## TOSHIBA



### STORAGE SOLUTIONS HARD DISK DRIVES FOR PROFESSIONAL & PERSONAL USE



toshiba-storage.com



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### The right hard disk drive for every mission

No storage requirement is the same. On our journeys, we generate an increased amount of data, day in, day out.

Be it for private or professional use, server-based storage, video surveillance, gaming or stylish mobile solutions, Toshiba delivers the right hard disk drives for a variety of storage needs.

Toshiba's external storage product range is categorized into different classes - Standard, Advanced, Premium and Specialty - addressing the individual storage requirements of users and helping them to find the perfect fit for their storage needs, whether it's a solution for simple plug-and-play operation, gaming or cross-platform use for Mac, Windows PC and tablets.

Toshiba's internal HDDs are divided into application areas for private and professional use, including NAS, surveillance and high-performance drives. Additionally, the extensive line-up of Enterprise storage solutions meet highest requirements to support business- and mission-critical applications.

For over 50 years Toshiba has been developing and delivering high-quality hard disk drives to the market. View the current portfolio on the following pages and find your perfect storage solution.

Everything is possible - with the right partner and hard disk drive.

#### Toshiba Storage Solutions



### Portable Storage

Storage is one of the most vital components of our ever-expanding digital lifestyles. In order to suit various demands, Toshiba offers a custom-designed range of external storage products to simplify your everyday life. Whether you are looking for a hard drive with autobackup software for your laptop or PC, or a safe place for your blogging content – with Toshiba you will find the right solution.

\*\*

Our external storage product line-up is categorized according to performance criteria and features. With clear colour codings and shopping guides, customers immediately know which products best meet their requirements.





### Premium



Make no compromises - every device should fit your style and exceed your expectations. In the world of design, special details make the

difference. That's what makes the Canvio Slim our top line of hard drives. Premium reliability and performance are packed into a slim aluminium casing that looks great. And there are extras you won't find on most hard drives, like software for added protection and a 3-year extended warranty. Everything is possible - with the right drive.



### Standard

#### Save your special memories on a special STANDARD hard drive.

Life flies by quickly. Before you know it, the kids are grown up and memories of the great times start to fade. Make your Toshiba Canvio Basics or Canvio Ready the treasure chest for all the special moments. It's easy to keep your memories safe and revisit them in clear detail later. Everything is possible - with the right drive.

### Specialty



#### Hard drives with something special built in.

There are times when ordinary drives are not good enough for special storage needs. Whether it's a high-performance storage upgrade for your gaming console or a drive that is compatible with your growing stable of devices, you can be sure to find the right solution in the Canvio Gaming or the Canvio Flex. Everything is possible – with the right drive.



### Advanced



#### When your journey leads you to stunning places, you need a safe place to store all the impressions.

Life is full of adventure. Every day there are memories to save and new experiences to report on. The Canvio Advance line of hard drives are your perfect companions. You get high-performance, top-quality and advanced functions in a modern design. And since security and backup software are included, you can rest assured your data is always safe. Everything is possible - with the right drive.



### Canvio Flex

Smart Storage. Made to Adapt. For Mac, Windows PC, Tablets



SPECIALTY TOSHIBA

#### One Drive. Many Devices.

2.5" 2.5" External Hard Drive

SuperSpeed USB 3.2 Gen 1 port

Includes USB Type-C<sup>®</sup> and

USB Type-A cables

Windows PC / Tablet / Smartphones

(3) 3-year warranty

Compatible with Mac /

Elegant silver finish

USB-powered

The Canvio Flex offers storage in its most compatible form, enabling you to seamlessly store and access your data on Mac, Windows PC, tablets devices and smartphones with USB-C<sup>®</sup> ports\* with a simple one-stop solution.

### **Canvio Gaming**

Level up your Storage.



SPECIALTY \* TOSHIBA

0

1

#### More Games. More Wins.

With the Canvio Gaming portable hard drive, you won't have to worry about deleting games to make room for the hottest new release. The sleek, lightweight design allows you to hold up to 100 games\*\* in an easy to carry lightweight casing. Offering up to 4 TB of storage capacity for your data, your gaming library has room to grow.



### Canvio Slim

All of the Room. None of the Weight.



#### Stylish and elegant companion.

2.5" 2.5" External Hard Drive

Auto-backup software

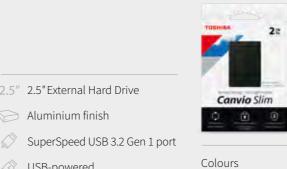
Password protection software

Aluminium finish

USB-powered

(3) 3-year warranty

Up to 2 TB stored in a super slim and lightweight aluminium design, make this drive a stylish and elegant companion for any device, whether it is on your desk or on the move. With several useful features and a three-year product warranty, the Canvio Slim keeps your data well protected. Available in two different colours: silver or black, the Canvio Slim always suits the occasion.





Capacities





Colour

Capacities

2

TB TB TB

4

\* Please check device compatibility

View mor \*\* Average game size: 36 GB



6

### Canvio Advance

Secured in Style. Take Life Anywhere.





#### Modern design.

The Canvio Advance features a stylish, textured design in four trendy colours. You can choose from black, light beige, red and green based on your preference for up to 4 TB of mobile storage in the plam of your hand.

- 2.5" 2.5" External Hard Drive
- > Textured finish
- SuperSpeed USB 3.2 Gen 1 port
- USB-powered
- Auto-backup software
- Password protection software





#### Capacities





### **Canvio Basics**

Storage Made Simple.



STANDARD  $\star$ 

#### Your compact companion.

High capacity storage in a conveniently compact, matt black casing. Available in several capacity sizes up to 4 TB, Canvio Basics hard drives are perfect for storing data, music, movies, and pictures.

### Canvio Ready

Ready to Store. Simple to Use.



STANDARD \*

#### A place for all your files.

The Canvio Ready is available in a range of different storage sizes up to 4 TB. So whatever your portable storage requirements, whether you're saving documents, photos, movies, or a combination, Canvio Ready provides the ideal, high-capacity solution in its distinctive two-tone matte and gloss black finish.

2.5" 2.5" External Hard Drive Canvia Ba

- >>> Two-tone matte and gloss finish
- SuperSpeed USB 3.2 Gen 1 port
- USB-powered
- Drag-and-drop use





Capacities





### Technical data

Model	Category	Casing	Part Number	Capacity	Interface	USB Con- nector Type	PC	Мас	Other Compatibility	Backup Software	Passwo Protecti
Canvio Flex 🏶			HDTX140ESCCA	4 TB							
	SPECIALTY TOSHIBA	Elegant silver finish	HDTX120ESCAA	2 TB	USB 3.2 Gen 1	Type-C <sup>®</sup> & Type-A	✓	✓		-	-
			HDTX110ESCAA	1 TB					iOS / Android™ devices <sup>2</sup>		
Canvio Gaming 🎕	<b>;</b>										
			HDTX140EK3CA	4 TB							
	SPECIALTY OSHIBA	Sleek black finish	HDTX120EK3AA	2 TB	USB 3.2 Gen 1 Type	Type-A	~	~		-	-
			HDTX110EK3AA	1 TB					PlayStation / Xbox <sup>2</sup>		
Canvio Slim **;	*										
			HDTD320EK3EA	2 TB	USB 3.2 Gen 1				-	*	~
	PREMIUM	Aluminium finish	HDTD310EK3DA	1 TB		Type-A		<b>√</b> 1			
	*** TOSHIBA		HDTD320ES3EA	2 TB			~				
			HDTD310ES3DA	1 TB							
Canvio Advance	**										
			HDTCA40EK3CA	4 TB							*
		Textured finish	HDTCA20EK3AA	2 TB							
		iiiioii	HDTCA10EK3AA	1 TB							
		Testand	HDTCA40ER3CA	4 TB							
		Textured finish	HDTCA20ER3AA	2 TB							
1 m	ADVANCED		HDTCA10ER3AA	1 TB	USB 3.2 Gen 1			<b>√</b> 1	_		
	TOSHIBA	Testand	HDTCA40EW3CA	4 TB	03B 3.2 Gen 1	Type-A	•	•		•	
1000		Textured finish	HDTCA20EW3AA	2 TB							
			HDTCA10EW3AA	1 TB							
			HDTCA40EG3CA	4 TB							
		Textured finish	HDTCA20EG3AA	2 TB							
_			HDTCA10EG3AA	1 TB							
Canvio Basics 🖈											
			HDTB540EK3CA	4 TB							
-	STANDARD * TOSHIBA	Matt	HDTB520EK3AA	2 TB	USB 3.2 Gen 1	Type-A	✓	<b>√</b> 1	-	-	-
	Toomba		HDTB510EK3AA	1 TB							
Canvio Ready ★											
	STANDARD	Two-toned	HDTP340EK3CA	4 TB					-		
		matte and gloss finish		0 TD	1100 2 2 0 1	T	✓	$\checkmark^1$			
	TOSHIBA		HDTP320EK3AA	2 TB	USB 3.2 Gen 1	Type-A	•	✓ 1	-	-	-

2.5" 2.5" External Hard Drive

- Matt finish
- SuperSpeed USB 3.2 Gen 1 port
- USB-powered
- $\vec{\mathbf{r}}$  Plug-and-play operation

Capacities

Colour

4 2 1 TB TB TB



View more

USB Type-C\* and USB-C\* are registered trademarks of USB Implementers Forum. Android is a trademark of Google LLC. Mac and macOS are trademarks of Apple Inc. Microsoft, Windows and Xbox are trademarks of the Microsoft group of companies. "PlayStation" is a registered trademark or a trademark of Sony Interactive Entertainment Inc. Canvio Gaming: Estimated game storage is based on assumption of average game size of 36 GB for current generation games. The number of games actually stored may vary depending on file size, formatting, console software, and other programs or factors. Original discs may be required to verify ownership for games purchased and loaded from disc. Internet connection and original game owner's account may be required.

#### External HDDs

<sup>1</sup> Requires reformatting for macOS. <sup>2</sup> Please check compatibility list.

### Quality in every detail

Best materials, highly rated hard drive disks and fast controllers: That is what Toshiba external storage is made of.



Hard Drives Toshiba quality 2.5" hard drive disks with up to 4 TB capacity

HDD interface connector

Micro-B USB 3.2 Gen 1

Controller Fast USB 3.2 onboard controller as part of the HDDs circuit board layout

### Software

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#### **Password Protection**

Stop unauthorised users from accessing your private information with the included Toshiba Storage Security Software, allowing you to secure your hard drive with a unique password.

#### **Backup Software**

The included Toshiba Storage Backup Software comes with an intuitive and userfriendly interface, making the backup of your data a breeze. Simply choose your individual files or folders, intervals and time settings for your backups and let the software take care of the rest.

# VSB Type-C<sup>®</sup> – Future-proof solution

#### Be prepared for connectivity of the future.

Most modern devices nowadays come with an USB-C® interface. That's why some of our hard drives include an USB-C<sup>®</sup> cable, so there's no need to buy an additional adapter. Ready to plug in to future devices out of the box.

#### Advanced HDD Technology – FC-MAMR

Toshiba's high capacity HDDs feature Flux Control Microwave Assisted Magnetic Recording (FC-MAMR) Technology – a breakthrough technology that uses microwave energy to ensure more of the write energy is focused into the platter, achieving an increased areal density capability (ADC) of up to 20 %.

#### Laser sealed helium

The Toshiba HDDs with 12 TB or more use a helium-sealed design, providing the powerefficient capacity and storage density needed by cloud-scale and enterprise storage solution providers to achieve their TCO objectives. Toshiba's laser welding technology ensures that the helium remains securely sealed inside the drive enclosure.

#### **High Reliability**

Providing reliability for the ultimate peace of mind, Toshiba HDDs deliver up to 2.5M hours of MTTF, achieving an AFR (Annualized Failure Rate) in 24/7 operation of down to 0.35 % - at a rated workload as high as 550 TB/year.

#### Industry-leading 10 disk platter design

The Toshiba 20 & 22 TB HDD feature a 10-disk platter design – achieving high storage density levels by stacking the maximum numbers of platters in the industry-leading 3.5" form factor.

### Built for performance and reliability

Toshiba is renowned the world over for 50 years of leading innovation - and the power behind its hard drive solutions is no exception. Our enterprise-level developments meet the industry standards with proven reliability. Designed for high capacity and excellent performance, you can be sure that Toshiba's wealth of experience in hard drives is at work in your storage system.



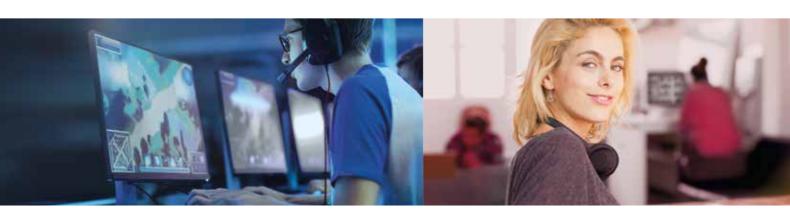
### Internal Hard Disk Drives

Toshiba offers a broad range of internal hard drives to keep pace with the ever-growing specific requirements of data storage. Choose from a wide range of reliable hard drives that deliver innovative technology and best performance and are tailored to your storage needs. Targeting different application areas such as NAS, Surveillance, Gaming, PC, laptop, and Enterprise storage, Toshiba provides the highest standards to support your personal and business missions.



### NAS Hard Drives

Offering special reliability for NAS and other high performance storage systems, Toshiba's NAS drives are optimized to meet the reliability, endurance, performance, and scalability requirements of 24/7 high-capacity storage for personal, home office, and small business use.

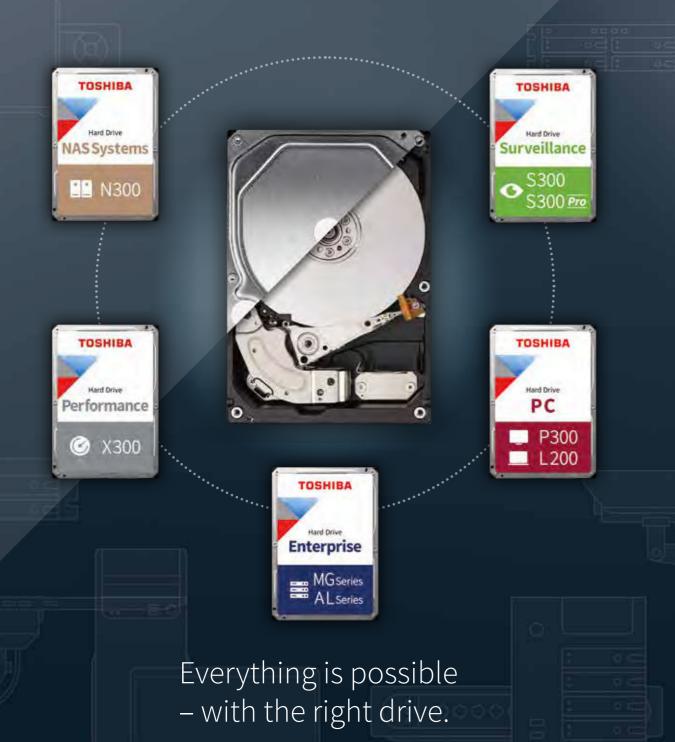




Delivering reliable storage, large capacities, and high performance, Toshiba's Performance hard drives are the perfect choice for PC gamers, graphic designers, and professionals with demanding storage requirements.



Designed for server and storage environments where high data capacity and performance matters, Toshiba's reliable Enterprise drives offer the necessary capacities and performance features required to run business- and mission-critical applications in enterprise, datacenter and cloud environments.







### Surveillance Hard Drives

In a society where 24/7 security is essential and real-time data availability is paramount, intelligent surveillance analysis starts with secure and reliable storage. Toshiba's Surveillance drives offer high reliability and are designed to cope with the concurrent access requirements of CCTV systems.

### PC Hard Drives

Boost the storage capacity of your laptop, PC, or game console to help ensure fast, stable file transfer, for smooth and responsive computing. Designed for professionals and everyday users who demand high-performing powerful storage.



#### Internal HDDs

### N300

Built for 24/7 reliability



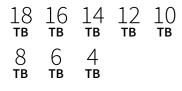
#### Toshiba's N300

The 3.5-inch internal hard disk offers unprecedented reliability for NAS and other high-performance storage systems. It is optimized to meet the reliability, endurance, performance, and scalability requirements of 24/7 high-capacity storage for personal, home office, and small business use.

••

- SATA 3.5" SATA Hard Drive
- RPM 7,200 rpm
- 512 MB buffer (18 | 16 | 14 TB) 256 MB buffer (14 | 12 | 10 | 8 | 6 | 4 TB)
- Toshiba Stable Platter Technology
- High reliability and enhanced real-time performance
- High-endurance design
- 3-year warranty

#### Capacities



#### Use for:

- NAS and Multimedia Server
- Desktop RAID and Server
- Private Cloud Storage
- Small Business Server and Storage

### X300

Level up your drive performance



#### Toshiba's X300

This 3.5-inch internal hard drive is designed for your professional or gaming PC – delivering reliable, large capacity, incredibly high-performance storage, made possible by a number of advanced features, including an ultra-high 512 MB (14 TB – 18 TB) buffer. It even features improved positional accuracy for stable recording. The X300 is ideal for PC gamers, graphic designers, and other users with demanding storage requirement.

SATA 3.5" SATA Hard Drive

#### RPM 7,200 rpm

- 512 MB buffer (18 | 16 | 14 TB) 256 MB buffer (12 | 10 | 8 | 6 | 4 TB)
- Toshiba Stable Platter Technology
- Contraction Toshiba Dynamic Cache Technology

#### Capacities



#### Use for:

- Powerful Desktop Workstations
- All-in-one PCs
- Gaming computers
- Home Media computers

### S300 Pro

Capture every detail



#### Toshiba's S300 Pro

The 3.5-inch internal hard disk is designed and tested for 24/7 reliable surveillance, built for speed, capacity, and longer content retention. Capture and analyse every frame from up to 64 video cameras in high resolution with the S300 Pro. Space is important to continually capture a history of video evidence over a period of time. With up to 10 TB, you get the capacity to record and play back the events in real-time in high resolution and with object identification and face recognition.



10 8 6 тв тв тв

#### Use for:

- Surveillance Digital Video Recorders (sDVR)
- Surveillance Network Video
- Recorders (sNVR)
- Hybrid sDVR (analog and IP)RAID Storage Arrays for Surveillance

14

### S300

Always On, Always Watching



#### Toshiba's S300

With surveillance systems, nothing but the best is good enough. The Toshiba 3.5-inch S300 is built to meet the highest demands. With support for up to 64 high-resolution surveillance video cameras simultaneiously and up to 6 TB capacity, it brings everything into clear view. Each S300 is built with the highest-quality components and has passed rigorous tests to ensure 24/7 reliability and performance. That's Toshiba quality you can trust under the harshest working conditions.

SATA	3.5" SATA Hard Drive
RPM	5,400 rpm (6   4   2 TB) 5,700 rpm (1 TB)
	256 MB buffer (6   4 TB) 128 MB buffer (4   2 TB) 64 MB buffer (1 TB)
64 <u>4;</u>	Up to 64 cameras
24/7	24/7 operation
3	3-year warranty
Сара	acities
6	4 2 1

#### 6 4 2 1 тв тв тв тв

#### Use for:

- Surveillance Digital Video Recorders (sDVR)
- Surveillance Network Video Recorders (sNVR)
- Hybrid sDVR (analog and IP)

#### Internal HDDs

### P300

Performance meets reliability



#### Toshiba's P300

The 3.5-inch P300 Desktop PC Hard Drive delivers high performance for everyday home or office computing needs. With its two-stage actuator, you can count on smooth, responsive processing power. In addition, your data and media are secured with a loading ramp design to prevent data loss or drive wear and tear. The P300 is available in capacities up to 6 TB.

#### SATA 3.5" SATA Hard Drive

RPM 5,400 rpm (6 | 4 TB) 7,200 rpm (3 | 2 | 1 TB)

256 MB buffer (2 TB) 128 MB buffer (6 | 4 TB) 64 MB buffer (3 | 1 TB)

#### Capacities

6 4 3 2 1 тв тв тв тв тв

#### Use for:

- Desktop Workstations
- All-in-one PCs
- Desktop PCs
- External enclosures

### L200

Take your laptop to the next level



#### Toshiba's L200

This 2.5-inch internal hard drive is designed for everyday laptop users and gamers – and it's ideal for boosting and upgrading the storage capacity of your laptop PC or games console by up to 2 TB. Perpendicular Magnetic Recording and Tunnel Magneto-Resistive technologies also ensure fast, stable recording that makes the most of your hard drive space.

SATA 2.5" SATA Hard Drive

RPM 5,400 rpm

128 MB buffer (2 TB | 1 TB 7 mm) 8 MB buffer (1 TB 9.5 mm | 500 GB 7 mm | 500 GB 9.5 mm)

Toshiba Dynamic Cache Technology

#### Capacities

2 1 500 тв тв <sub>св</sub>

#### Use for:

- Notebooks
- Game consoles
- External enclosures

### Technical data

								Recording		24/7	Warrant
Model	Retail Number	Bulk Number	Capacity	Interface	RPM	Cache	Height	Technology	RAID	Operation	(years)
N300 NAS Har	d Drive 3.5"										
	-	HDWG51JUZSVA	18 TB			512 MB					3
	-	HDWG31GUZSVA	16 TB			512 MB					
100401	HDWG51EEZSTA	-	14 TB			512 MB			•		
	-	HDWG21EUZSVA	14 TB			256 MB					
Sata Spinters	HDWG21CEZSTA	HDWG21CUZSVA	12 TB	SATA 6 Gbit/s	7,200	256 MB	26.1 mm	CMR		✓	
and the second	HDWG11AEZSTA	HDWG11AUZSVA	10 TB			256 MB					
	HDWG480EZSTA	HDWG480UZSVA	8 TB			256 MB					
	HDWG460EZSTA	HDWG460UZSVA	6 TB			256 MB					
	HDWG440EZSTA	HDWG440UZSVA	4 TB			256 MB					
X300 Performa	ance Hard Drive 3.5"										
	-	HDWR51JUZSVA	18 TB			512 MB					
	-	HDWR31GUZSVA	16 TB			512 MB					
	HDWR51EEZSTA	HDWR51EUZSVA	14 TB			512 MB		CMR			2
V	HDWR21CEZSTA	HDWR21CUZSVA	12 TB	SATA 6 Gbit/s	7 200	256 MB	26.1 mm				
Per Terratica	HDWR11AEZSTA	HDWR11AUZSVA	10 TB		7,200	256 MB	26.1 mm	CMR	-	-	Z
A DECEMBER OF	HDWR480EZSTA	HDWR480UZSVA	8 TB			256 MB					
	HDWR460EZSTA	HDWR460UZSVA	6 TB			256 MB					
	HDWR440EZSTA	HDWR440UZSVA	4 TB			256 MB					
S300 Pro Surv	eillance Hard Drive 3	.5"									
	-	HDWT31AUZSVA	10 TB			256 MB					
the second second	-	HDWT380UZSVA	8 TB	SATA 6 Gbit/s	7,200	256 MB	26.1 mm	CMR	✓	~	3
Oppide	-	HDWT360UZSVA	6 TB								
S300 Surveilla	nce Hard Drive 3.5"										
	-	HDWT860UZSVA	6 TB		5,400	256 MB					
TERMEN	-	HDWT840UZSVA	4 TB		5,400	256 MB		SMR	-		
	_	HDWT140UZSVA	4 TB	SATA 6	5,400	128 MB	26.1 mm	CMR	~	~	3
0.00	-	HDWT720UZSVA	2 TB	Gbit/s	5,400	128 MB		SMR			
	-	HDWV110UZSVA	1 TB		5,700	64 MB		CMR	-		
P300 Desktop	PC Hard Drive 3.5"										
	-	HDWD260UZSVA	6TB		5,400	128 MB					
*Carries	-	HDWD240UZSVA	4TB		5,400	128 MB		SMR			
Desiting PC	-	HDWD130UZSVA	3TB	SATA 6 Gbit/s	7,200	64 MB	26.1 mm	CMR	-	-	2
<b>-</b> F30)	-	HDWD320UZSVA	2TB	Gbit/s	7,200	256 MB					
	-	HDWD110UZSVA	1TB		7,200	64 MB		SMR			
L200 Laptop P	C Hard Drive 2.5"										
	_	HDWL120UZSVA	2 TB	SATA 6		128 MB	9.5 mm				
	-	HDWL110UZSVA	1 TB	Gbit/s		128 MB	7.0 mm	SMR			
Name of	-	HDWJ110UZSVA	1 TB	SATA 3	5,400	8 MB	9.5 mm				2
	-	HDWJ105UZSVA	500 GB	Gbit/s	3,400	8 MB	9.5 mm	CMR	-	-	2
	_	HDWK105UZSVA	500 GB	SATA 6		8 MB	7.0 mm	CIMIX			
			000 00	Gbit/s		0.00					

#### Internal HDDs

### **AL** Series





#### Use for:

- Mission-Critical Enterprise Server and Storage Systems • Business Database Server with High Workloads
- Big Data Analytics
- Virtualized Storage Systems

#### **Toshiba's AL Series**

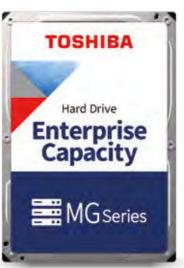
Toshiba's Enterprise Performance Hard Drive – AL Series delivers high storage densities with rapid data transfer speed, backed up by a 5-year warranty. You can trust the AL Series to deliver day in and day out, 24/7, even in the most demanding high-performance server and storage systems. Especially when traffic is high, the hard drives have the speed needed to perform simultaneous transactions smoothly and efficiently. Additionally, proprietary aprovide the assurance that your data will stay in safe hands.

- SAS 2.5" SAS Hard Drive
- 24/7 24/7 operation
- (0)Unlimited workload (TB/year)
- MTTF MTTF of 2 mill. hours
- Persistent Write Cache Technology
- <u>512n</u> 4k Flexibility in block size and SIE and SED options
- 5 5-year warranty

AL Series	AL14SX	AL15SE				
Capacity (GB)	300   600   900	300   600   900   1,200 1,800   2,400				
I/F speed	SAS 12	Gbit/s				
RPM	15,000	10,500				
Cache	128	MB				
MTTF	2.0 mi	ll. hrs.				

### **MG** Series

#### Enterprise Capacity HDD





Business Critical Enterprise

Server and Storage Systems

Cloud and Hyperscale Storage

Industrial Server- and Storage

 Big Data, Distributed File Systems Enterprise Archive and Data

Enterprise Storage Arrays

Recovery Systems

Use for:

Systems

Systems



5-year warranty

Toshiba's MG Series

24/7 24/7 operation

550)

<u>512n</u> 4k

5

MG Series		MG04	MG06	MG07	M		MG10							
Capacity (TB)	1 2		10	12   14	4 6 8		16	18	20   22					
I/E speed	-	- SAS 12 Gbit/s												
I/F speed		SATA 6 Gbit/s												
RPM				-	7,200									
Cache	1	28 MB		256	5 MB		512 MB							
Sector length	512n	512e, 512n, 4Kn	512e	e, 4Kn	512e, 512n, 4Kn		512e, 4Kn		512e <sup>*</sup>					
MTTF	1.4	mill. Hrs.	2.5 m	ill. Hrs.	2 mill. H	2.5 mill. Hrs.								
Sealed		Air		Helium	Air		Helium							



Toshiba's Enterprise Capacity Hard Drive - MG Series offers formatted capacities as high as 22 TB with interface options including SATA and SAS and delivers 24/7 operation at a workload of 550 TB/year. The MG Series is ideal for enterprise storage array and industrial server and storage systems. It provides the capacity and advanced technologies to meet the special demands of datacenter and cloud-scale infrastructures.

SATA 3.5" SATA or SAS Hard Drive

- Toshiba Stable Platter Technology
- Persistent Write Cache Technology
- 550 TB/year workload
- Flexibility in block size and SIE and SED options

\* Changeable to 4Kn by field-reformatting

### Technical data

	Model					Specification						Perfor	mance		
	Number	Form- factor	Fill Gas & Recording	Capacity (GB)	Block Size (Byte)	Spindle Speed (RPM)	Buffer Size (MiByte)	Interface	Security Options			Data Rate (sustained) (MB/s)	Operating Power (W) typ.	MTTF (hrs)	Unrecoverabl Error Rate
	HIGHEST PERFORMANCE HDD (15K RPM) FOR SERVERS – BUSINESS DATABASE, ONLINE TRANSACTION, HIGH PERFORMANCE COMPUTING														
	AL14SXB30EN			300											
	AL14SXB60EN			600	512n	15,000	128		SIE/SED			272	9.0	2.0 mill.	1 in 1016
	AL14SXB90EN			900				12 001(/3							
	AL14SXB30EE			300											
	AL14SXB60EE	2.5"	Air CMR	600	512e	15,000	Buffer Size (MiByte)     Interface     Security Options     Data Rate (sustained)     Operating Power (MB/s)     MTTF (W) typ.     Unrecoverab (hrs)       ACTION, HIGH PERFORMANCE COMPUTING     545								
	AL14SXB90EE			900											
TOSHUMA	AL14SXB30EA			300											
100	AL14SXB60EA			600	4Kn	15,000	128		SIE/SED			304	9.0	2.0 mill.	1 in 1016
Enterprise Performance	AL14SXB90EA			900											
E Alson	PERFORMANCE HDD	(10K RPM)	) FOR SERVER	S AND STORAG	GE – MISSION CRITI	ICAL BUSINESS DATA	BASE AND HIGH P	ERFORMANCE STO	RAGES						
and the second second	AL15SEB030N			300								236	6.5		
AL Series	AL15SEB060N			600	512n	10,500	128						7.0		
AL JEIIE3	AL15SEB090N			900					SIE/SED			245	7.0	2.0 mili.	1 in 1016
<b>F</b>	AL15SEB120N			1,200									8.1		
Enterprise	AL15SEB06EQ			600									6.5		
Performance	AL15SEB09EQ			900									7.0		
HDD	AL15SEB12EQ	2.5"	Air	1,200	512e	10,500	128		SIE/SED			273	7.0	2.0 mill.	1 in 1016
	AL15SEB18EQ	2.5	CMR	1,800				12 001(75					8.1		
	AL15SEB24EQ			2,400									8.7		
	AL15SEB06EP			600									6.5		
	AL15SEB09EP			900									7.0		
	AL15SEB12EP			1,200	4Kn	10,500	128		SIE/SED			273	7.0	2.0 mill.	1 in 1016
	AL15SEB18EP			1,800				,					8.1		
	AL15SEB24EP			2,400									8.7		

#### Footnotes

- Definition of capacity: A gigabyte (GB) is 1,000,000,000 bytes and a terabyte (TB) is 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1GB =  $2^{10}$  bytes = 1,073,741,824 bytes and 1TB =  $2^{10}$  = 1,099,511,627,776 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 and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

A mebibyte (MiB) means 2<sup>20</sup>, or 1,048,576 bytes.

• "2.5-inch" and "3.5-inch" mean the form factor of HDDs. They do not indicate

drive's physical size.

Product image may represent a design model.

Number of surveillance cameras support capability is defined by performance simulation with High Definition cameras as 2 MiB/s rate.

 A = Advanced Format Sector (4k), E = 512byte Sector Emulated, N = 512byte Sector Native, P = 4Kn Q=512e

Toshiba refers to "storage products" as products that can store data, such as HDD.

• MTTF (Mean Time to Failure) is not a guarantee or estimate of product life; it is a statistical value related Standard 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. Read and write speed may vary depending on the host device, read and write conditions and file size. · Company names, product names, and service names mentioned herein may be trademarks of their respective registrants and/or owners as well.

#### Enterprise HDDs

	Reliability		
rable ate	Duty	Rated Workload (TB/year)	Warranty (years)
16	24/7	unlimited	5
16	24/7	unlimited	5
16	24/7	unlimited	5
16	24/7	unlimited	5
16	24/7	unlimited	5
16	24/7	unlimited	5

 Images displayed of the N300, X300, S300 Pro, S300, P300 and L200 Internal Hard Drives as well as of the MG and AL Series are for illustration purposes only and do not show the actual products. The images are merely intended to help illustrate the function of the products.

SIE = Sanitize Instant Erase, SED = Self Encrypting Drives, FIPS = Federal Information Processing

### Enterprise HDDs

### Technical data

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MG Series

Enterprise Capacity HDD

Model Number					Specification					Perior	mance			Reliability		
	Form-	Fill Gas &	Capacity	Block Size	Spindle Speed	Buffer Size	Interface	Security		Data Rate (sustained)	Operating Power	MTTF	Unrecoverable	Duty	Rated Workload	Warranty
	factor	Recording	(GB)	(Byte)	(КРМ)	(MiByte)		Options		(MB/s)	(W) typ.	(hrs)	Error Rate		(TB/year)	(years)
	Y HDD WIT	TH SAS 12 GBI		E – BUSINESS CRITI	ICAL STORAGES WIT	H LARGE CAPACITY										
MG04SCA20EN			2,000	512n	7,200	128	SAS	SIE		204	11.8	1.4 mill.	1 in 1015	24/7	550	5
MG08SDA400N			4,000		.,	256	12 Gbit/s	SIE/SED		233	8.5	2.0 mill.		, .		
MG04SCA20EA		Air	2,000			128		SIE		215	11.8	1.4 mill.				
		CMR				256										
						256	545					2.0 mill.			550	
				4Kn	7,200	200							1 in 10 <sup>15</sup>	24/7		5
		Helium	,				12 0010/3									
		CMR										2.5 mill.				
		Helium				512										
	3.5"															
MG04SCA20EE						128				215	11.8	1.4 mill.				
MG08SDA400E			4,000			256		SIE/SED		255	8.5	2.0 mill.				
MG08SDA600E			6,000					SIE/SED		251	9.2	2.0 mill.				5
MG08SDA800E		CMR	8,000			256		SIE/SED		260	9.9	2.0 mill.				
MG06SCA10TE			10,000				646	SIE/SED		249	11.0					
MG07SCA12TE		Halium	12,000	512e	7,200			SIE/SED		254	7.8		1 in 1015	24/7	550	
MG07SCA14TE			14,000				12 0010/3	SIE/SED		260	8.4					
MG08SCA16TE		CMIX	16,000					SIE/SED		275	8.2	2.5 mill.				
MG09SCA18TE		Holium	18,000			512		SIE/SED		281	9.2					
MG10SCA20TE		MAMR	20,000			512		SIE/SED		281	9.6					
MG10SFA22TE			22,000					SIE/SED		284	10.2					
ITERPRISE CAPACIT	Y HDD WIT	TH SATA 6 GBI	T/S INTERFACE	E – MAINSTREAM S	ERVER AND STORAG	E, HYPERSCALE- A	ND CLOUD STORA	GE								
MG04ACA100N			1,000					SIE		204	11.3					
MG04ACA200N			2,000	512n	7,200	128		SIE		204	11.3	1.4 mill.	1 in 1015	24/7	550	5
MG08ADA400N			4,000			256	6 Gbit/s	SIE/SED		233	8.1	2.0 mill.		,		
MG04ACA200A		Air	2,000			128		SIE		184	11.3	1.4 mill.				
MG08ADA400A		CMR	4,000			256		SIE/SED		255	8.1	2.0 mill.				
MG08ADA600A			6,000					SIE/SED		251	8.7	2.0 mill.				
MG08ADA800A			8,000					SIE/SED		260	9.5	2.0 mill.				
MG06ACA10TA				4Kn	7.200	256							1 in 1015	24/7	550	5
		Helium			,		6 Gbit/s									
		CMR										2.5 mill.				
	3 5"					F10										
	5.5					512										
		MANIK	-			129		,				1.4 mill				
		Air				230										
		CMR						,								
						256						2.5 mm.				
MG07ACA12TE				512e	7,200		SATA						1 in 1015	24/7	550	5
MG07ACA14TE			14,000				6 Gbit/s	SIE/SED		260	8.0			,		
MG08ACA16TE		CMR	16,000					SIE/SED		275	7.7	2.5 mill.				
MG09ACA18TE			18,000			510		SIE/SED		281	8.3					
MG10ACA20TE			20,000			512		SIE/SED		281	9.3					
MG10AFA22TE		MANIK	22,000					SIE/SED		284	9.8					
	MG08SDA400A           MG08SDA600A           MG08SDA600A           MG08SDA800A           MG08SCA10TA           MG07SCA12TA           MG07SCA14TA           MG08SCA16TA           MG09SCA18TA           MG09SCA18TA           MG08SDA400E           MG08SDA400E           MG08SDA400E           MG08SCA10TE           MG08SCA10TE           MG08SCA10TE           MG07SCA12TE           MG07SCA12TE           MG08ACA10N           MG04ACA200N           MG04ACA200N           MG04ACA200N           MG08ADA400A           MG08ADA400A           MG08ACA10TA           MG08ACA10TA           MG08ACA10TA           MG08ACA10TA           MG08ACA10TA           MG08ADA800A           MG08ADA800A           MG08ADA400A           MG08ADA400A           MG08ADA400A           MG08ADA800A           MG08ADA800A           MG08ADA800A           MG08ADA400E           MG08ADA400E           MG08ADA400E           MG08ADA800E           MG08ADA800E           MG08ADA4	MG08SDA400A         MG08SDA600A         MG08SDA600A         MG08SDA600A         MG08SCA10TA         MG07SCA12TA         MG09SCA18TA         MG09SCA18TA         MG09SCA18TA         MG08SDA600E         MG08SDA600E         MG09SCA18TA         MG08SCA10TE         MG08SDA600E         MG08SCA16TE         MG08SCA18TE         MG07SCA12TE         MG07SCA12TE         MG07SCA12TE         MG07SCA12TE         MG07SCA12TE         MG08ACA16TE         MG08ACA16TE         MG04ACA100N         MG04ACA200N         MG08ADA400A         MG08ADA400A         MG08ACA16TA         MG08ACA16TA         MG08ACA16TA         MG08ACA16TA         MG08ADA800A         MG08ADA800E         MG08ADA400E         MG08ADA400E         MG08ADA400E         MG08ADA800E         MG08ADA800E         MG08ADA400E         MG08ADA800E         MG08ADA400E         MG08ADA400E         MG08ADA400E         MG08ADA140E	MG08SDA400A MG08SDA400A MG08SDA600A MG08SCA10TA MG07SCA12TA MG07SCA12TA MG09SCA18TA MG09SCA18TA MG09SCA18TA MG09SCA18TA MG08SDA400E MG08SDA400E MG08SDA400E MG08SDA400E MG08SCA10TE MG07SCA12TE MG07SCA12TE MG07SCA12TE <b>ERPRISE CAPACITY HDD WITH SATA 6 GBI</b> MG04ACA100N MG04ACA200N MG08ADA400A MG08ADA400E MG08ACA18TA MG07ACA12TA MG07ACA12TE MG07ACA12TE MG07ACA12TE MG07ACA12TE MG07ACA12TE MG07ACA14TE MG0	MG08SDA400A MG08SDA600A MG08SDA600A MG08SDA800A MG06SCA10TA MG07SCA12TA MG07SCA12TA MG09SCA18TA MG09SCA18TA MG08SDA400E MG08SDA400E MG08SDA400E MG08SDA400E MG08SDA600E MG08SDA600E MG08SCA16TE MG07SCA12TE MG07SCA12TE MG07SCA12TE MG07SCA12TE MG07SCA12TE MG08SDA600E MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG08SCA16TE MG09SCA18TE Helium MG08ACA16TAAir Air Air CMR 16,000 10,00	MG08SDA400A         Air CMR         4,000           MG08SDA600A         6,000           MG08SCA10TA         8,000           MG07SCA12TA         12,000           MG07SCA12TA         Helium           MG08SCA16TA         12,000           MG08SCA16TA         Helium           MG08SCA16TA         16,000           MG08SCA16TA         MAMR           MG08SCA16TA         3.5"           MG08SCA16TA         4,000           MG08SCA16TA         4,000           MG08SCA16TA         4,000           MG08SCA16TE         2,000           MG07SCA12TE         4,000           MG07SCA12TE         12,000           MG07SCA12TE         18,000           MG08SCA16TE         18,000           MG08SCA16TE         18,000           MG08SCA16TE         1,000           MG08ACA100N         2,000           MG04CA100N         4,000           MG08ACA200N         4,000           MG08ACA200N         4,000           MG08ACA200N         4,000           MG08ACA10TA         4,000           MG08ACA10TA         4,000           MG08ACA200A         4,000           MG08	MG08SDA400A MG08SDA600A MG08SDA600A MG08SCA10TA MG07SCA12TA MG07SCA12TA MG07SCA12TA MG07SCA12TA MG07SCA14TA MG07SCA14TA MG08SCA16TA MG08SCA16TA MG08SCA16TA MG08SCA16TA MG08SCA16TA MG08SCA16TE MG08SCA100N MG08SCA16TE MG08SCA100N MG08ACA200N MG08ACA100N MG08ACA100N MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TA MG08ACA16TE MMMMR 20,000        Air G000 Air G000 Air G000 Air G000 MG08ACA16TE MMMR 20,000        Air G000 Air G000 Air G000 MG08ACA16TE MMMR 20,000        Air G000 Air G000 Air G000 Air G000 MG08ACA16TE MMMR 20,000        Air G000 Air G000 Air G000 Air G000 Air G000 Air G000 Air G000 Air G000 Air G000 Air G000 Air G000 MG08ACA16TE MMMR AD AIR AIR AIR AIR AIR AIR AIR AIR AIR AIR	MG08SDA400A MG08SDA600A MG08SDA600A MG08SDA600A MG08SDA600A MG07SCA12TA MG07SCA12TA MG07SCA12TA MG07SCA12TA MG09SCA18TA MG09SCA18TA MG08SDA600E MG08SDA600E MG08SDA600E MG08SDA600E MG08SDA600E MG08SDA600E MG08SCA18TE MG07SCA12TE MG07SCA14TE MG07SC	Air MG08SDA600A MG08SDA600A MG08SDA600A MG08SDA600A MG08SDA600A MG08SDA600A MG08SDA600A MG08SDA600A MG08SCA14TA MG07SCA12TA MG08SCA16TA MG08SCA16TE MG08CA16TE MG08SCA16TE MG08C	MG685DA600A         Air CMR         4,000         500         512         545         517,550           MG085DA60A         10,000         4Kn         7,200         256         545         517,550           MG085DA11A         10,000         4Kn         12,000         512         517,550         517,550           MG085DA11A         Helium         10,000         4Kn         512         512         517,550           MG085DA20A0E         4,000         512         512         517,550         517,550           MG085DA300E         Air         6,000         512         517,550         517,550           MG085DA300E         Air         6,000         512         517,550         517,550           MG085DA300E         Air         6,000         512         7,200         256         517,550           MG085DA300E         Air         6,000         512         7,200         12         517,550           MG085DA300E         Air         10,000         512         7,200         12         517,550           MG085DA300E         Air         2,000         512         7,200         128         517,550           MG085DA300A         Air         2,000         <	Medispandari Medi Medi Medispandari Medispandari Medispandari Medispandar	MADESSADADACAP CAP CAP40.00 50.00AKA7.200256 26 <td>MAGESSAMPA AUCONSCIPTION AUCONALISATION AUCONALISATION AUCONALISATION AUCONALISATION AUCONSCIPTION AUCONALISATION AUCO</br></td> <td><ul> <li>Marcessandaria</li> <li>Marcessandaria<!--</td--><td>MARMBORM     MARCONFINITION     A.400     PAC     A.400     PAC     PAC</td><td>MARCHANGANG         And Cone         And Cone</td><td>NAME     NAME     NAME</td></li></ul></td>	MAGESSAMPA AUCONSCIPTION 	<ul> <li>Marcessandaria</li> <li>Marcessandaria<!--</td--><td>MARMBORM     MARCONFINITION     A.400     PAC     A.400     PAC     PAC</td><td>MARCHANGANG         And Cone         And Cone</td><td>NAME     NAME     NAME</td></li></ul>	MARMBORM     MARCONFINITION     A.400     PAC     A.400     PAC     PAC	MARCHANGANG         And Cone         And Cone	NAME     NAME

#### Enterprise HDDs

## TOSHIBA

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