



Ultrastar DC SN730 | 2.5-inch U.2
1TB¹, 2TB, 4TB, 1.6TB and 3.2TB NVMe SSD

Highlights

- High-performance PCIe Gen 3 × 4 NVMe 1.3 compliant
- Storage capacity up to 4TB in 2.5-inch U.2 form factor
- High Sequential Read / Write performance and Random Read / Write IOPS with low latency
- Superior enterprise-grade reliability: Flash-aware RAID, end-to-end data path protection, T10 DIF, power-loss protection

Applications & Workloads

- Highest performance tier enterprise and cloud storage
- Databases supporting mission-critical applications
- Cloud and Hyperscale high performance computing
- Online Transaction Processing (OLTP) and Online Analytical Processing (OLAP)
- High Frequency Trading (HFT) for financial transactions
- e-Commerce
- Virtualization

Features & Benefits

	Feature / Function	Benefits
Performance	<ul style="list-style-type: none"> • Up to 820k Random Read IOPS (4KiB) • Up to 470k IOPS Mixed (R/W) Random Workloads (4KiB) 	<ul style="list-style-type: none"> • Use as top tier storage to accelerate databases and high frequency workloads
Capacity & Endurance	<ul style="list-style-type: none"> • 1.6TB to 3.2TB capacities supporting 3 DW/D • 1TB/2TB/4TB capacities supporting 1DW/D and configurable to 960GB/1.92TB/3.84TB 	<ul style="list-style-type: none"> • Focused mainstream capacity portfolio offering best performance on various cloud and enterprise workload requirements
Reliability	<ul style="list-style-type: none"> • UBER of < 1 in 10¹⁷ • Power loss and end-to-end data protection 	<ul style="list-style-type: none"> • Enterprise-grade reliability helps reduce service incidents and lower support costs
Integration	<ul style="list-style-type: none"> • NVMe 1.3 Compliant 	<ul style="list-style-type: none"> • Industry standard support for ease of system integration

NVMe™ SSD for Application Acceleration

Western Digital extends its technology leadership with the introduction of the Ultrastar® DC SN730 solid-state drive (SSD). The Ultrastar DC SN730 NVMe SSD delivers a new level of performance and capacity for Enterprise, Cloud, and Hyperscale environments. Enabling faster intelligence in the expanding digital data demands of business applications, the Ultrastar DC SN730 SSD is a reliable resource for fast access to critical data. The Ultrastar DC SN730 supports similar read and 1.4x write performance over the previous generation with a lower 20W power envelope.

Ultra-Low Latency and High Quality of Service (QoS)

To meet Tier 1 enterprise service level agreements (SLAs), data center managers need high QoS from their storage infrastructure. With the dynamic IO scheduler architecture, the Ultrastar DC SN730 delivers a QoS improvement and lower latency over its predecessor, providing consistent low latency as the device reaches its highest levels of throughput. The combination of high throughput performance and predictable low latency delivers extreme performance for today's data intensive applications.

Mainstream Capacity Supports Data Growth

Delivering capacities of up to 4TB in a 2.5-inch form factors for a 1 drive write per day (DW/D) and a 3.2TB for 3 DW/D endurance rating, the Ultrastar DC SN730 delivers mainstream capacity requirements for cloud and enterprise markets. In fact, at 4TB this product delivers amongst the best IO performance density in a U.2 form factor among NVMe-compliant devices at the time of its market introduction, providing swift access to even more data.

Enterprise Storage Experience for High Performance Servers

Western Digital Ultrastar SSDs leverage decades of enterprise storage design expertise in high performance and high reliability to deliver this NVMe PCIe SSD 2.5-inch drive. The hardware read/write acceleration supports IO intensive cloud and enterprise applications, ensuring faster access to user data.

Ultrastar® Quality and Reliability

The Ultrastar DC SN730 SSD extends the company's long-standing tradition of performance and reliability leadership. A balanced combination of new and proven technologies enables high reliability and availability to customer data. Western Digital Ultrastar drives are backed up by a 5-year limited warranty and an array of available technical support and services, which may include customer and integration assistance. Western Digital is dedicated to providing a complete portfolio of storage products to satisfy today's demanding computing needs.

Specifications

	4TB	2TB	1TB	3.2TB	1.6TB
Configuration					
Interface	PCIe 3.0 x4, NVMe 1.3	PCIe 3.0 x4, NVMe 1.3	PCIe 3.0 x4, NVMe 1.3	PCIe 3.0 x4, NVMe 1.3	PCIe 3.0 x4, NVMe 1.3
Form Factor	U.2 2.5-inch Drive	U.2 2.5-inch Drive	U.2 2.5-inch Drive	U.2 2.5-inch Drive	U.2 2.5-inch Drive
Capacity ¹	4TB	2TB	1TB	3.2TB	1.6TB
Endurance (Drive Writes per Day) ²	1 DW/D	1 DW/D	1 DW/D	3 DW/D	3 DW/D
Flash Memory Technology	BiCS3 3D TLC NAND	BiCS3 3D TLC NAND	BiCS3 3D TLC NAND	BiCS3 3D TLC NAND	BiCS3 3D TLC NAND
Performance ³			Projected ⁷		Projected ⁷
Sequential Read (max MiB/s, 64KiB)	3,330	3,330	3,330	3,330	3,330
Sequential Write (max MiB/s, 128KiB)	2,920	2,010	1,000	2,920	2,000
Random Read (max IOPS, 4KiB)	820,000	815,000	420,000	820,000	740,000
Random Write (max IOPS, 4KiB)	120,000	97,000	63,000	300,000	195,000
Mixed Random Read/Write (max IOPS 70%R / 30%W, 4KiB)	285,000	215,000	130,000	470,000	325,000
Write Latency ⁴ (µs)	12	12	12	12	12
Reliability					
Uncorrectable Bit Error Rate (UBER)	1 in 10 ¹⁷	1 in 10 ¹⁷	1 in 10 ¹⁷	1 in 10 ¹⁷	1 in 10 ¹⁷
MTBF ⁵	2.5M Hours	2.5M Hours	2.5M Hours	2.5M Hours	2.5M Hours
Annual Failure Rate ⁵ (AFR)	0.35%	0.35%	0.35%	0.35%	0.35%
Limited Warranty ⁶	5 Years	5 Years	5 Years	5 Years	5 Years
Data Retention	3 Months at 40°C	3 Months at 40°C	3 Months at 40°C	3 Months at 40°C	3 Months at 40°C
Power					
Requirement (DC +/-10%)	3.3V (Aux) and 12v	3.3V (Aux) and 12v	3.3V (Aux) and 12v	3.3V (Aux) and 12v	3.3V (Aux) and 12v
Operating (W, proj. max) ⁷	20 W	14 W	14 W	20 W	14 W
Idle (W, proj. max) ⁷	5.5 W	5 W	5 W	5.5 W	5 W
Physical Size					
z-height (mm)	15	15	15	15	15
Dimensions (width x depth, mm)	100.45 × 69.85	100.45 × 69.85	100.45 × 69.85	100.45 × 69.85	100.45 × 69.85
Weight (g, max)	182	182	182	182	182
Environmental					
Operating Temperature	0° to 55°C (Ambient), 0° to 70°C (Case)	0° to 55°C (Ambient), 0° to 70°C (Case)	0° to 55°C (Ambient), 0° to 70°C (Case)	0° to 55°C (Ambient), 0° to 70°C (Case)	0° to 55°C (Ambient), 0° to 70°C (Case)
Non-operating Temperature	-40° to 85°C	-40° to 85°C	-40° to 85°C	-40° to 85°C	-40° to 85°C

* See "How to Read the Ultrastar model number" below for possible values for y.

¹ One megabyte (MB) is equal to one million bytes, one gigabyte (GB) is equal to one billion bytes, and one terabyte (TB) is equal to 1,000GB (one trillion bytes) when referring to storage capacity. Accessible capacity will vary from the stated capacity due to formatting, system software, and other factors.

² Endurance rating based on DW/D using 4KiB random write workload over 5 years.

³ Performance will vary by capacity point, or with the changes in useable capacity. Consult product manual for further details. All performance measurements are in full sustained mode and are peak values. 1MiB=1,048,576 bytes or 220, 1KiB=1,024 bytes or 210.

⁴ Average Write Latency at 4KiB QD=1

⁵ MTBF and AFR targets are based on a sample population and are estimated by statistical measurement and acceleration algorithms under median operating conditions. MTBF and AFR rating do not predict an individual drive's reliability and do not constitute a warranty.

⁶ The warranty for the product will expire on the earlier of (i) the date when the flash media has reached one-percent (1%) of its remaining life or (ii) the expiration of the time period associated with the Product.

⁷ Projected values only, subject to change.

Model Numbers

WUS3B8T4TCSP3X1 / OTS1910 (4TB)
WUS3B8T2TCSP3X1 / OTS1909 (2TB)
WUS3B8T1TCSP3X1 / OTS1926 (1TB)

WUS3C8T32CSP3X1 / OTS1908 (3.2TB)
WUS3C8T16CSP3X1 / OTS1925 (1.6TB)

How to Read Model Number

Example: WUS3B8T4TCSP3X1

W = Western Digital
U = Ultrastar
S = Standard
3B = BiCS3 3D TLC NAND
8T = Max capacity in series (8TB)
4T = Capacity this model (4TB)
C = Generation Code (3rd)
S = Form Factor (U.2 15mm)
P3 = Interface (PCIe 3.0)
X = Performance
1 = No crypto erase support

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