



How to resize partitions on a USB disk drive in Windows

1 Prerequisites

- Nil

2 Required Equipment/Software

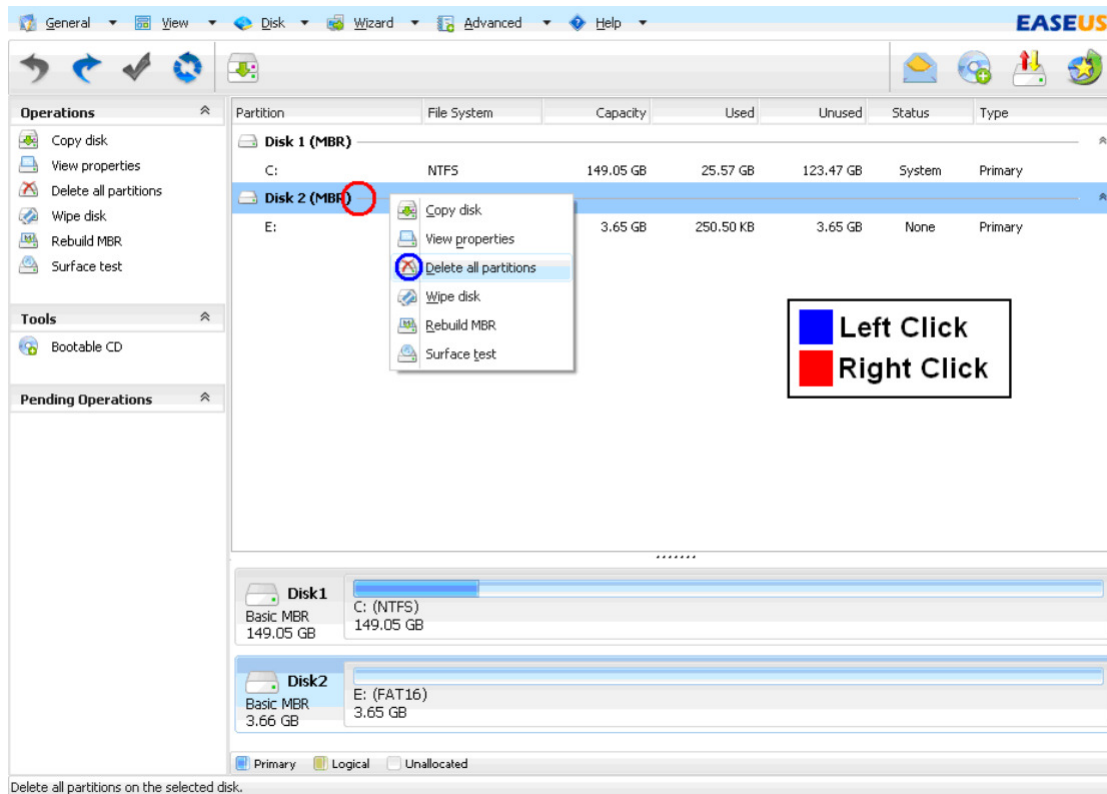
- dataTaker DT80 series data logger
- USB disk drive (sometimes called a pendrive or thumbdrive)
- PC running Microsoft Windows
- EASEUS Partition Master (<http://www.partition-tool.com/download.htm>)

3 Process

3.1 Delete all partitions on the USB disk

Before you run Partition Master you will need to plug your USB disk into an available USB port on the PC. Upon starting Partition Master you are presented with a summary screen that details all available drives on the local computer, this includes the system drive and any removable drives (such as your USB disk).

NOTE: It is important to identify the correct disk drive that corresponds to your USB stick as this process will erase everything on the disk – it is recommended to double-check the drive letter and the capacity.

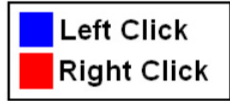
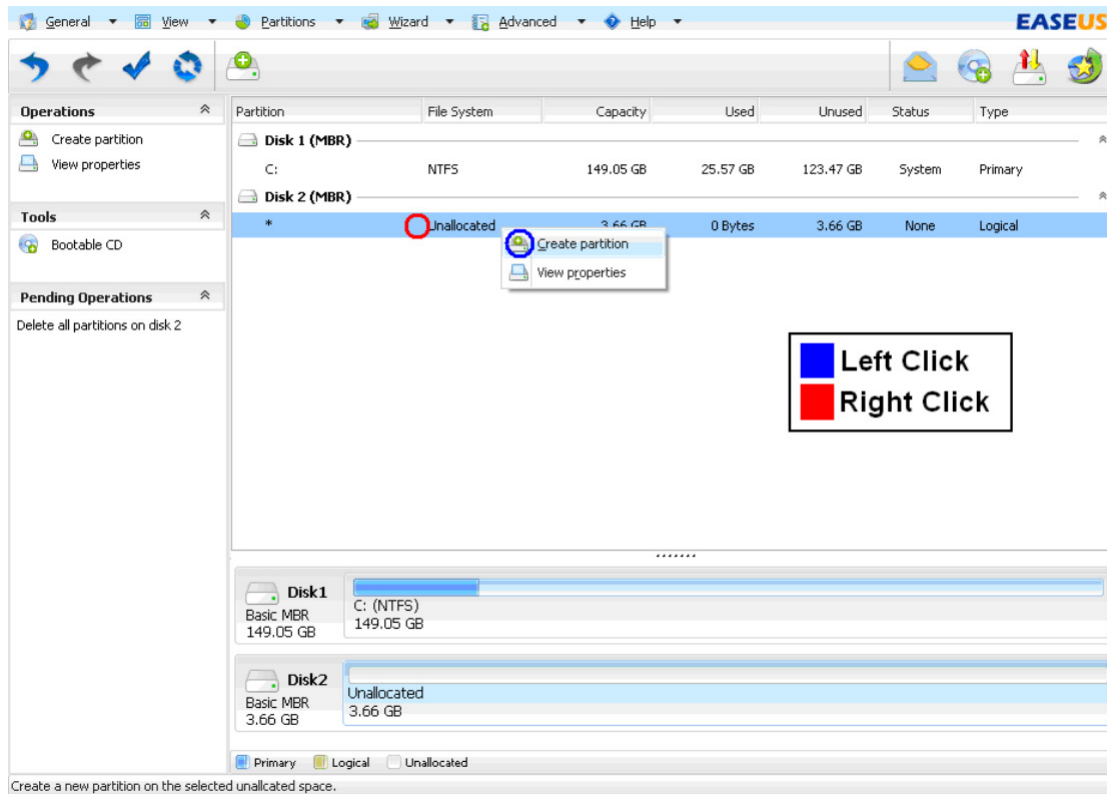




- In the main window, right-click the disk that corresponds with your USB drive and click **Delete all partitions**
- A warning window will appear that will ask you to confirm this action, click **OK**
- The “delete all partitions” task will be added to the *Pending Operations* list in on the left hand side of the screen, these tasks are queued and executed after all tasks are defined

3.2 Create a smaller partition on the USB disk

Now that you have a blank file system on your USB disk it will be necessary to create a single, smaller file-system which will be used to store your log files.



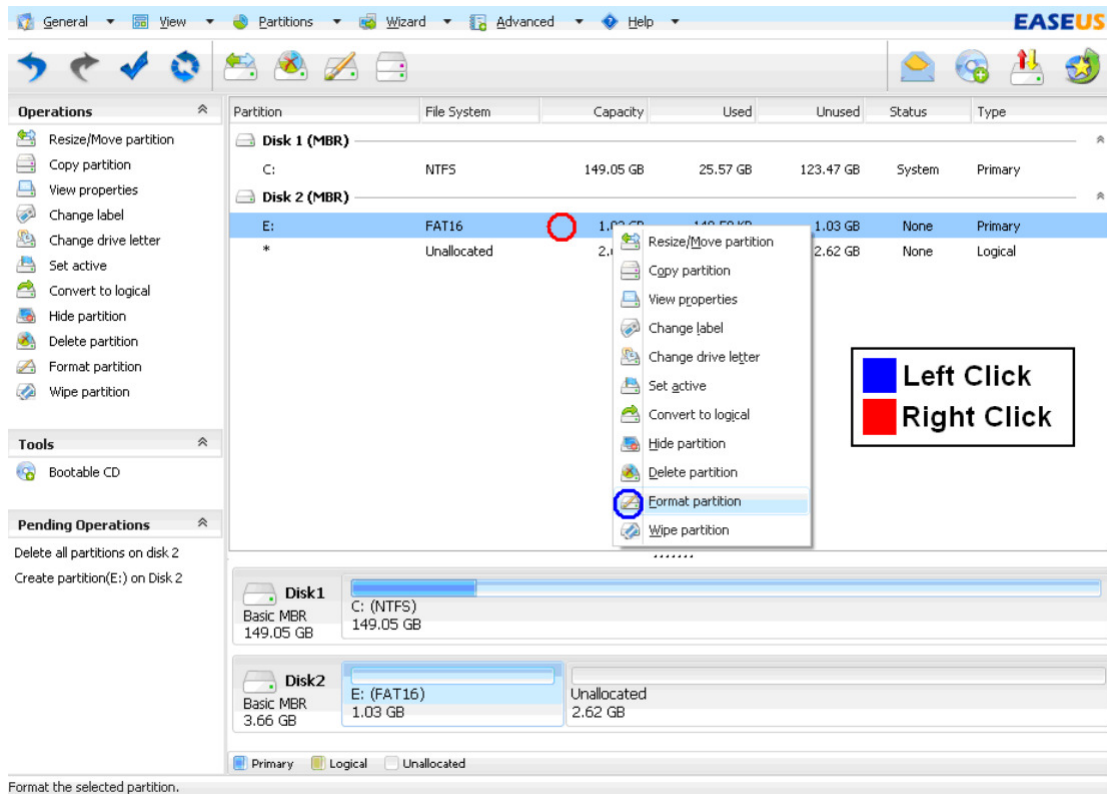
- In the main window, right-click the “unallocated” item underneath your USB drive and click **Create partition**
- A dialog box will appear that asks for the specifications for the new partition, these specifications will be:
 - Create as = **Primary**
 - File System = **FAT**
 - Drag the slider from the right hand side to create the desired storage space on the USB disk (smaller space = faster response time in the logger). It is recommended that this size be 2000MB or smaller
 - Check to ensure that “unallocated space before” is 0.0
- Click **OK** when done

Again a new task will be added to the *Pending Operations* list on the left-hand side of the main screen.



3.3 Format the new partition for use with a dataTaker

Now that a smaller partition has been created for use with the dataTaker, we need to format it so that it will be optimised for speed rather than space. What this means is that we need to have a large cluster size (32KB) rather than the standard 4KB. This effectively reduces the total number of clusters and therefore the read time is significantly reduced. The downside to this is that the smallest file that can exist on the drive is 32KB, so if one were to store many small files on the drive (like an operating system) then the drive would fill up quickly. This is not a problem for the dataTaker because storefiles are few and typically large files.



- In the main window, right-click the new “FAT16” entry underneath your USB drive and click **Format partition**
- A dialog box will appear that asks for the specifications for the new partition, these specifications will be:
 - File System = **FAT**
 - Cluster size = **32KB**
- Click **OK** when done

3.4 Apply the changes

Now that the specifications for the USB drive have been identified and queued, we need to apply the changes. To do this you need to click the large tick in the tool bar at the top of the screen.

At this stage you will be prompted to confirm the application of these changes. Click yes to confirm. If prompted to restart the computer then select no as it is unnecessary.



4 Appendices

4.1 Typical read times for USB drives

The table below identifies the time required for the DT80 to analyse and read a USB drive before it can be used for data storage.

Drive capacity (MB)	Cluster size (KB)	Time for DT80 to read (s)
500	8	14
500	16	8
500	32	5
1000	16	14
1000	32	8
2000	32	14
4000	8	182
4000	16	93
4000	32	47