

TOSHIBA
Leading Innovation >>>

Hybrid Drive

Delivering Speed and Capacity



RESTRICTIONS ON PRODUCT USE

Before creating and producing designs and using, customers must also refer to and comply with the latest versions of all relevant TOSHIBA information and the instructions for the application that Product will be used with or for.

TOSHIBA CORPORATION
Semiconductor & Storage Products Company

Where to contact
<http://www.toshibastorage.com/>



Hybrid Drive

HDD + NAND

What do you need more for your PC,
High Performance or Large Capacity ?

Powered by Toshiba NAND Flash Technology,
Toshiba Hybrid Drive offers both performance and capacity
for High End Notebook PCs and Ultrathin Notebook PCs —
computing without compromise !



Hybrid Technology

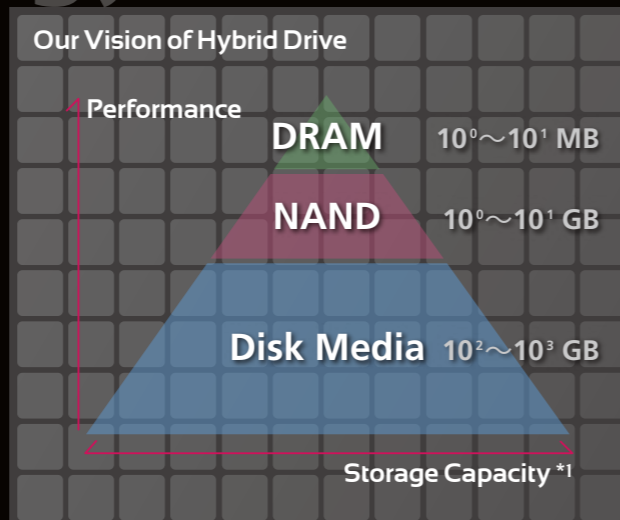
Toshiba has optimized self-learning caching algorithm for our Hybrid Drive. Toshiba's Hybrid Drive dynamically learns your data accessing pattern and directs data to the appropriate tiers, that are DRAM, NAND, and Disk Media. This boosts an HDD's performance to the level of SSD.

Inventor of NAND

As the inventor of NAND and a leader in HDDs, Toshiba has the engineering expertise to combine NAND, HDD and SSD technologies to develop and produce Hybrid Drives.

Toshiba's NAND Controller Technologies unleash the full NAND capability:

- Defective Blocks Management
- ECC (Error Correction Code)
- Conversion of Logical Block Address
- Wear-leveling (Equating Write count)



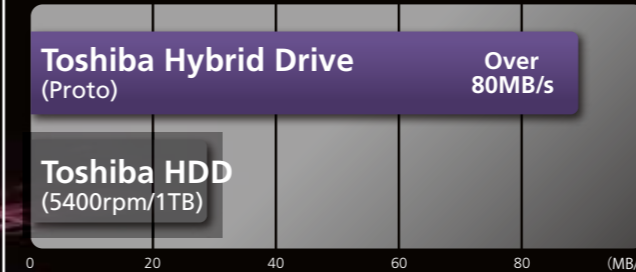
Key Features

High Performance

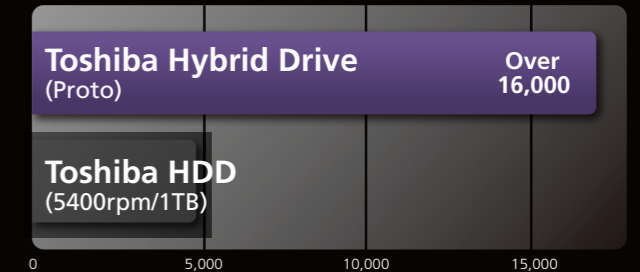
Toshiba's Hybrid Drive (Proto model) attains the higher score by PCMark[®]*2 Vantage, comparing to HDD (1TB*1).

PCMark[®]*2 Vantage Score

Video editing Score



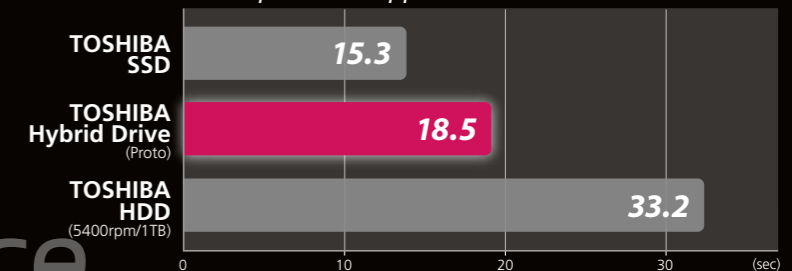
Overall Score



Time for starting Applications is accelerated and almost rivals the level of SSDs.

Applications*3 started by this experiment : Microsoft[®] Outlook[®] + Microsoft[®] Excel[®] + Microsoft[®] Word + Microsoft[®] PowerPoint[®]

Start-up Time of Applications (Measurement method : Toshiba original)



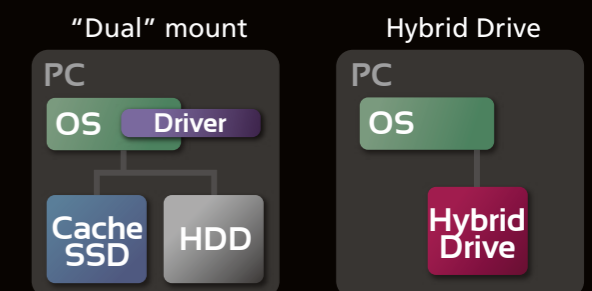
Large Capacity

Toshiba's Hybrid Drive delivers HDD's large capacity – up to 1TB*1.

Compatibility

Toshiba Hybrid Drive offers the same in physical size and in interface with the traditional 2.5-inch HDD.

Toshiba's Hybrid Drive is recognized by the system as one storage device. The system accesses the drive through one interface without the need for specific device driver software. The single interface allows for physical space efficiency with in a system.

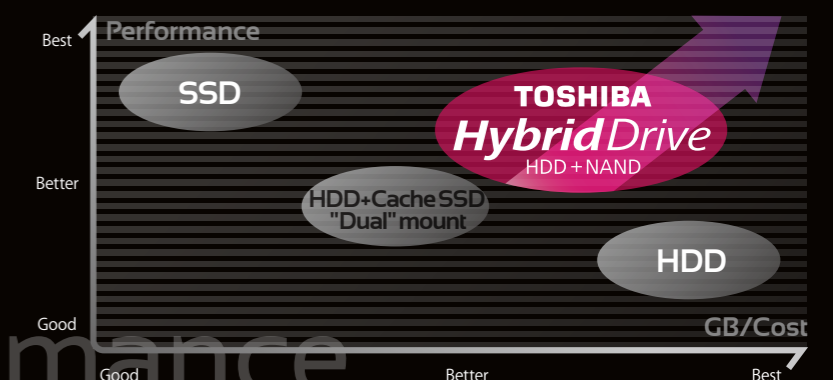


Compatibility

Cost Performance

Toshiba's Hybrid Drive delivers the advantages of both SSDs (High Performance) and HDDs (Large Capacity).

Toshiba's Hybrid Drive is a lower cost alternative to SSDs while keeping SSD-class performance by the optimized NAND Flash configuration.



*1 : PCMark[®] is a registered trademark of Futuremark corporate.

*2 : A megabyte (MB) as 1,000,000 bytes, a gigabyte (GB) as 1,000,000,000 bytes, and a terabyte (TB) as 1,000,000,000,000 bytes.

*3 : Microsoft[®], Outlook[®], Excel[®], PowerPoint[®] are registered trademarks of Microsoft Corporation in the United States and other countries.