

Active@ Partition Manager
(Freeware version)
User Guide

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1.0 Product Overview

This chapter gives an overview of Active@ Partition Manager.

1.1 About Active@ Partition Manager

Active@ Partition Manager is an application that helps you manage storage devices and the logical drives or partitions that they contain. You may create, delete, format and name partitions on your computer without shutting down the system. Most configuration changes take effect immediately.

Active@ Partition Manager includes the following features:

- Easy-to-use interface
- View the properties of a partition, logical drive or hard drive device
- Assign or change partition attributes
- Format a logical drive or partition
- Create or delete a partition or logical drive
- Create several partitions on a USB flash memory device
- Format a USB device as NTFS
- Create FAT32 partitions greater than 32GB in size

The Active@ Partition Manager Professional version allows you to recover an entire deleted partition

1.2 Requirements

This chapter outlines the minimum requirements for PCs using Active@ Partition Manager.

Personal Computer

IBM PC/AT compatible CPU

Intel Pentium processor or higher

128 Mb of RAM

Video must be VGA or better resolution (800 x 600)

Drive Storage System

USB storage device

Hard Disk Drive type IDE, ATA, SATA or SCSI with controllers

1.3 Downloading and installing

To download the free version visit <http://www.ntfs.com/> and download the installation package.

To install Active@ Partition Manager, double-click the install executable that you just downloaded and follow the install wizard steps.

1.4 Active@ Partition Manager Workspace

When you start Active@ Partition Manager, it retrieves information about all media storage devices and volumes on your computer. The message in the status bar shows "Analyzing devices..." or "Analyzing Volume..."

After initial information about storage devices has been collected, the information appears in the Data Storage Devices and Partitions table.

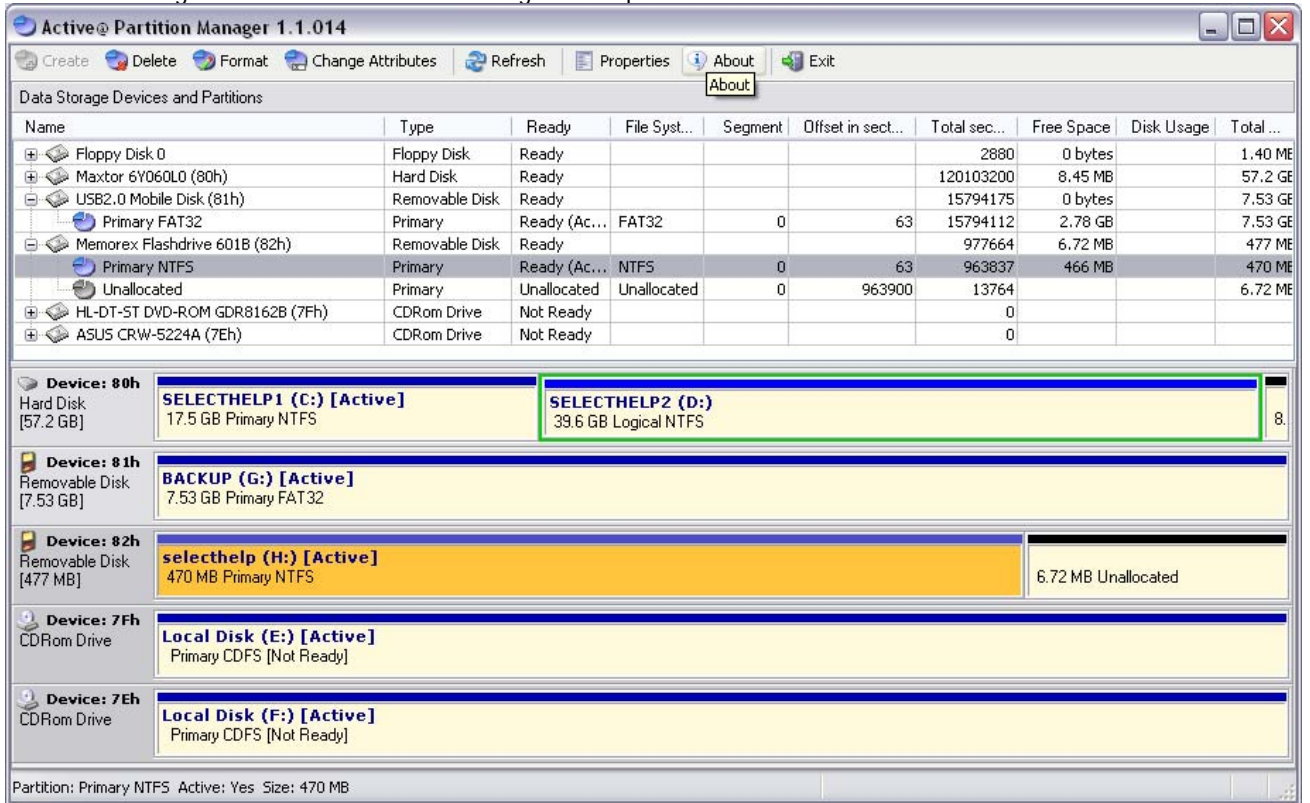
Below the table, a list of devices appears. Each device displays partitions associated with the device.

In the table, to expand a device and view the partitions that belong to that device, click the plus sign (+) next to the device name. If you click a partition to select it, the corresponding partition in the device list is selected.

Similarly, if you click a partition in the device list to select it, the corresponding partition in the table is selected.

In both cases, the status bar displays the type, file system, ready-state and size of the selected partition.

Figure 1-1 Active@ Partition Manager Workspace



2.0 Using Active@ Partition Manager

You must be logged on as an administrator or a member of the Administrators group in order to use Active@ Partition Manager . If your computer is connected to a network, you might need help from your network administrator to be able to use Active@ Partition Manager .

Use this utility to perform maintenance tasks on hard drive partitions.

2.1 View properties

To view properties of a device:

1. To open the device properties box, do one of the following:
 - Click a device to select it and click **Properties**.
 - Right-click a device and select **Properties** from the context menu.
2. To view properties of the BIOS, select the **General** tab.
3. To verify the volumes that this device contains, select the **Volumes** tab.

To view properties of a partition:

1. To open the partition properties box, do one of the following:
 - Click a partition to select it and click **Properties**.
 - Right-click a partition and select **Properties** from the context menu.

2.2 Change drive attributes

Be careful when you change the drive letter. If another program makes references to the existing drive letter, changing the drive letter destroys the existing references.

If an error message appears when you attempt to change a drive letter, it may be because another program is using it. If this happens, close the program that is using the device.

If you want to change the drive letter for a device, the drop-down list contains only those letters that have not been assigned to a device.

To change drive attributes:

1. To open the **Change Drive Attributes** dialog box, do one of the following:
 - Click a device or a partition to select it and click **Change Attributes**.

- Right-click a device or a partition and select **Change Attributes** from the context menu.
2. To change the device letter, select a letter from the **Assign the following drive letter** drop-down list.
 3. To change the volume label, type a new label into the **Volume label** box.
 4. Click **OK**.

2.3 Format a partition

You may format or reformat any partition on your computer. With Active@ Partition Manager , you may format a USB device as NTFS.

If you perform a quick format, you remove files from the file table, and you do not scan the disk for bad sectors. Use quick format only if you are sure the disk is not damaged.

To format a partition:

1. To open the **Format** dialog box, do one of the following:
 - Click a partition to select it and click **Format**.
 - Right-click a partition and select **Format** from the context menu.
2. Type a volume label in the **Volume Label** box.
3. Select a file system type from the **File System** drop-down list.
4. To determine the file allocation unit size, select a size from the **Allocation unit size** drop-down list.
5. To perform a quick format, select the **Perform a quick format** check box.
6. To perform a full format, clear the **Perform a quick format** check box.
7. Click **OK**.

A progress bar appears.

2.4 Create a partition or logical drive

You may create a partition or logical drive only on the unallocated part of a drive device.

You may create several partitions on USB devices.

Active@ Partition Manager can also create FAT32 partitions greater than 32GB which you cannot create using standard Windows tools.

To create a partition:

1. To open the **Create Partition** dialog box, do one of the following:
 - On a hard disk device, click an **Unallocated** area to select it and click **Create**.
 - Right-click an **Unallocated** area and select **New Partition** in the context menu.
2. At the top of the dialog box, select the partition type. It may be one of:
 - Primary Partition
 - Extended Partition
 - Logical Drive in the extended partition
3. In Partition geometry, do the following:
 - To indicate the byte offset at which to start the partition, type the offset number in the **Partition offset, sectors** box.
 - To indicate the size of the partition in megabytes, type the size in the **Partition size in MB** box. The maximum available size for this partition appears next to this box.
4. In Drive Letter, do the following:
 - To create an extended partition with no drive letter, click **Do not assign drive letter**.
 - To assign a drive letter, click **Assign the following drive letter** and select a letter from the drop-down list.
5. In Format Partition, do the following:
 - To skip formatting this partition and create an extended partition, click **Do not format this partition**.
 - To format this partition, click **Format this partition with the following settings** and set parameters for the format action.
6. Click **OK**.

The partition is created.

2.5 Delete a partition or logical drive

Caution Before you delete a partition, be sure to back up the data. When you delete a partition or logical drive, you will lose all the data that it contains.

To delete a partition:

1. Click a partition in the list to select it.
2. Click **Delete**. A confirmation message appears.
3. Click **Yes**.

The partition is deleted.

If you have deleted a partition and you want to recover the data from that deleted partition, buy the professional version of **Active@ Partition Manager** and undelete the partition.

If a deleted partition cannot be undeleted, you may still be able to recover specific files and folders with **Active@ File Recovery** (<http://www.file-recovery.com>).

3.0 About partitions

A partition on a hard disk device is a unique segment that is separate from other segments on the device.

A typical hard disk is a physical disk or a USB device that contains primary partitions, extended partitions, or logical drives. A partition or a logical drive can also be called a volume.

A primary partition—also called a boot partition—contains one file system. In most versions of Microsoft Windows operating systems, the first partition (drive C:) must be a "primary partition".

A common partition type code for a primary partition used with Microsoft Windows NT 4.x, Windows 2000 and Windows XP is NTFS.

The number of partitions you can create on a hard disk or a USB device depends on the device's partition style. In Windows, the MBR (Master Boot Record) describes how a disk is partitioned, which partition contains the boot sector and where the boot sector is located. On MBR devices, you can create up to four primary partitions, or you can create up to three primary partitions and one extended partition. You may create only one extended partition on a drive device. Within the extended partition, you can create an unlimited number of logical drives.

You can add more space to an existing primary partition by extending it into adjacent, contiguous unallocated space on the same disk. To extend a partition, it must be formatted with the NTFS file system. You can extend a logical drive within contiguous free space in the extended partition that contains it. If you extend a logical drive beyond the free space available in the extended partition, the extended partition grows to contain the logical drive as long as the extended partition is followed by contiguous unallocated space.

4.0 Glossary

allocation unit

Consistent unit of disk space allocated to each file and directory in order to reduce time for managing data structures. The space occupied by every file or directory will be a multiple of the assigned allocation unit, regardless of the actual size of the file.

See also: cluster

BIOS settings

Basic Input Output Subsystem. Programmable chip that controls how information is passed to various devices in the computer system. A typical method to access the BIOS settings screen is to press ESC, F1, F2, F8 or F10 during the boot sequence.

boot priority

First device, or any device that is higher in the order list having preference over devices that are lower in the order. BIOS settings allow you to run a boot sequence from a floppy drive, a hard drive or a CD-ROM drive. You may configure the order that your computer searches these physical devices for the boot sequence. For example, to boot from a CD-ROM drive instead of a hard drive, place the CD-ROM drive ahead of the hard drive in priority.

boot record

See MBR.

exclusive access

Lock that is applied to a partition for exclusive writing access, for example while recovering deleted or damaged files or folders. The recover operation must have exclusive access to the target partition while recovering files. If another application or the operating system is using the target partition, you must close all applications or system processes that may be using the target partition before you may lock it.

extended partition

Partition that is not formatted and has no drive letter. An extended partition is useful if you want to create more than four volumes on a hard disk. You may create one or more logical drives within an extended partition. After you create the logical drive, you format it and assign it a drive letter.

FAT

File Allocation Table. Space that contains the records of data of every file and directory in a FAT-formatted hard disk drive.

The operating system needs this information to access the files. The FAT computer file system is the basis for MS DOS and Windows operating systems up to Windows Me.

Active@ Partition Manager supports FAT32, FAT16 and FAT versions.

deleted boot records

Damaged or erased MBR. In a damaged disk, if the location of the boot records is known, the partition table can be reconstructed.

MBR

Master Boot Record. All disks start with a boot sector. When you start the computer, the code in the MBR executes before the operating system is started. The location of the MBR is always track (cylinder) 0, side (head) 0, and sector 1. The MBR contains a file system identifier.

MFT records

Master File Table. File that contains the records of every other file and directory in an NTFS-formatted hard disk drive. The operating system needs this information to access the files.

NTFS

New Technology File System. Developed by Microsoft after the FAT file system, it is the preferred file system for Microsoft Windows operating systems. NTFS has improved support for metadata and the use of advanced data structures to improve performance, reliability, and disk space utilization.

partition

Portion of a physical disk that functions as though it were a logically separate disk. After you create a partition, you must format it and assign a drive letter to it before you can store data on it.

A partition is also called a volume. A volume may be a primary partition or a logical drive.

On a software RAID-type disk, a partition is called a dynamic volume.

partition boot sector

A portion of a hard disk partition that contains information about the disk's file system and a short machine language program that loads the operating system.

primary partition

Partition that contains one file system (DOS, Windows, etc.) or exists for a special use. In DOS or Windows, a standard setup includes a single, active primary partition (usually the C: drive), that contains the operating system, utilities, applications, user data and page/swap file.

root records

See FAT.

unallocated space

Space on a hard disk where no partition exists. A partition may have been deleted or damaged or a partition may not have been created.