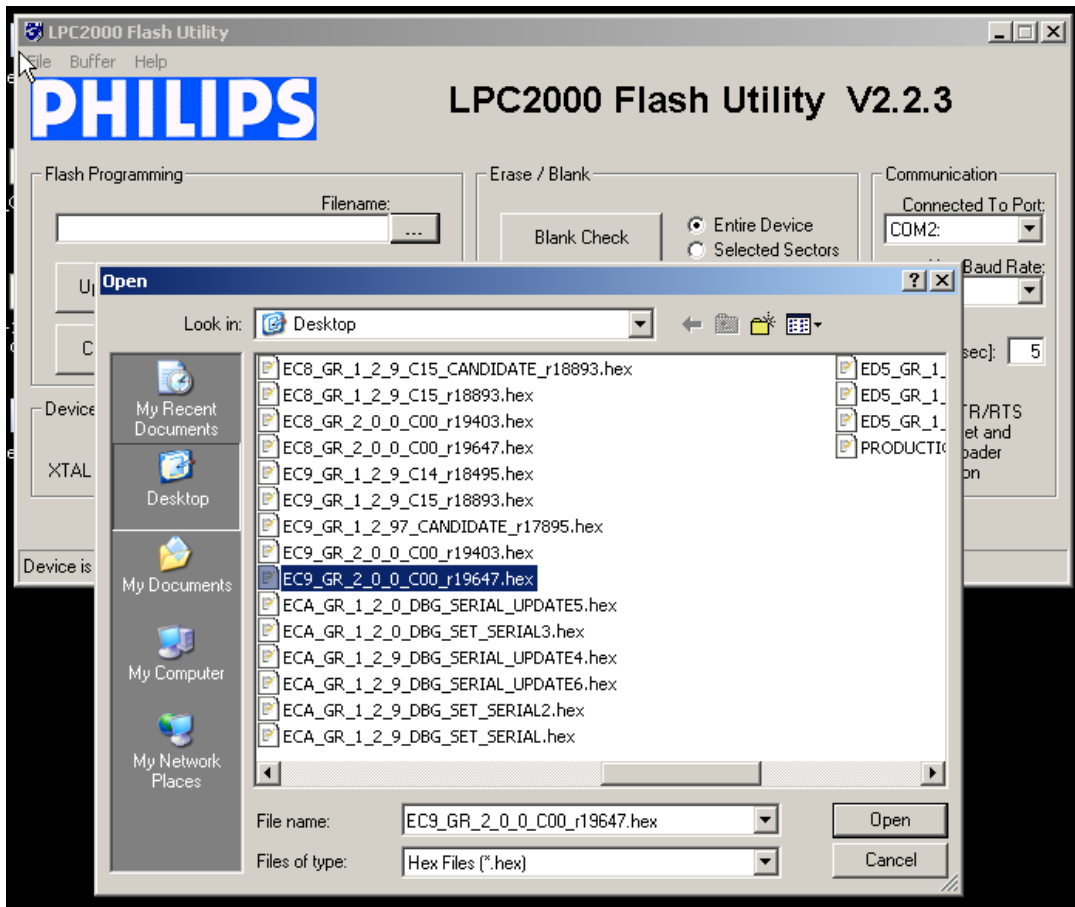
- 7) Erase the current reader firmware by selecting the erase button. You should see “Erased LPC2000 Flash Successfully”



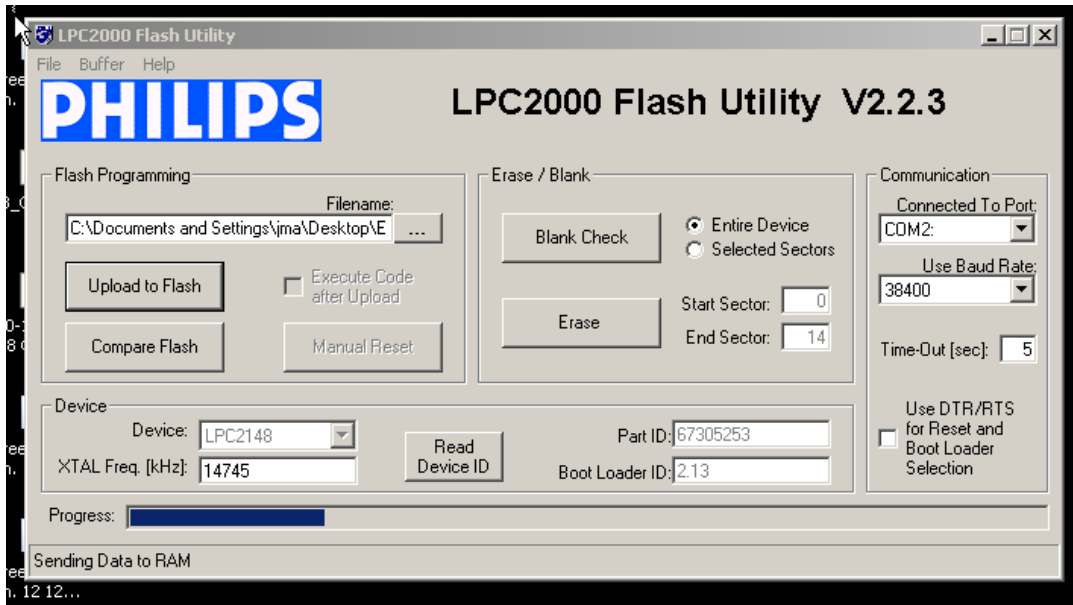
- 8) Select Blank Check to make sure the flash is blank. A dialogue will display stating the Device is Blank! Select “OK”



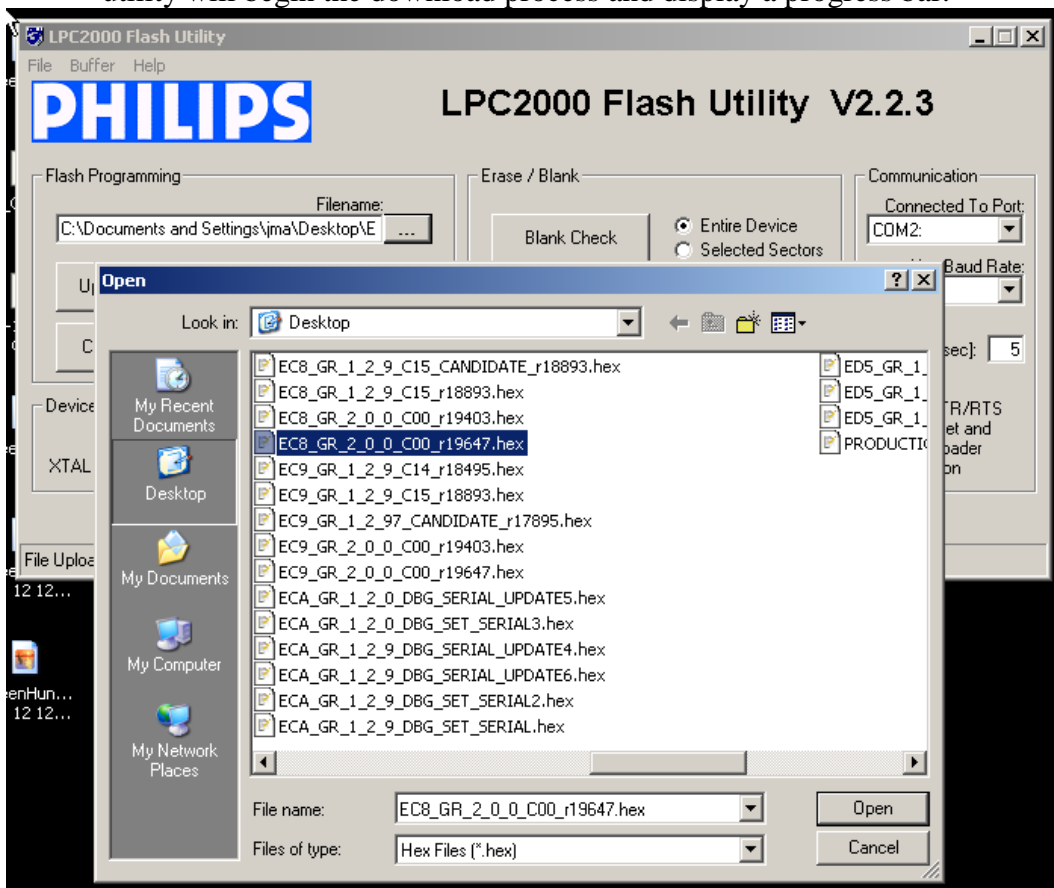
- 9) From FileName field browse to the firmware to select the file, this will be in hex format.

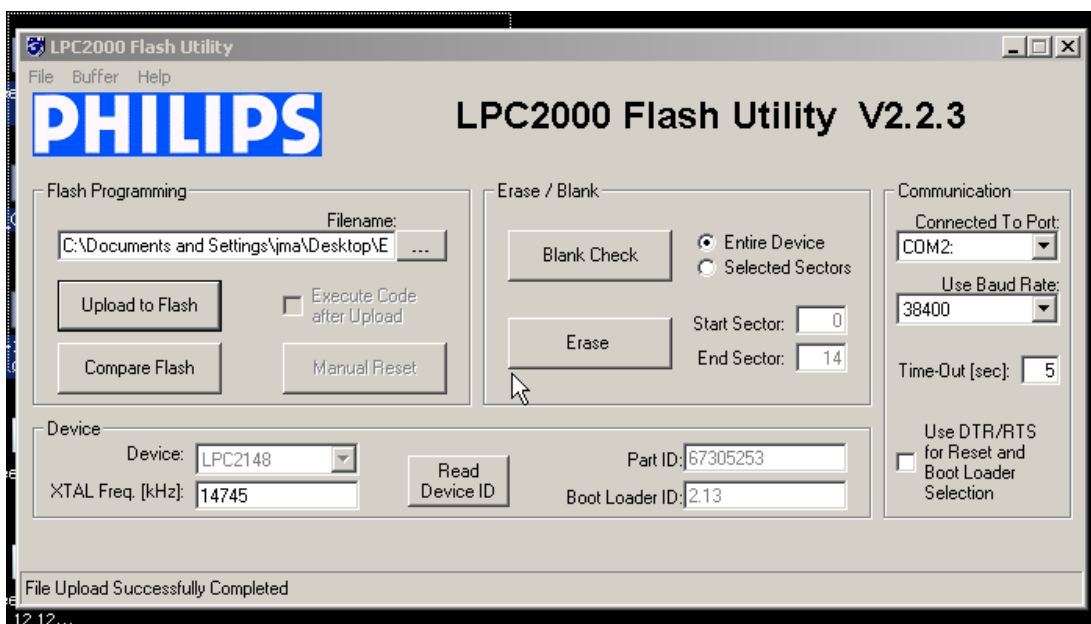
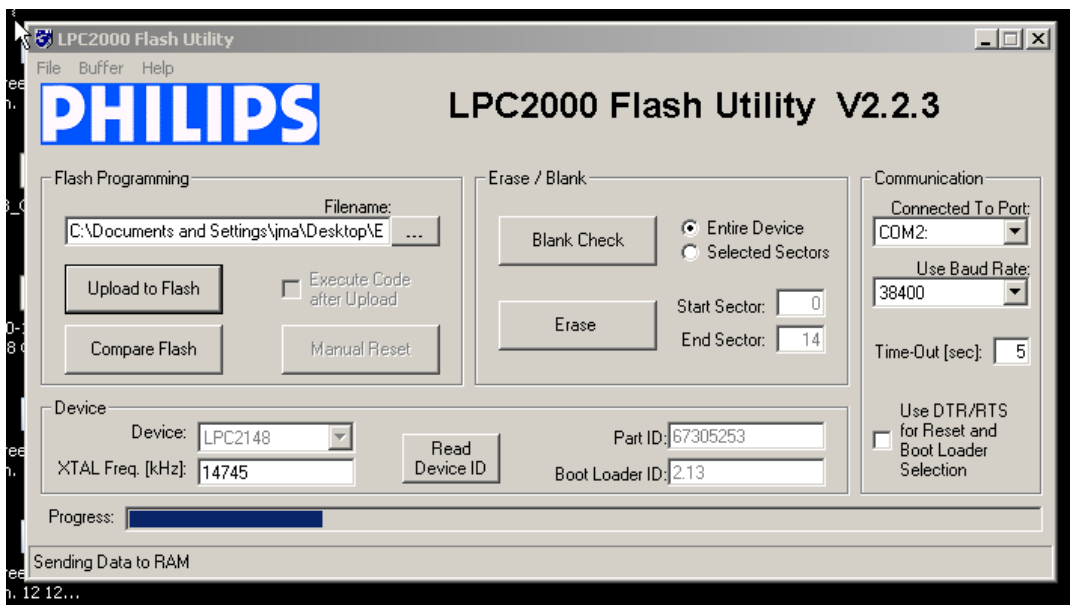


- 10) Select EC9\_GR\_2\_0\_0\_C00.rxxxx.hex. Once the appropriate filename and path have been loaded to the Filename field, select the upload to flash button. The utility will begin the download process and display a progress bar.



- 11) Select EC8\_GR\_2\_0\_0\_C00.rxxxx.hex. Once the appropriate filename and path have been loaded to the Filename field, select the upload to flash button. The utility will begin the download process and display a progress bar.





- 12) Once the download has completed successfully, remove the download cable from the download connector and power cycle the reader.