



Huawei OceanDisk 300S

Basic Specifications										
Model Number	HSSD-O 07A3AL 480N	HSSD-O 07A3AL 960N	HSSD-O 07A3AL 1T9N	HSSD-O0 7A3AL 3T8N	HSSD-O0 7A3AL 7T6N	HSSD-O07A3AV 800N	HSSD-O07A3AV 1T6N	HSSD-O0 7A3AV 3T2N	HSSD-O07A3AV 6T4N	
Form Factor	U.2									
Weight	< 200 g (excluding the disk tray)									
NAND Flash	3D TLC									
Interface Protocol	SAS 3.0									
Capacity	480 GB	960 GB	1,920 GB	3,840 GB	7,680 GB	800 GB	1,600 GB	3,200 GB	6,400 GB	
Performance										
Single-Port Sequential Read/Write Bandwidth@128 KB	900/350 MB/s	1,000/950 MB/s	1,000/1,000 MB/s	1,000/1,000 MB/s	1,000/1,000 MB/s	1,000/950 MB/s	1,000/1,000 MB/s	1,000/1,000 MB/s	1,000/1,000 MB/s	
Single-Port Random Read/Write IOPS@4 KB	160,000 /16,000	200,000/ 40,000	200,000/ 70,000	200,000/ 70,000	200,000/ 100,000	200,000/ 80,000	200,000/ 150,000	200,000/ 150,000	200,000/ 150,000	
Single-Port Average Read/Write Latency@1 QD	118/48 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	
Dual-Port Sequential Read/Write Bandwidth@128 KB	900/350 MB/s	2,100/1,000 MB/s	2,100/1,800 MB/s	2,100/1,800 MB/s	2,100/1,800 MB/s	2,100/1,000 MB/s	2,100/1,800 MB/s	2,100/2,000 MB/s	2,100/1,800 MB/s	
Dual-Port Random Read/Write IOPS@4 KB	160,000/ 16,000	360,000/ 40,000	400,000/ 70,000	400,000/ 70,000	400,000/ 100,000	360,000/ 80,000	400,000/ 150,000	400,000/ 150,000	400,000/ 200,000	
Dual-Port Average Read/Write Latency@1 QD	118/48 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	118/38 μs	
Reliability										
Endurance ¹	1 DWPD, 5years				3 DWPD, 5years					
PBW ²	0.876 PB	1.752 PB	3.504 PB	7.008 PB	14.016 PB	4.38 PB	8.76 PB	17.52PB	35.04PB	
Temperature	Non-operational: -40°C to 85°C (-40°F to 185°F); operational: 0°C to 83°C (32°F to 181.4°F)									
Reliability	MTBF: 2.5 million hours; AFR: ≤ 0.35%; UBER: 10 ⁻¹⁸									
TRIM	Supported									
Power Failure Protection	Supported									
Media Failure Protection	Supported									
Power Consumption										
Average Power Consumption	5 W (idle), 11 W (active)									
Certification										
	China: RoHS; Europe: WEEE, RoHS, REACH, and CE; North America: NRTL; UK: UKCA; Japan: VCCI; Canada: IC; Australia: RCM; IEEE Member States/Regions: CB									

Notes: The specifications are subject to change without notice. Performance results are based on internal testing and use. Results and performance may vary according to configurations and systems, including device capacity, operating system versions, and test tools.

1. DWPD represents drive writes per day tested according to the JESD219 standards. An SSD can be used for five years if the DWPD stays below the specified value; otherwise, the SSD service life will be affected.

2. Petabytes written (PBW) are tested with 4 KB I/O size and alignment.

Scale-out storage

I/O performance improvement

Content caching

Access speed improvement

CAD/CAM

Data read/write acceleration

Database

TPS performance improvement

Big data

Data sorting acceleration

HCI

All-SSD acceleration



Huawei Enterprise App



Huawei IT

To learn more about Huawei storage, please contact your local Huawei office or visit the Huawei Enterprise website: <http://e.huawei.com>.

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High-Performance Enterprise SSD



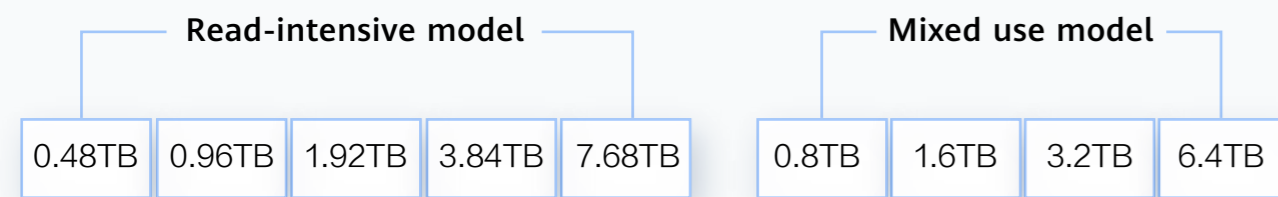
Beyond the Xtreme for Data Acceleration

Huawei OceanDisk 300S

OceanDisk 300S is an enterprise SAS SSD. It features high performance, fast response, and high reliability, greatly improving storage I/O performance. The SSD can seamlessly fit into mainstream operating systems (OSs) and virtualization systems to enhance performance for database, virtual desktop infrastructure (VDI), and high-performance computing (HPC) applications, helping reduce system TCO.



• Single-disk capacity



Robust Performance

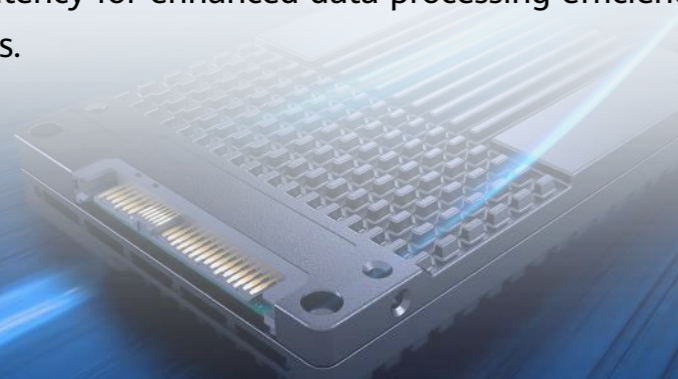
2100/2000

Max. sequential read/write bandwidth (MB/s)

400K/200K

Max. random read/write IOPS

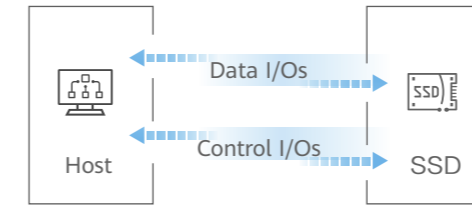
Leveraging the standard SAS 3.0 protocol and advanced hardware-software integration, the SSD provides single- and dual-port auto-adaptation capabilities, achieving high bandwidth and low latency for enhanced data processing efficiency in mission-critical enterprise applications.



Optimized SSD performance with hardware and software combination

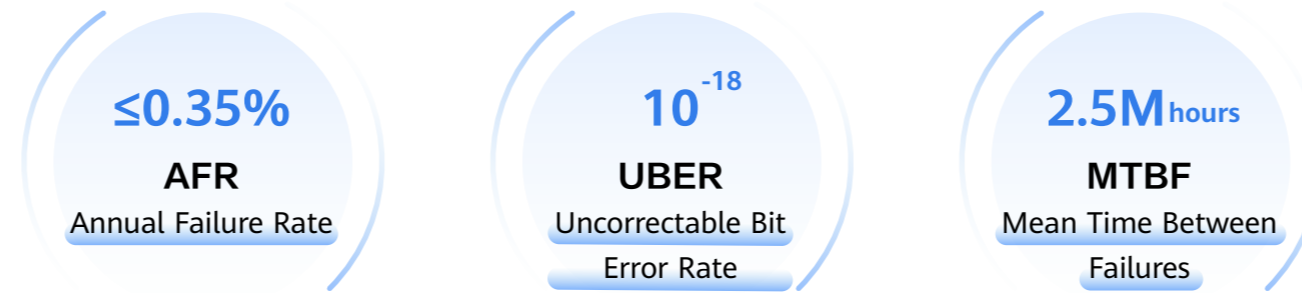
Microcode-based control channel + Hardware-based data path

The data and control I/O paths are decoupled, which reduces loads on each channel and delivers 10% higher energy efficiency under full load compared to similar products.



Note: The legend is for demonstration purposes only. The flow has been simplified for clarity.

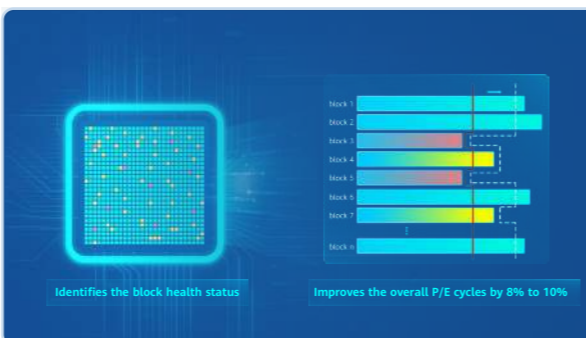
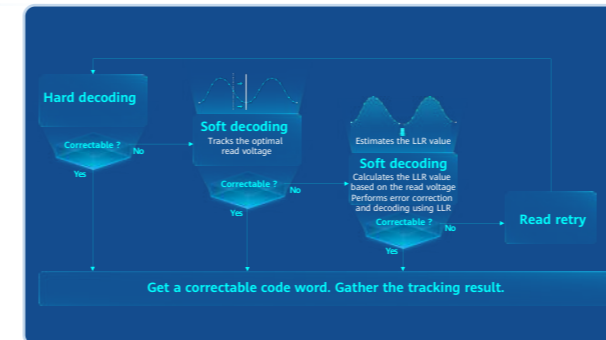
Ultimate Reliability



With 20 years of expertise in data storage, Huawei has developed advanced technologies that deliver high stability, durability, and reliable data protection for complex environments and demanding workloads. These advanced technologies include the enhanced Low-Density Parity Check (LDPC) algorithm, intelligent wear leveling, intelligent multi-streaming and reclamation, and end-to-end data protection.

LDPC + FSP 3.0

UBER improves to 10⁻¹⁸, 10 times better than the industry benchmark.

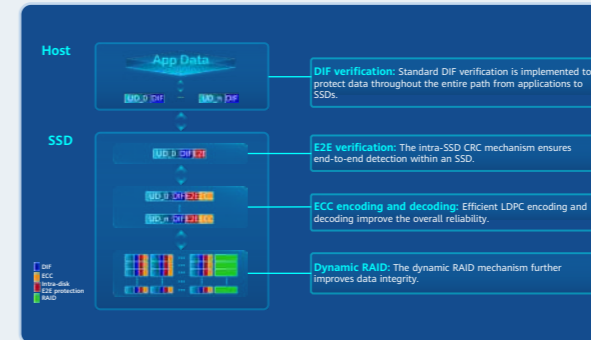
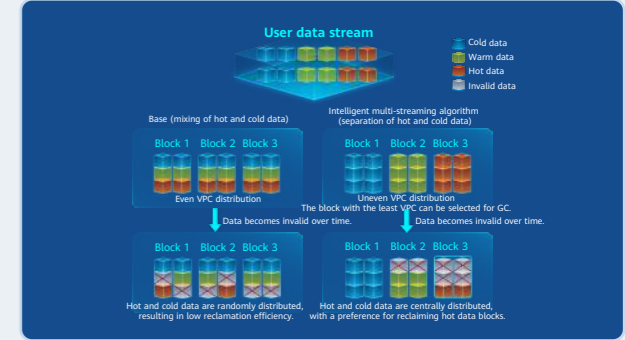


Intelligent wear leveling

This technique identifies block health status and aligns the block Program/Erase (P/E) policy to improve the overall P/E cycles by 10%.

Intelligent multi-streaming and reclamation

Intelligent hot and cold data identification and multi-dimensional judgment for reclamation help reduce write amplification by 20%+.



Four-layer dataprotection mechanism

The four-layer data protection mechanism, including DIF, intra-SSD CRC, ECC encoding and decoding, and dynamic RAID, ensures end-to-end data resilience.

Intelligent Management

Huawei DiskBooster is an AI-powered O&M tool that reliably predicts failures and lifespan of disks. By detecting slow disks, it reminds IT personnel to replace or repair disks or back up data to improve service performance. This reduces the impact of faulty or sub-healthy disks on services, ensuring data resilience and service continuity.

Pre-failure detection

By analyzing over 20 key indicators, including wear degree, UNC threshold-crossing, and die failure, the impact of disk faults on services is halved.

Disk life prediction

Over 10 disk lifespan indicators and advanced lifespan prediction algorithms ensure disk lifespan is accurate to within five days (down from over a month).

Slow disk detection

Over 10 slow disk criteria are collected and analyzed by decision and processing algorithms, delivering a detection accuracy of 99%.

Disk logical failure repair

The multi-level incremental repair policy reduces the fault return rate by 50%.

