

Form Factor	3.5-inch			3.5-inch				2.5-inch			
Marketing name	X300			P300				L200			
Category Description	Extreme-Performance Desktop Hard Drive			High-Performance Desktop Hard Drive				Reliable-Performance Mobile Hard Drive			
Identify	TOSHIBA HDWE160	TOSHIBA HDWE150	TOSHIBA HDWE140	TOSHIBA HDWD130	TOSHIBA HDWD120	TOSHIBA HDWD110	TOSHIBA HDWD105	TOSHIBA HDWJ110	TOSHIBA HDWJ105	TOSHIBA HDWK105	
Basic Specifications											
Interface	SATA			SATA				SATA			
Interface Speed	6.0 Gbit/s			6.0 Gbit/s				3.0 Gbit/s		6.0 Gbit/s	
Capacity	6TB	5TB	4TB	3TB	2TB	1TB	500GB	1TB	500GB	6.0 Gbit/s	
Form Factor	3.5-inch			3.5-inch				2.5-inch, 9.5mmH		2.5-inch, 7mmH	
Logical Data Block Length(HOST)	512 B			512 B				512 B			
Logical Data Block Length(DISK)	4,096 B			4,096 B				4,096 B			
Advanced Format (AF)	yes			yes				yes			
Environmental Compliance	RoHS compatible			RoHS compatible				RoHS compatible			
Features											
Drive Bays Supported*1	not support			not support				not support			
Rotational Vibration (RV) Sensors	-			-				-			
Shock Sensor	yes			yes				yes			
low power consumption	-			-				-			
Silent Seek mode	not support			not support				not support			
Toshiba Ramp Load Technology	support			support				support			
Wobble Load Technology	-			-				-			
Toshiba Stable Platter Technology (Tied Spindle Motor)	support			not support				not support			
Toshiba Dynamic Cache Technology	-			-				-			
Cache Algorithm & Buffer Management	not support			not support				yes			
Perpendicular Magnetic Recording (PMR) technology	yes			yes				yes			
Tunnel Magneto-Resistive (TMR) Recording Head Technology	yes			yes				yes			
Optimized self-learning caching algorithm	not support			not support				not support			
Performances											
Rotation Speed	7,200rpm			7,200rpm				5,400rpm			
Buffer Size	128 MB			64 MB				8 MB			
Average Latencytime	4.17 ms			4.17 ms				5.36ms			
Reliability											
MTTF	600,000hours			non-public				600,000hours			
Unrecoverable Error Rate	1 per 10E14 bits read			1 per 10E14 bits read				1 per 10E14 bits read			
Load/Unload	300,000cycles			600,000cycles				600,000cycles			
Power Requirements											
Supply Voltage	5 V DC ±5 %			5 V DC ±5 %				5 V ±5 %			
Power Consumption(Read/Write)	11.3W			6.4 W Typ.				1.5 W			
Power Consumption(Low Power Idle)	6.0 W			5.2 W				3.7 W			
Dimensions											
Height	26.1 mm			26.1 mm				9.5 mm		7mm	
Length	147 mm			147 mm				100 mm			
Width	101.6 mm			101.6 mm				69.85 mm			
Weight	770 g Max.			720 g Max.		680 g Max.		450 g Max.	117g Max.	107g Max.	92g Max.
Environmental Requirements											
Temperature (Operating)	5 to 55 °C			0 to 60 °C				5 to 55 °C			
Temperature (Non-operating)	-40 to 70 °C			-40 to 70 °C				-40 to 65 °C			
Humidity (Operating)	5 to 90 % R.H.			8 to 90% R.H, non-condensing				8 to 90 % R.H.			
Humidity (Non-operating)	5 to 95 % R.H.			5 to 95% R.H, non-condensing				8 to 90 % R.H.			
Altitude (Operating)	-305 to 3,048 m			-300 to 3,048 m				-300 to 3,000 m			
Altitude (Non-operating)	-305 to 12,192 m			-300 to 12,000 m				-300 to 12,000 m			
Vibration (Operating)	7.35 m/s ² (0.75 G) (5 to 300 Hz) 2.45 m/s ² (0.25 G) (300 to 500 Hz)			6.57 m/s ² (0.67 G) (5 to 500 Hz)				9.8 m/s ² (1.0 G) (5 to 500 Hz)			
Vibration (Non-operating)	49 m/s ² (5 G) (5 to 500 Hz) 886 m/s ² (70 G) (2 ms half sine)			10.2 m/s ² (1.04 G) (2 to 200 Hz) 686 m/s ² (70 G) (2 ms half sine)				49 m/s ² (5.0 G) (15 to 500 Hz) 3,920 m/s ² (400 G) (2 ms half sine)			
Shock (Operating)	2,940 m/s ² (300 G) (2 ms half sine)			2,920 m/s ² (300 G) (2 ms half sine)		3,430 m/s ² (350 G) (2 ms half sine)		8,820 m/s ² (900 G) (1 ms half sine)			
Shock (Non-operating)	34 dB			31 dB		25dB		23dB			
Acoustics(Sound Power) Idle mode	35 dB			34 dB		26dB		24dB			
Acoustics(Sound Power) Seek mode	-			-		-		-			
Miscellaneous											
Bottom holes type*3	TYPE1			TYPE2		TYPE2		TYPE2			
Warranty (years)	2			2		2		2			

* Definition of capacity: Toshiba defines 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. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1GB = 2³⁰ = 1,073,741,824 bytes and therefore shows less storage capacity. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

* Read and write speed may vary depending on the host device, read and write conditions, and file size.

* "2.5-inch" and "3.5-inch" mean the form factor of HDDs or SSDs. They do not indicate drive's physical size.

* MTTF (Mean Time to Failure) is not a guarantee or estimate of product life; it is a statistical value related to mean failure rates for a large number of products which may not accurately reflect actual operation. Actual operating life of the product may be different from the MTTF.

* Workload is defined as the amount of data written, read or verified by commands from host system.

* Operating watt is measured using 80% random read/write and 20% performance idle.

* Location of bottom mounting hole is different from product. For more information, please see the following page.

<https://toshiba.semicon-storage.com/us/design-support/faq/storage-holes.html>