The Problem & Solution for Notebook Hard Drive Upgrades

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Abstract

This paper addresses the problem and solution of notebook hard drive upgrades. Notebooks are becoming increasingly powerful and popular, but upgrading of the hard drive can be difficult. Apricorn’s EZ Upgrade, an all in one hardware and software package, is the solution. The EZ Upgrade simplifies the upgrade process including more capacity, larger cache and faster rotational speeds for notebook hard drives. A larger, faster hard drive includes more capacity for storage, increased functionality in video editing and gaming and an overall enhanced computer experience. With a longer useful life for your notebook, you’ll see a better return on your computer investment.

Problem

Notebooks are increasingly being used as the primary computing platform. According to research firm Current Analysis, laptops sales accounted for 53 percent of the total personal computer retail market since May 2005. Current notebooks are equivalent in performance to desktop machines. People use them to perform the same tasks, such as business applications, audio and video editing, and gaming.

Notebooks purchased a year ago may have a 20 to 40 gigabyte hard drive. The current standard for notebooks is a 40 gigabyte hard drive, though capacities are available with up to 160 gigabytes. Notebook hard drives need to be able to hold more than just spreadsheets and programs; music, video and photos take up vast amounts of space. A photograph from an eight-mega pixel camera can occupy up to 42 megabytes of space as an uncompressed CMYK 48bit/pixel TIFF. The popularity of digital music and online accessibility is allowing people to easily fill up their hard drives. A thousand songs will occupy about four gigabytes of space. Video consumes the most space on a hard drive and can occupy one gigabyte for every two minutes of footage. Normal use can quickly fill up a notebook’s hard drive.

<table>
<thead>
<tr>
<th></th>
<th>Capacity Used</th>
<th>100GB</th>
<th>80GB</th>
<th>60GB</th>
<th>40GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours of music</td>
<td>1 MB/min</td>
<td>1,660</td>
<td>1,330</td>
<td>1,000</td>
<td>660</td>
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<tr>
<td>Photos</td>
<td>3MB/photo</td>
<td>33,330</td>
<td>26,660</td>
<td>20,000</td>
<td>12,800</td>
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<tr>
<td>Hours of DV25 video</td>
<td>11GB/hour</td>
<td>9</td>
<td>7.2</td>
<td>5.4</td>
<td>3.6</td>
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<tr>
<td>Interactive games</td>
<td>2GB/game</td>
<td>50</td>
<td>40</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Business files</td>
<td>100KB/file</td>
<td>thousands</td>
<td>thousands</td>
<td>thousands</td>
<td>thousands</td>
</tr>
</tbody>
</table>

Actual storage requirements will vary based on compression used.

The standard notebook hard drive has a rotational speed of 4,200 revolutions per minute and has two megabytes of cache. Newer notebook hard drives have a rotational speed of 5,400 or 7,200 revolutions per minute and eight to 16 megabytes of cache. This increased rotational speed and cache leads to better performance and prolongs the notebook’s useful life.
There are several major obstacles to upgrading a notebook’s hard drive. Notebooks generally, do not have an easy method to directly connect a second hard drive. Additionally, replacing a notebook hard drive can be a daunting task. Many steps must be taken before the replacement disk is up and running.

Without the aid of an Apricorn EZ Upgrade Kit, any important data, including documents and emails, must be backed up before inserting the new drive in the notebook. Once the new drive is placed in the notebook, an operating system must be installed and updated with the latest service packs and hot fixes. Applications must be reinstalled and brought up to date with the latest service packs, hotfixes, and product updates. After the reinstallation process is complete, the backed up data is then restored to the computer. This whole process can take many hours, if not days, not to mention countless reboots.

Product Design

The EZ Upgrade includes Apricorn’s EZ Gig II Hard Drive Cloning and Upgrade software, a high-speed Universal Serial Bus 2.0 hard drive enclosure, (USB 1.1 compatible) a one-meter USB cable and USB auxiliary power cables.

The EZ Gig II is a powerful and easy tool that creates an exact clone, or a compressed image, of a hard drive, perfect for backups or hard drive upgrades. This second-generation product is loaded with powerful features, such as high-speed USB 2.0 support, adjustable compression settings, comment fields and password protection. In addition to supporting data transfers via high-speed USB 2.0, the EZ Gig II also supports USB 1.1, PC Card, IDE PATA and SATA interfaces.

EZ Upgrade Solves the Notebook Hard Drive Upgrade

EZ Upgrade is all users will need to easily transfer all data on the drive—including operating systems, applications, documents, address books, e-mail, settings, and preferences—from the old hard drive to a new drive in three easy steps.
The notebook now has a larger, faster hard drive. This will allow increased storage of large business files, presentations and data-intensive media files. If you choose to increase the rotational speed, the transfer rates will increase, boot up time will decrease and programs will launch faster. By upgrading both the capacity and speed of the hard drive, you will meet the business demands for increased productivity and improve employee moral.

An additional benefit of upgrading the hard drive is an increase of the useful life of the notebook. This allows for a longer use and a better return on investment. When the original user is done with the notebook, it can be passed to co-workers or family members and be a useful tool for many years.

Another benefit of EZ Upgrade is that the old drive can be used in EZ Upgrade’s high-speed USB 2.0 enclosure as external storage. When used with EZ Gig II, the external drive becomes a state-of-the-art backup solution.

Conclusion

Apricorn’s EZ Upgrade facilitates easy upgrades to a notebook’s hard drive. This upgrade gives the user a better, more enhanced overall computing experience by allowing more storage space for photos, movies and music. Also, faster rotational speed of the new hard drive allows for faster video editing and better gaming. Upgrading the hard drive will increases the notebook’s performance and useful life for years to come.

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