



## **Tutorial – How to upgrade firmware on Phison S5 controller MyDigitalSSD.**

**Version 1.0**

This tutorial will walk you through how to create a DOS bootable USB drive and how to apply the newest firmware S5FAM012 to your Phison S5 controlled MyDigitalSSD.

**\*NOTE: THIS FIRMWARE UPGRADE WILL ERASE YOUR SSD, MAKE SURE AND BACK UP ALL IMPORTANT INFORMATION\***

Checklist: USB Drive, PC that supports mSATA or the mSATA to SATA adapter, and a MyDigitalSSD featuring the S5 controller, pictured here:



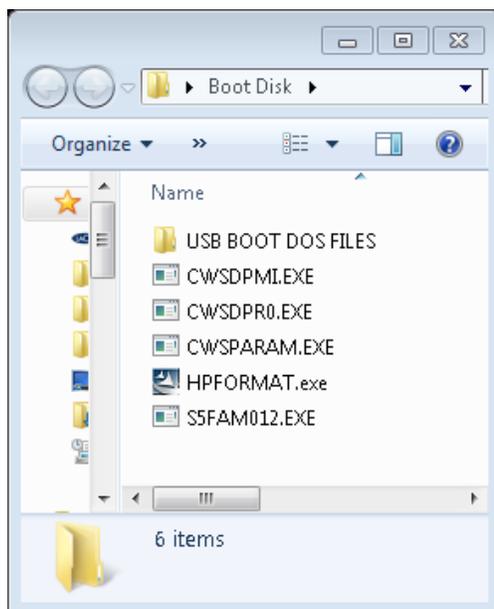
Step 1) **DOWNLOADING THE FILES YOU NEED.**

MyDigitalDiscount has included everything you need in 1 download located here:

**LINK:**

**Extracting:**

- 1) Download the file located at the link above.
- 2) Open the file using WinZIP, WinRAR, or most versions of Windows 7 will simply open the file in a folder.
- 3) Create a new folder on your current desktop called 'Boot Disk.'
- 4) Highlight all the files in the ZIP file and drag them to your 'Boot Disk' folder you just created on your desktop. \*You may close the ZIP program.\*
- 5) If you open your new folder 'Boot Disk' you should see the following files:



Step 2) **Creating a bootable USB drive to install the firmware update.**

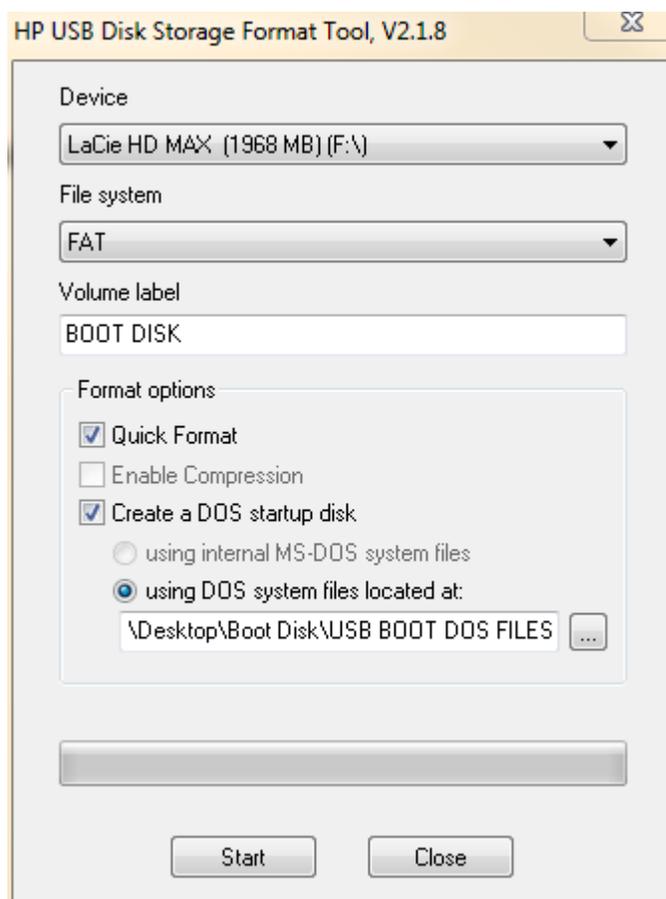
**\*BEFORE STEP 2: The user must make sure the computer they are using to do this upgrade can boot from the USB port. Most new computers will have this feature. See Step 4-B**

**Step 2-1) Using the HP Format tool to create a bootable USB drive.**

- a) In the 'Boot Disk' folder on your desktop, there should be a file named 'HPFORMAT' Double click and install that program.
- b) Plug a USB drive into a USB port on your computer. **\*NOTE: This process will wipe your USB drive clean, so please back up any important information before proceeding.**
- c) After installing the program, this is the icon that should be on your desktop: Double click to open the program.

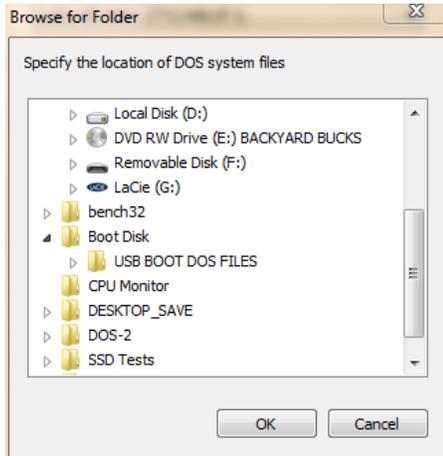


- d) This is exactly what you should see and what you should have selected:

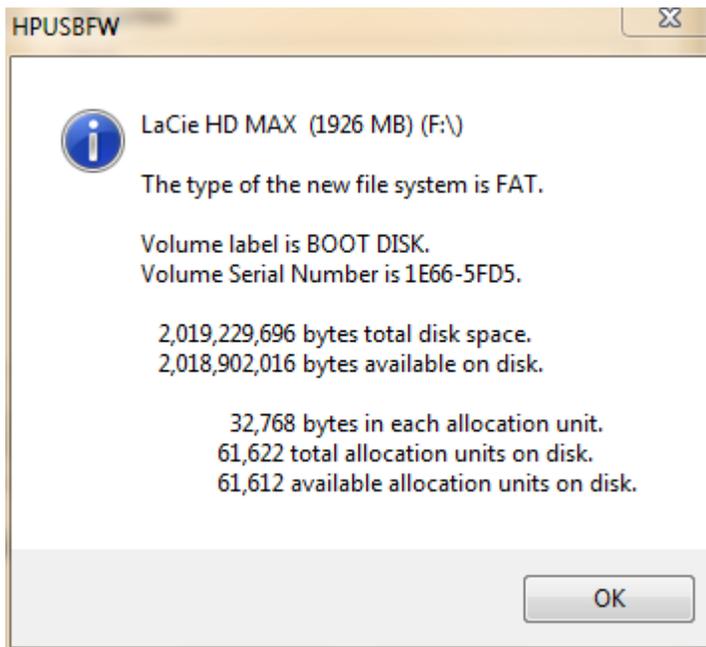


**NOTES: 2GB and under: Choose FAT for the file system. 4GB and over choose FAT32 for the file system. Do not choose NTFS.**

- e) To apply the correct boot files, under the 'using DOS system files located at:' press the  button and navigate again to the 'Boot Disk' folder you created on your desktop and highlight the folder inside the 'Boot Disk' folder called 'USB BOOT DOS FILES' demonstrated below:

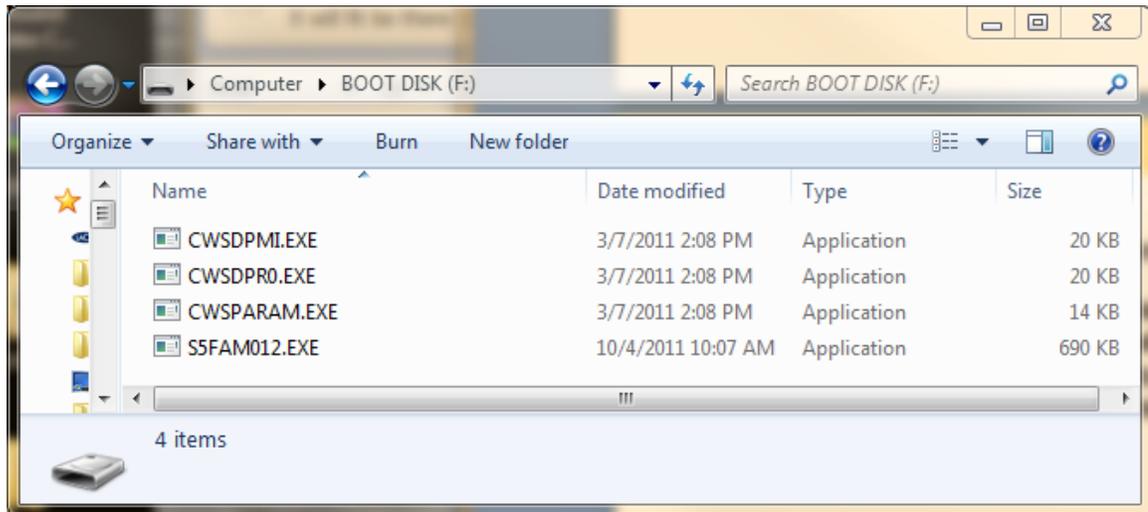


- f) **PRESS THE 'START' BUTTON.** You should then see this dialog box:



### Step 3) Putting the necessary files on the new boot drive

- a) Open the 'Boot Disk' folder from your desktop, and also open the boot drive you just created. Highlight, drag and drop the following files onto the new USB drive you created. When you are done your USB drive should have the following files on it:



b) Your boot disk is now officially complete.

Step 4) Making sure your BIOS is set up correctly on your computer.

a) Making sure the computer is in IDE mode, not AHCI.

- I. Turn your computer on and enter into the bios. This is different on most computers, the most common key triggers to get you into the bios are 'delete', 'F2', or 'F12.' The opening screen should tell you how to enter setup, if it does not and none of the keys work, you may need to contact the laptop manufacturer or consult the notebook manual for this information.
- II. Because all manufacturers use different BIOS, this may be difficult to find. Search around the BIOS for something that states some variation of 'SATA operation mode,' or IDE configuration. The choices should be IDE, RAID, or AHCI. On most new computers it should be running on AHCI, you will need to change that to IDE. (NOTE: You will need to remember to change this option back to AHCI before trying to boot back into Windows.)
- III. Save and Exit the BIOS. \*NOTE: If this option is not in your bios that you can find, it is safe to assume the only mode your computer has is IDE mode and you can proceed.

b) Making sure your computer can boot from the USB drive:

- I. Shut down your computer. Plug in the thumb drive.
- II. The easiest way would be if your computer gives you a choice to do a 'One Time Boot.' When you first start your computer before it starts to boot into windows. It should say some variation of 'Press <F11> to load boot menu.' Unfortunately there is no default key that will bring up this menu, it will be different on most computers, you may want to contact the laptop manufacturer or consult the notebook manual for this information. If your computer has this capability, you may skip direct to 'Step 5.'

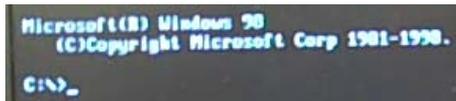
- III. Turn your computer on and enter into the bios. This is different on most computers, the most common key triggers to get you into the bios are 'delete', 'F2', or 'F12.' The opening screen should tell you how to enter setup, if it does not and none of the keys work, you may need to contact the laptop manufacturer or consult the notebook manual for this information.
- IV. In most BIOS' you will see a tab that indicates 'Boot' 'Boot Sequence' or 'Boot Device Priority'



- V. Make sure the first boot device is the USB drive. After saving this you may restart the computer.

Step 5: Applying the firmware update: **\*THIS WILL ERASE YOUR DRIVE, BACK UP ALL IMPORTANT INFORMATION BEFORE PERFORMING THIS TASK\***

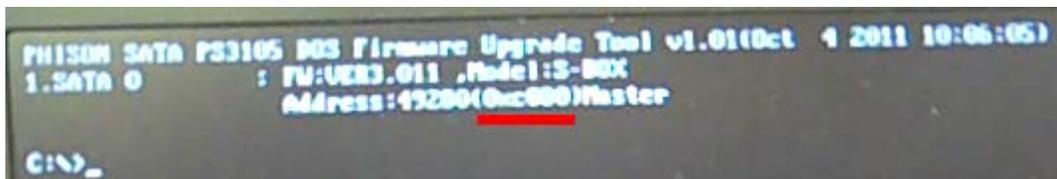
- a) Now when you turn on the computer you should be presented with an MS-DOS prompt screen:



- b) Type in the following exactly: S5FAM012 /SCANPORT



- c) This will bring up a list of drives to choose from and the address you need to upgrade:



You cannot see it clearly in my screenshot, however I underlined the address port that you will be looking for which is unique to your configuration, in my case the address is 0xc080. Each user's address will be different but should look similar to what I have underlined.

- d) To start the application, type in this: S5FAM012 **0xc080** \*NOTE: Apply the address information you gathered instead of the address I have in red.
- a. Also NOTE: If the address given does not state 'Master' like the address above, but instead states 'Slave'. You will need to type the command as follows: S5FAM012 **0xc080** -Slave

```
PHISON SATA PS3105 BIOS Firmware Upgrade Tool v1.01(Oct 4 2011 10:06:05)
1.SATA 0 : FW:VER3.011 ,Model:S-BOX
          Address:45200(0xc080)Master
C:\>S5fam012 0xc080
```

- e) The process should not take any longer than 30-60 seconds, and if all was done correctly you should see this screen.

```
1.SATA 0 : FW:S5FAM011 ,Model:SATA 33B
          Address : 45200(0xc080)

Check Device Ready ...
New Updated Firmware version : S5FAM012
Don't remove device during running :
Force To Boot Code ... PASS
ISP Prog FRAM Code ... PASS
Erase Device .100%... PASS
Preformat Device ...100%... PASS
ISP Prog Flash Code ... PASS
Check InfoBlock ... PASS
Flash Write-Read Test, Logical Size=122104 MB
Begin : ok.
End : ok.
Scan Bad Block ... PASS

PASS
Testing Completed!!
C:\>
```

Finishing Step) After you receive the notification that the test has passed and the testing is completed, you may restart your PC, move everything in the bios back to the way it was, and use the drive as if it were brand new. If the upgrade failed you



would see the following: and you would need to go back through the steps to make sure you did not miss anything.