

## Use of Shingled Magnetic Recording (SMR) technology in Toshiba Consumer Hard Drives.

The introduction of Shingled Magnetic Recording (SMR) technology has enabled HDD manufacturers, such as Toshiba, to increase the capacity of their spinning platter drives beyond that of existing approaches. SMR technology is recognized as having an impact on write-speeds in drives where this technology is used, especially in the case of continuous random writing. For this reason, Toshiba products are carefully tailored to specific workloads and use cases.

For example, in use cases such as network-attached storage (NAS), where continuous random writing regularly occurs, Toshiba's current product line for consumers features the N300, which does not use SMR.

The following drives do use SMR technology:

The P300 Desktop PC Hard Drive range of products, which is the product line for client drive application, such as all-in-one PCs and desktop PCs.

In the current range, the following drives *do use* SMR technology:

- P300 6TB HDWD260UZSVA (Bulk)
- P300 4TB HDWD240UZSVA (Bulk)



The L200 Laptop PC Hard Drive range of products, which is the product line for client drive application, such as notebook PC, game consoles, and external enclosures, etc.

The following drives also use SMR technology:

- L200 2TB HDWL120UZSVA (Bulk), HDWL120EZSTA (Retail), HDWL120XZSTA (Retail)
- L200 1TB HDWL110UZSVA (Bulk), HDWL110EZSTA (Retail), HDWL110XZSTA (Retail)

Toshiba works extensively with Notebook and Desktop PC vendors on the selection of the appropriate storage media to help ensure the data integrity, reliability and planned lifetime requirements of the system. To find out more information on selecting the type of drive suitable for your needs, please visit consumer website at https://www.toshiba-storage.com/.

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