


# Installing Microsoft Windows XP on an Eee PC 701 4G

## Warnings

### Playing with your page file

-  Read [this](#) before attempting to change or delete your swap file (pagefile.sys)

### Incompatible Windows XP version(s)

-  Windows XP Home Edition (Version 2002) SP1. Trying to install results in a BSOD during the initialization process. The error seems to be with **pci.sys**.

## Basic installation method

Pre-requisites for an easy install:

- A legal copy of Windows XP
- An external USB2 CD/DVD reader
- Optional: [nLite](#) to reduce the size of the Windows installation.

Steps for an easy installation:

- Optional: Make your own nLited version of Windows XP. nLite allows you to decrease the size of Windows XP by removing unnecessary components and files. Options are very clearly labelled. If you're not sure about a component to remove, just leave it there. Burn your new custom Windows XP CD.
- Boot from your Windows CD (either original or nLited version). Plug your USB CD drive, power up your eee pc and press [Esc] at the BIOS boot screen. Select your external CD reader which should appear in the list. (There is no need to change your boot-up sequence in the BIOS if you press Esc at boot time).
- Windows installation will start. When given the option to choose where Windows should be installed, select your SSD. You can repartition the SSD to one single partition within Windows XP's setup. Format the SSD in either FAT 32 or NTFS.
- NOTE: A lot of people have reported receiving an NTLDR Error after XP has rebooted - this happens when you do not delete all of the partitions before installing. You should delete them all - including the one marked partition 1 [BIOS] to leave a single partition. Search the forum for more information. When you get to the partitioning screen of the XP install you keep pressing the "D" key until there are no more partitions left. Then you press the "C" key to create a new partition for the installer to format and install WinXP on.
- Continue Windows installation as normal.

- Once Windows is installed and boots, install all drivers provided by ASUS (they don't install completely when slipstreamed in XP with nLite).
- Make sure that OS installation is set to FINISHED in the BIOS. Otherwise, USB2 ports won't be detected as USB2.
- That's it!

If you didn't nLite you Windows version, you'll soon discover that most of your SSD is now full and that there is no space to install other applications (Office, etc.). ASUS provides in its manual very easy instructions to disable SSD-hungry components. The modifications proposed by ASUS are safe and are the first steps to consider for newbies. It's a good idea to get a large SD card to store extra files or install extra applications.

## **Installation method to keep SSD writes to a minimum**

Forum member TheBronze gave some useful ideas for keeping writes to the minimum when running Windows XP on the Eee. The following information was provided by him (edited for wiki use):

The SSD has a limited (but lengthy) lifespan due to the nature of the device and its architecture. We also know that Windows spends a good amount of its time writing files to the C drive, filling it up with temporary files, cookies, update files, and more.

So how do we reduce or eliminate this problem? Well, you can't make it go away; it's just how Windows works. But you can send it to the back forty! This will require an additional SDHC card to occupy your slot. Think of it as a permanent solution, because if you make the changes below and then pull out your SDHC to swap in an MP3 collection, you are going to crash your system. I'm approaching these tasks as a system administrator, so if I get confusing, call me out on it and I will clarify.

Below, I will cover making changes to the following:

- Assigning a permanent drive letter to an external device (SDHC, but you could use a USB drive)
- Moving the Page File off of the C drive
- Moving the My Documents folder off of the C drive
- Moving the Temp and tmp directories off of the C drive
- Moving User Variables off of the C Drive
- Moving Application Data off the C drive
- Using FileMon to detect further writes made to the SSD
- Other considerations

### **Steps**

- Assigning a permanent drive letter to an external device
  1. Right-click My Computer and select Manage
  2. Expand Storage

3. Click on Disk Management
4. Identify your newly installed device
5. Right-click in the area next to the part that says Disk 0 or 1 or other (probably Disk 1, as your built-in disk should be Disk 0)
6. Select “Change Drive Letter and Paths”
7. Select your favorite letter and click OK, then click OK again to the warning about breaking programs.

Note: Any of the steps below can be done on a USB drive, but if you forget to install it when you boot, you will probably see a blue screen.

- Moving the Page File off of the C drive
  1. Right-click My Computer and select Properties
  2. Click on the Advanced tab
  3. Select Settings under Performance
  4. Select Advanced
  5. Under Virtual Memory click Change
  6. Select your existing C drive and set it to “No paging file”
  7. Select your newly assigned SDHC drive letter and assign a value not exceeding twice your physical RAM [Note: if you have enough RAM, you can omit this step and bypass the paging file altogether.]
  8. Click OK.

**Notice:** Unfortunately the directions for moving the page file to SDHC card do not work. XP will let you assign the page file to D:, but will not actually create or use it. It will create a default size pagefile on the SSD instead. This is because XP will not place its swap on a removable device. And as far as I know there is currently no way to convince it SDHC is a permanent drive (there are some directions that will confuse it enough to allow installing applications on SDHC, but still, it will NOT place swap on it). The best thing to do is upgrade RAM and either assign a 64-128MB pagefile to the SSD or just disable swap.

- Moving the My Documents Folder off of the C drive
  1. Right-click My Documents and select Properties
  2. Under Target, select Move and navigate to a new location on your newly assigned drive
  3. If you have not created a directory yet, you can select Make New Folder and name it
  4. Click OK.

Your files will be moved to the new location. The Target window should now have your new location.

- Moving the Temp and tmp directories off of the C drive
  1. Right-click My Computer and select Properties
  2. Select Environment Variables under the Advanced tab

3. Scroll down to TEMP and TMP and change them both to a path on your SDHC drive. It may be wise to use the same two names for these directories.
- Moving User Variables off of the C drive
    1. While in the Environment Variables section, edit both the TEMP and TMP values to point to your newly moved location for your documents and settings if this has not already been done automatically.
  - Moving Application Data off the C drive
    1. Copy C:\Documents and Settings\\Application Data to a flash drive or SDHC
    2. Go into Start, select Run... and type in regedit
    3. Navigate to  
HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\User Shell Folders
    4. Double click the AppData field and replace the text in the box to the path where you copied the Application Data folder to.
    5. Click OK then close out of the registry editor and reboot

**Alternative Procedure:** There is a good alternative to moving My Documents and Application Settings. Move the whole profile. In the user profile there is much more data than application settings and documents and it is a much better solution to move it all at once.

- Moving user profile over to SDHC
  1. Open Control Panel, go to User Accounts and create a new user with Administrator privileges
  2. Log off and Log in as the new user
  3. Go to C:\Documents and Settings\, and move your main user profile to wherever on the D: you want it (assuming you assigned D: letter to SDHC)
  4. Open regedit and go to  
HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\ProfileList
  5. You will see at least two keys there starting with S-1-5-21. You need to open them and looking at the ProfileImagePath value determine which one of them belongs to your main user. Edit that value to reflect the new path to the profile (wherever you moved it in the previous step).
  6. Reboot, log into your main user account and delete the temporary account and its profile.
  7. Enjoy!

**Note:** This set of directions assumes that you never remove that SDHC card. If you ever start Eee without that card you might run into all sorts of trouble, since XP will not be able to find your profile.

- Detecting further SSD writes

1. To see if any other programs or processes are writing to the SSD you can use a program called [FileMon](#) from Sysinternals.

\* Other considerations

- Office. If you install Office XP, 2003, or 2007 and aren't careful during the install, the source files will be written to your C drive. This is around 300MB of space. You can either delete the MSOCache folder on the C drive or just move it to, for example, an external USB drive or HDD; this is useful if you need to make changes while on the road.
- Windows Update. Most Windows Update procedures result in the creation of an uninstall folder in the Windows root directory. These files vary in size from around a hundred kilobytes to a hundred megabytes; my current XP install has about 130 of these folders. You can delete them with no adverse effects, unless for some reason you need to uninstall a recent update.
- Recycle Bin. You can do a few things to minimize space wasted here:
  - Set it to less than 10% of the C drive (10% is the default). Given the small capacity of the SSD, it might be annoying to be notified frequently to empty it.
  - Check the box that says "Do not move files to the Recycle Bin. Remove files immediately when deleted". This can become problematic if you accidentally delete files.
  - Or you can just remember to press Shift+Del when deleting files. Windows will permanently delete them for you.
- Temporary Internet Files and cookies. These relatively small files reside in the My Documents folder, but if you do a lot of surfing with Internet Explorer, you will want to delete them from time to time to keep your second drive from wasting space.
  1. Open Internet Explorer and select Tools, Internet Options
  2. On the General tab, select Delete Cookies and Delete Files. Wait for each to complete. (Note: If you delete your cookies, all your session information from your visited sites will be dumped. Don't forget your passwords!)

Source: <http://forum.eeeuser.com/viewtopic.php?id=942>

Wouldn't it also be a good idea to disable the NTFS last access timestamps? see <http://msdn2.microsoft.com/en-us/library/ms940846.aspx> on how to do that. — [dummzeuch](#)  
2008/03/29 14:59

## Eliminate Virtual Memory Altogether?

If you have installed a RAM upgrade to the EEE PC, it may be possible to eliminate some of the writes to the SSD by using RAM. In practice, Windows XP seldom requires more than 800Mb of RAM when you have 3 or 4 applications open. Certainly if you have a 2Gb RAM chip you will have plenty of RAM to spare, and using RAM is much faster than using an SDHC card. Here are two suggestions:

- 1) Turn off Virtual Memory Altogether (see note above, added 3/13/08)

2) Allocate some memory (perhaps 100Mb) to a RamDisk using products such as RAMdiskVE or Superspeed. Then you can go into the IE or Firefox settings and change the location of the cache file to your RAM disk.

In IE, see Tools→Internet Options→Temporary Internet Files→Settings→Move Folder

In Firefox, go type about:config in the location bar and enter the settings area, then add a setting to the list as described here to specify a new cache file location:

[http://kb.mozillazine.org/Browser.cache.disk.parent\\_directory](http://kb.mozillazine.org/Browser.cache.disk.parent_directory)

Source: <http://wiki.eeeuser.com/windowsxp>