

About RAID

RAID is an acronym for Redundant Array of Independent Disks. With RAID enabled on a storage system you can connect two or more drives in the system so that they act like one big fast drive or set them up so that one drive in the system is used to automatically and instantaneously duplicate (or mirror) your data for real-time backup.

Advantages of RAID

There are three reasons you might want a RAID system of drives.

1. You need tons of storage space and you need it to be fast. (RAID 0)
2. You want to instantaneously and automatically backup your data. (RAID 1)
3. You want both. (RAID 5)

Which RAID mode should I use?

1. Speed (RAID 0)

Set in high-performance mode (also called striped mode or RAID 0) the storage system gives you the power you need when you're:

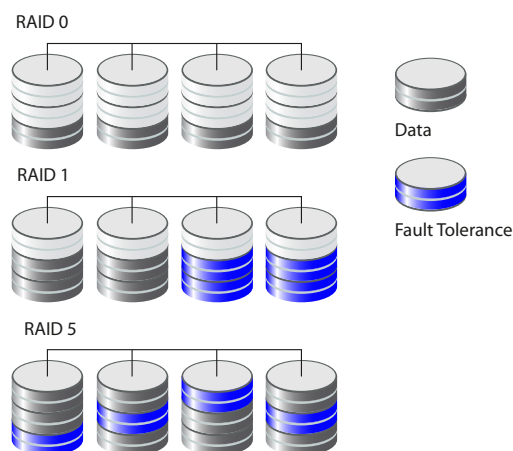
- Designing huge graphics and need a lightning-fast Photoshop® scratch space.
- Recording large DV files while maintaining clean audio performance.
- Editing DV or HD video and want a smooth work flow with no dropped frames.
- Rendering complex 3D objects or special effects.
- Performing disk-intensive database operations.
- Driven to be the first geek on your block with a computer so fast it blows your socks off.

Why is RAID 0 so fast? It's a bit complicated, but suffice it to say that two or more heads, or in this case, drives, are better than one. Picture multiple hoses filling a bucket at the same time or several men bailing a boat and you can understand why two or more drives striped are faster than one. Data is saved (striped) across the drives and accessed in parallel by all the drives so you get higher data transfer rates on large data accesses and higher input/output rates on small data accesses.

2. Data protection (RAID 1)

Set the system to data protection mode (also known as mirrored mode or RAID 1) and the capacity is divided in half. Half of the capacity is used to store your data and half is used for a duplicate copy.

RAID Mode Comparison







Why do I want that kind of redundancy? It's your data, your family pictures, your movie of baby's first steps, your first novel. Is it important? You decide. If it is, then RAID mirroring is for you.

3. Data protection and speed (RAID 5)

In systems with three or more drives, (like our WD ShareSpace™ Network Storage System) we recommend that you set the system to RAID 5. This gives you the best of both worlds: fast performance by striping data across all drives; data protection by dedicating a quarter of each drive to fault tolerance leaving three quarters of the system capacity available for data storage.

WD's Storage Systems with RAID

				
	WD ShareSpace	My Book® Studio Edition™ II	My Book Mirror Edition™	My Book World Edition™ II
RAID 0 (Striped)	◆	◆	◆	◆
RAID 1 (Mirrored)	◆	◆	◆	◆
RAID 5	◆			

- ◆ Default configuration
- ◆ Capable configurations



Western Digital, WD, the WD logo, Put Your Life On It, and My Book are registered trademarks in the U.S. and other countries; and WD ShareSpace, Studio Edition, Mirror Edition and World Edition are trademarks of Western Digital Technologies, Inc. Other marks may be mentioned herein that belong to other companies. Not all products or capacities are available in all regions of the world. Pictures shown may vary from actual products. All product and packaging specifications subject to change without notice.

As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment.