

Huawei eKitStor Xtreme 300S						
Basic Specifications						
Model Number	HSSD-E0A480A3L7N	HSSD-E0A960A3L7N	HSSD-E0A1T9A3L7N	HSSD-E0A3T8A3L7N	HSSD-E0A7T6A3L7N	HSSD-E0A3T2A3V7N
Form Factor	U.2					
Weight	< 200 g (excluding the disk tray)					
NAND Flash	3D TLC					
Interface Protocol	SAS 3.0					
Available Capacity	480 GB	960 GB	1,920 GB	3,840 GB	7,680 GB	3,200 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	1,000/1,000 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/ 150,000
Single-Port Average Read/Write Latency@1 QD	118/48 μ s	118/38 μ s	118/38 μ s	118/38 μ s	118/38 μ s	118/38 μ s
Dual-Port Sequential Read/Write Bandwidth@128 KB	900/350 MB/s	1,600/1,000 MB/s	2,100/1,800 MB/s	2,100/1,800 MB/s	2,100/1,800 MB/s	2,100/2,000 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	400,000/ 150,000
Dual-Port Average Read/Write Latency@1 QD	118/48 μ s	118/38 μ s	118/38 μ s	118/38 μ s	118/38 μ s	118/38 μ s
Reliability						
Endurance ¹	1 DWPD, 5years	1 DWPD, 5years	1 DWPD, 5years	1 DWPD, 5years	1 DWPD, 5years	3 DWPD, 5years
PBW ²	0.876 PB	1.752 PB	3.504 PB	7.008 PB	14.016 PB	17.52 PB
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	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 JEDEC219 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.



TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO CASE SHALL HUAWEI TECHNOLOGIES CO., LTD BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, OR LOST PROFITS, BUSINESS, REVENUE, DATA, GOODWILL OR ANTICIPATED SAVINGS ARISING OUT OF, OR IN CONNECTION WITH, THE USE OF THIS MANUAL.

Updated: March 2025

HUAWEI TECHNOLOGIES CO., LTD.
Bantian Longgang District
Shenzhen 518129, P.R. China
Tel: +86-755-28780808

Beyond the Xtreme for Data Acceleration

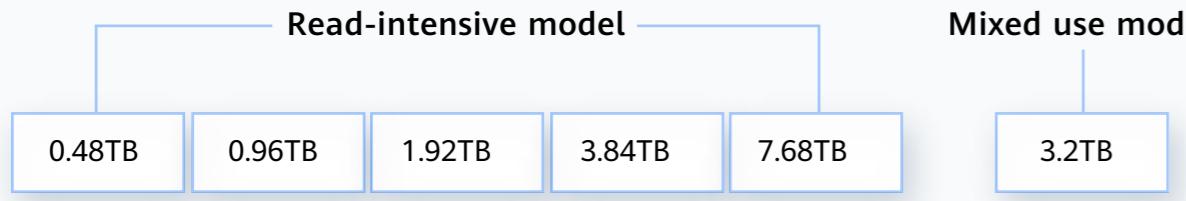


Huawei eKitStor Xtreme 300S

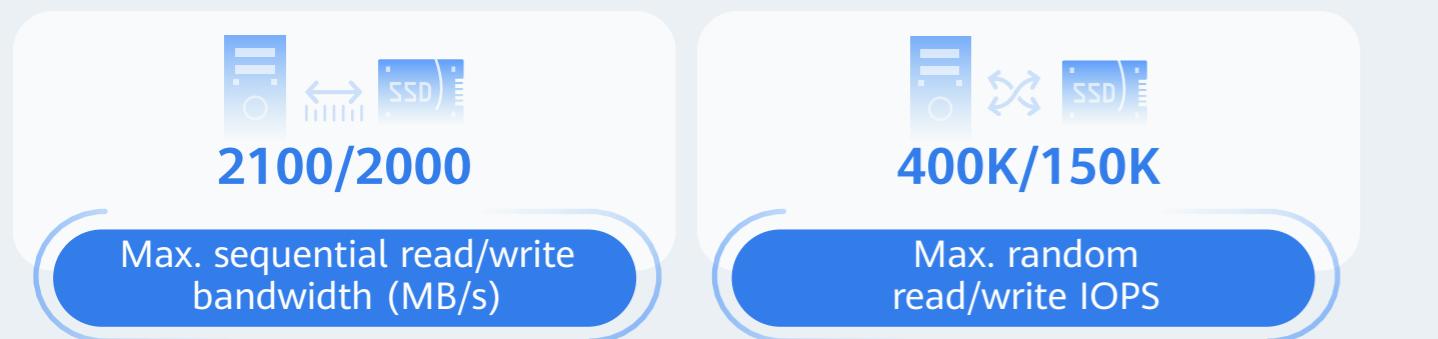
eKitStor Xtreme 300S is an enterprise SAS SSD. It features high performance, fast response, and high reliability, greatly improving storage I/O performance. The SSD can seamlessly fit into mainstream operating systems (OSs) and virtualization systems to enhance performance for database, virtual desktop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



- Single-disk capacity



Robust Performance

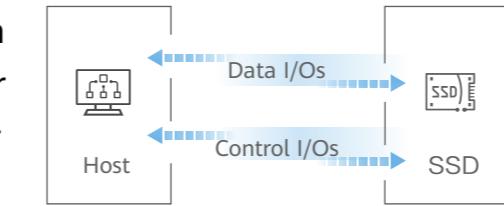


Leveraging the standard SAS 3.0 protocol and advanced hardware-software integration, the SSD provides single- and dual-port auto-adaptation capabilities, achieving high bandwidth and low latency for enhanced data processing efficiency in mission-critical enterprise applications.

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.

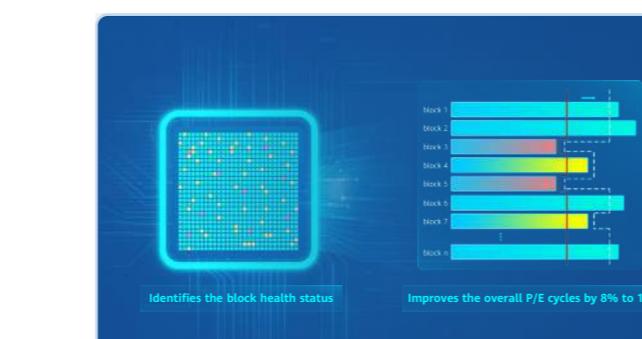
Ultimate Reliability



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**.

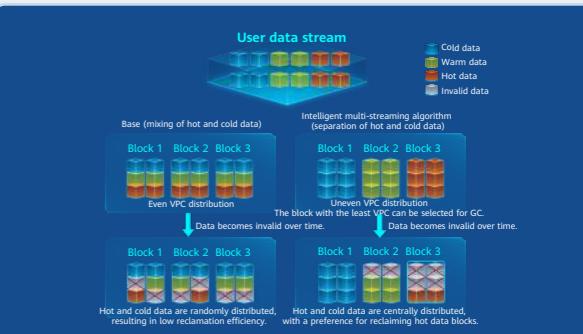


Intelligent wear leveling

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

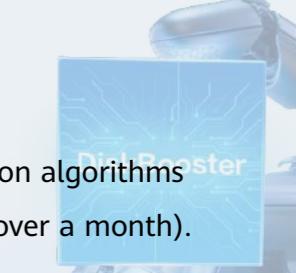
The four-layer data protection mechanism, including DIF, intra-SSD CRC, ECC encoding and decoding, and dynamic RAID, ensures end-to-end data resilience.

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.

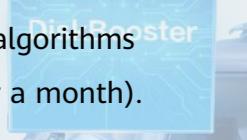
Pre-failure detection

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 predication 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%.

