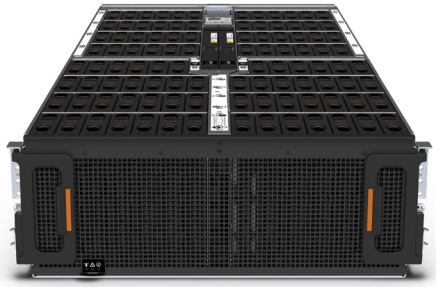
Product Brief



Ultrastar® Data102 3000 Hybrid Storage Platform

The Next Generation Platform for Software-Defined Storage

Designed for High Density and Flexibility

The Ultrastar Data102 3000 Hybrid Storage Platform redefines what's possible in modern storage infrastructure. As a foundational building block for disaggregated and software-defined storage (SDS) architectures, it delivers massive capacity without sacrificing flexibility — empowering organizations to strike the right balance between performance and cost across any workloads. Packed with up to 3.26PB of raw storage in a compact, efficient form factor, the Data102 3000 is purpose-built for the demands of scalable data-intensive environments.

The Storage Platform for Cloud, Neo-Cloud, and HPC

Whether you're scaling a hyperscale cloud, building next-generation AI infrastructure, or powering demanding HPC workloads, the Ultrastar Data102 3000 series delivers. Designed for cloud service providers, emerging neo-cloud and AI infrastructure builders, it provides dense, shared HDD storage optimized for data growth at scale. As AI workloads demand ever-larger training datasets and model repositories, flexible drive configurations let you dial in the right mix of capacity, performance, and cost. With 24Gb/s SAS 4 host connectivity, you get the bandwidth to keep every system fast, responsive, and efficient — no matter how large your environment grows.

Innovative Cooling. Improved Reliability.

Not all dense storage platforms are created equal. The Ultrastar Data102 3000 is built to perform reliably at scale. Patented IsoVibe™ vibration isolation technology actively counteracts drive-induced vibration to protect performance under load, while ArcticFlow™ thermal zoning channels airflow precisely through the center of the chassis for targeted, highly effective cooling. Together, these breakthrough technologies drive up to a 62% reduction in HDD returns[3] — meaning fewer failures, lower operational costs, and greater peace of mind. Backed by a five-year limited warranty, the Data102 3000 is a platform built for the long haul.

Features

- Up to 102 Ultrastar HDDs (SAS or SATA)
- Up to 3.26PB[1] of raw storage[2] in 4U
- Up to 4 units may be daisy-chained for a total raw capacity of 13.04PB
- Patented IsoVibe technology ensures maximum performance even in heavy workloads
- Improved cooling from innovative ArcticFlow technology
- Together, IsoVibe and ArcticFlow contribute to a 62% reduction in drive returns[3]
- Choose dual-port SAS for high availability or single-port SATA for lower cost
- Up to 12 x 24Gb/s SAS-4 host connections
- Enterprise-grade redundant and hot-swappable drives, PSUs, IO Modules, HEMs, and fans
- Rack-mounted top cover for quick and easy service

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IsoVibe Patented Vibration Isolation Technology

Precision cuts in the baseboard create a suspension system for the drives within the chassis, isolating them from transmitted vibration. The result is consistent performance maintained across every drive — even when the entire system is working at full capacity.

Innovative ArcticFlow Thermal Zone Cooling Technology

By introducing cool air directly into the center of the chassis, drives operate at lower and more consistent temperatures than conventional systems. This delivers lower fan speeds, reduced vibration, lower power consumption, quieter operation, and ultimately, higher reliability.

Western Digital Resource Manager

A GUI-based tool that enables real-time monitoring and management of the platform through a consolidated dashboard displaying the most critical system information. Additional views provide platform configuration, health monitoring, and maintenance capabilities.

Specifications

Max. Drives	102 x 3.5in drive bays
Drive Interface	12Gb/s SAS 6Gb/s SATA
Available Drive Capacities	HDD up to 26TB CMR or 32TB SMR
Host Interface	Dual redundant HEMs, 6 Mini-SAS HD ports per HEM
Weight	Product without drives: 47kg / 103.6lbs Product with 102 HDDs: 121.02kg / 266.8lbs
LED Indicators	Front/Rear: Power, ID, Fault Drive: Activity, Fault
Physical Dimensions	Height: 174.5 mm / 6.87 in Width: 447.0 mm / 17.60 in Depth: 1044.2 mm / 41.11 in Depth with CMA: 1191 mm / 46.89 in
Management	SCSI Enclosure Services Redfish (out of band, via RJ45)
Power	Titanium: Dual 200-240V AC, 1600W
Cooling	4 main enclosure fans front-to-rear system cooling with zero-loss backflow prevention 1 IO module fan Dual PSUs with built-in fans
Environmental	Operating Temperature: 5°C to 35°C Non-op Temperature: -40 to 70°C Humidity: 5 to 85% relative humidity Operating Altitude: -300m to 3048m / -984 ft to 10,000 ft Sound Power: < 7.2Bels @ 23±2°C
Serviceability	Cable-free hot-swappable IOM, HEM, power supply, fans, and drives
Warranty[4]	5 Year Limited Warranty

[1] One terabyte (TB) is equal to one trillion bytes and one petabyte (PB) is equal to 1,000 TB. Actual user capacity may be less due to operating environment.

[2] Ultrastar Data102 Hybrid Storage Platform total raw capacity of 2.65PB using 26TB CMR HDDs and 3.26PB using 32TB SMR HDDs.

[3] Based on observed and projected drive return data compared to generation without features. Does not change product specifications or constitute a warranty.

[4] Please see product warranty terms and conditions for details at: https://documents.westerndigital.com/content/dam/doc-library/en_us/assets/public/western-digital/collateral/warranty/warranty-western-digital-platform-products.pdf.

Certifications & Standards

Country Certifications	Australia/New Zealand (RCM) | European Union (CE) | Great Britain (UKCA) | Israel (SII) | Japan (VCCI) | Korea (KC) | North America: Canada, USA (NRTL) | South Africa (LoA) | Taiwan (BSMI)
Safety	CAN/CSA-C22.2 No. 62368-1, Second Edition | CE – Low Voltage Directive | CNS 15598-1 | IEC 62368-1 | IS 13252-2010
EMC Class A Emissions	AS/NZS CISPR 32 | CNS 15936-1 | CE – EMC Directive 2014/30/EU | CISPR 32 Edition 6 | FCC CFR 47 Part 15, Subpart B | ICES-003, Issue 7 | IEC 55032 | KS C 9832 | TR CU 020/2011 | VCCI V-3
EMC Class A Immunity	IEC 55035 | IEC 61000-3-2 Harmonic Current Emissions | IEC 61000-4-2 ESD | IEC 61000-4-3 Radiated Immunity | IEC 61000-4-6 RF Common Mode | IEC 61000-4-8 Power Frequency Magnetic Field | KS C 9835
Eco-Design	Commission Regulation (EU) 2019/424
Environmental Standards	EU RoHS Directive (2011/65/EU) | EU WEEE Directive (2012/19/EU) | EU REACH Regulation (EC) No 1907/2006 | EU POPs Regulation (EU) 2019/1021

How to Read Model Number

Example: Ultrastar Data102 **3234** 2652TB, 3rd Generation with Dual IOM SAS, 6x HEM 24G, and 26TB CMR

1st digit = JBOD Generation 3: Ultrastar Data102 3rd Generation	2nd digit = Interface 1: Single IOM SATA 2: Dual IOM SAS
3rd digit = Connectivity 3: 6x HEM 24G (Microchip)	4th digit = HDD Generation 1: Ultrastar DC HC580 CMR 2: Ultrastar DC HC680 SMR 3: Ultrastar DC HC555 CMR 4: Ultrastar DC HC590 CMR 5: Ultrastar DC HC690 SMR

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