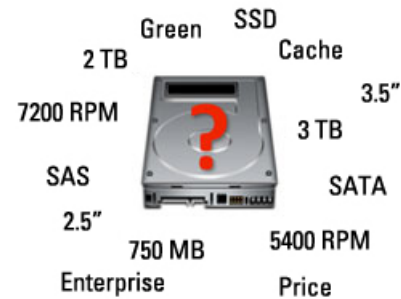


## Which Drive Is Right for Your Drobo?

Drobo gives you the flexibility to use a wide variety of drive types and capacities, but with many drive options to choose from, the process of getting the ideal drive is challenging. Not all drives are the same and if you do not choose the right one, your Drobo's performance may not meet your expectations. Here are options you should consider when evaluating drives:

- **Grade** – Quality is important when deciding what drive to use. If you will be actively using the drives most of the day in a business environment, for example, you should use enterprise-grade drives. Enterprise drives have higher MTBF (Mean Time Between Failures), which is a good thing when used with applications in continuous use.
- **RPM** – When it comes to disk drive performance, the speed at which the disks spin is very important. Choose faster spinning drives ( $\geq 7200$  RPM) for applications that can take advantage of higher-performance storage. For example, so-called "Green" ( $\leq 5600$  RPM) drives have the lowest RPM rating and will be the slowest performing drives in a Drobo. For optimal performance, it's best not to mix 7200 RPM drives with slower drives. Also, it is not recommended to mix significantly different RPM speeds, such as 7200 RPM with 15,000 RPM in the Drobo B1200i.
- **Capacity** – With Drobo, you can choose the capacity that you need today and expand with larger capacity drives in the future. Remember, with the disk redundancy in arrays like Drobo, one or more drives will be used to store parity data. Use the Drobo [Capacity Calculator](#) for specific information.
- **Form Factor** – All 3.5" drives are compatible with Drobo's carrier-less design, requiring no tools or screws to install.
- **Cache** – Most modern drives have a good amount of internal cache (32 or 64 MB), so this is not a critical deciding factor.
- **Interface** – All Drobos use SATA (SATA II/III) drives, but the Drobo B1200i can also use SAS drives. The main difference is that SAS drives are dual-ported, enabling a high-availability architecture such as can be found in the B1200i.
- **Number of Drives** – In arrays like Drobo, the more drives installed, the faster the performance. For example, if you are using a B800i in a VMware vSphere cluster, consider using 8 enterprise-grade drives instead of a smaller number such as 4. The same goes for the B1200i, where you would want to use 12 instead of 6.
- **Price** – Despite the many other things to consider, often the #1 deciding factor when people purchase drives is price. Since performance, reliability, and energy efficiency are also key purchase criteria, price should not be the only consideration. Purchasing high-quality drives will give you a better storage experience by reducing the chance of having to replace or rebuild a drive—ultimately saving you money.



Below are descriptions of supported drive types.

### Desktop "Green" SATA Disk Drives

- Home or home office environments where reduced noise and energy efficiency are more important than performance
- Often the lowest-cost drive type
- Examples are WD Caviar Green and Seagate Barracuda Green

### Desktop Performance SATA Disk Drives

- Home or small office environments where high-performance storage is required ( $\geq 7200$  RPM)
- Often more reliable and recommended above "green" drives
- Examples are the WD Caviar Black and Seagate Barracuda XT

## Enterprise "Green" SATA Disk Drives

- Small and medium-sized business environments in which reduced energy consumption and cooling requirements are more important than high performance
- The benefits of a "green" drive with enterprise reliability
- Good for file and backup servers that are not heavily exercised
- Example is the WD RE4-GP

## Enterprise Performance SATA Disk Drives

- Small and medium-sized business environments that require reliable, high-performance storage that is affordable
- Good for server virtualization and business applications
- Examples are WD RE4 and Seagate Constellation ES (SATA)

## Enterprise Performance SAS Disk Drives

- Small and medium-sized business environments that require reliable, high-performance storage
  - Good for server virtualization and business applications
  - Dual-ported for a high-availability architecture
- The Drobo B1200i comes with 7200 RPM SAS drives. While the B1200i supports 15,000 RPM SAS drives, it is not recommended that you mix these two drive rotational speeds.
- Examples are WD RE SAS and Seagate Constellation ES (SAS)

## Enterprise Performance SAS Solid State Drives (SSDs)

- Small and medium-sized business environments that require accelerated storage performance
- Good for high-density server virtualization and business-critical applications such as Microsoft Exchange
- Ideal when paired with Enterprise Performance SAS Disk Drives to create a multi-tier storage solution
- Examples are OCZ Talos, Seagate Pulsar, and Pliant Lightning

The table below summarizes the drive types for each Drobo model.

### Drive Types Supported in Each Drobo

	Drobo	Drobo S	DroboPro	Drobo FS	Drobo B800fs	Drobo B800i	Drobo B1200i
Desktop "Green" SATA Disk Drives							
Desktop Performance SATA Disk Drives							
Enterprise "Green" SATA Disk Drives							
Enterprise Performance SATA Disk Drives							
Enterprise Performance SAS Disk Drives							
Enterprise Performance Solid State Drives (SSDs)							

- Supported and Recommended - best drive type to use with this Drobo.
- Supported - can be used with this Drobo.
- Not Supported - do not use with this Drobo.