

Huawei eKitStor Xtreme 300P							
Basic Specifications							
Model Number	HSSD-E021T9P 4L1N	HSSD-E023T8P 4L1N	HSSD-E027T6P 4L1N	HSSD-E0215TP 4L1N	HSSD-E021T6P 4V1N	HSSD-E023T2P 4V1N	HSSD-E026T4P 4V1N
Form Factor	U.2						
Weight	182 g						
NAND Flash	3D TLC						
Interface Protocol	PCIe 4.0 1*4 (single-port), NVMe 1.4						
Available Capacity	1.92 TB	3.84 TB	7.68 TB	15.36 TB	1.6 TB	3.2 TB	6.4 TB
FTL Size	4 KB	4 KB	4 KB	8 KB	4 KB	4 KB	4 KB
Performance							
Sequential Read Bandwidth @128 KB (MB/s)	6,800	7,400	7,400	7,400	6,800	7,400	7,400
Sequential Write Bandwidth @128 KB (MB/s)	2,500	2,500	4,700	4,800	2,500	4,700	4,700
Random Read (k IOPS) @4 KB	900k	1,600k	1,600k	1,600k	900k	1,600k	1,600k
4 KB Random Write (k IOPS) @4 KB	200k	200k	250k	150k	300k	400k	500k
Average Read Latency @1 QD (μs)	65	65	70	70	65	65	70
Average Write Latency @1 QD (μs)	12	12	12	12	12	12	12
Reliability							
Endurance ¹	1 DWPD, 5 years				3 DWPD, 5 years		
PBW ²	3.504 PBW	7.008 PBW	14.016 PBW	28.032 PBW	8.760 PBW	17.520 PBW	35.040 PBW
Reliability	MTBF: 2.5 million hours; AFR: ≤ 0.35%; UBER: 10 ⁻¹⁸						
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)						
TRIM	Supported						
Power Failure Protection	Supported						
Media Failure Protection	Supported						
Data Retention Period (Power Failure)	3 months at 40°C (104°F)						
Power Consumption							
Average Power Consumption	7.5 W (idle), 18 W (Active)						
Certification							
China: RoHS; Europe: WEEE, RoHS, REACH, and CE; North America: NRTL; UK: UKCA; Japan: VCCI; Canada: IC; Australia: RCM; IEEE Member Countries/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

Database

TPS performance improvement

Content caching

Access speed improvement

Big data

Data sorting acceleration

CAD/CAM

Data read/write acceleration

HCI

All-SSD acceleration

QR Code 1

HUAWEI eKit App

QR Code 2

HUAWEI eKit Store

To learn more about Huawei eKitStor products, please contact your local Huawei office or visit Huawei eKitStor website: <http://ekit.huawei.com>.

Copyright © Huawei Technologies Co., Ltd. 2025. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without the prior written consent of Huawei Technologies Co., Ltd.

Trademarks and Permissions

HUAWEI, HUAWEI , and are trademarks or registered trademarks of Huawei Technologies Co., Ltd. Other trademarks, product, service and company names mentioned are the property of their respective holders.

Disclaimer

THE CONTENTS OF THIS MANUAL ARE PROVIDED "AS IS". EXCEPT AS REQUIRED BY APPLICABLE LAWS, NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE MADE IN RELATION TO THE ACCURACY, RELIABILITY OR CONTENTS OF THIS MANUAL.



Huawei eKitStor Xtreme 300P

High-Performance Enterprise SSD



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

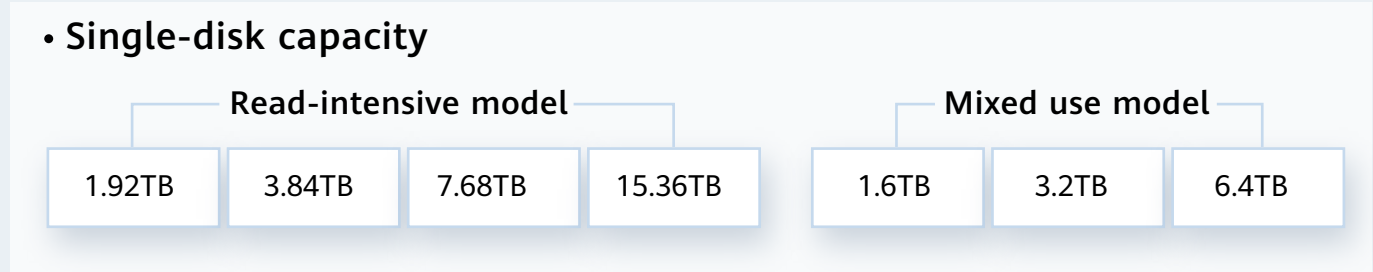
HUAWEI TECHNOLOGIES CO., LTD.
Bantian Longgang District
Shenzhen 518129, P.R. China
Tel: +86-755-28780808

Beyond the Xtreme for Data Acceleration

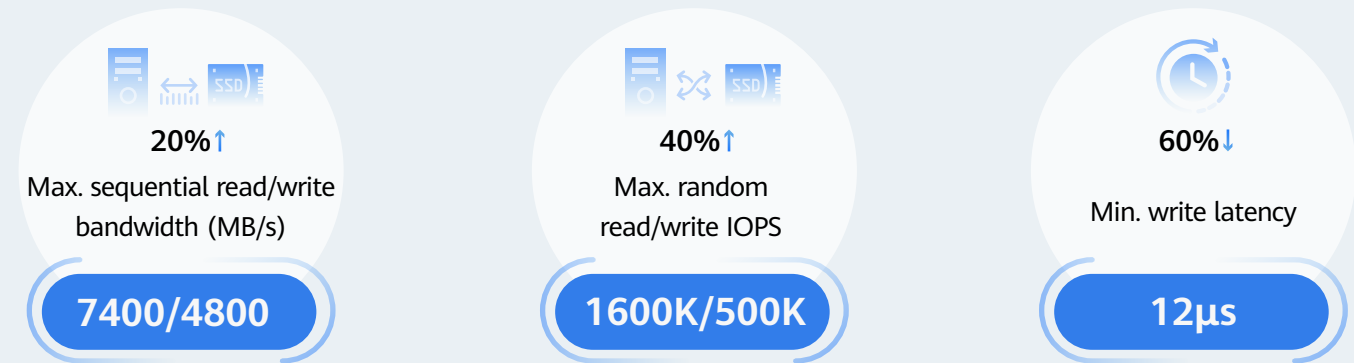


Huawei eKitStor Xtreme 300P

eKitStor Xtreme 300P is an enterprise NVMe PCIe SSD. It features high performance, fast response, and high reliability, greatly improving storage I/O performance. The SSD product can seamlessly fit into mainstream operating systems (OSs) and virtualization systems to enhance performance for database, virtualization, and HPC applications, helping reduce system TCO. With enhanced device management, the eKitStor Xtreme 300P supports OS-native drivers. It also supports comprehensive hot swap for easy maintenance.



Superb Performance



Leveraging the standard NVMe protocol and PCIe 4.0 high-speed interface, combined with a hardware-software integrated technical framework, eKitStor Xtreme 300P provides higher bandwidth and lower latency. It effortlessly handles efficient reads and writes of mass files, concurrent multi-task processing in complex environments, and critical application scenarios with heavy-load, high-performance demands. This product ensures a smooth and efficient user experience.

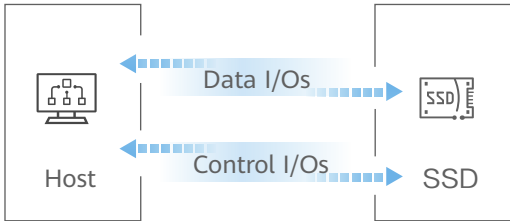
PCIe 4.0
Efficient four-channel transmission

NVMe 1.4
Standard protocol

Optimized SSD performance with hardware and software combination

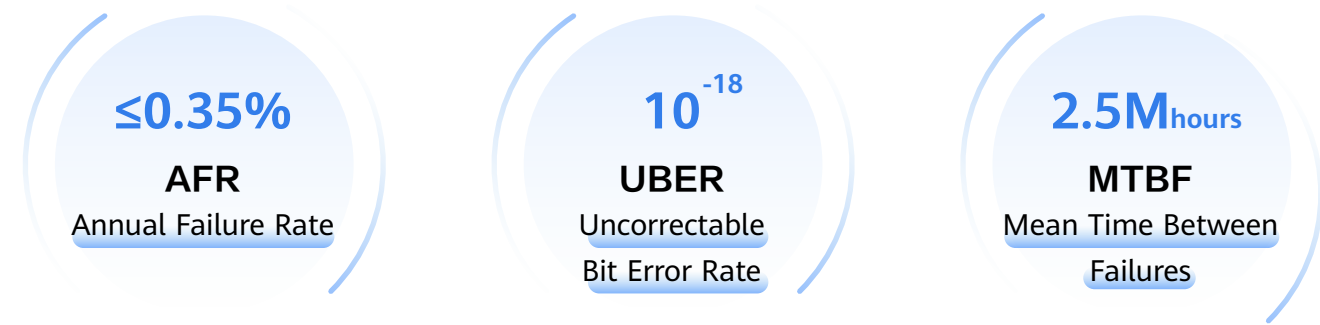
Microcode-based control channel

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

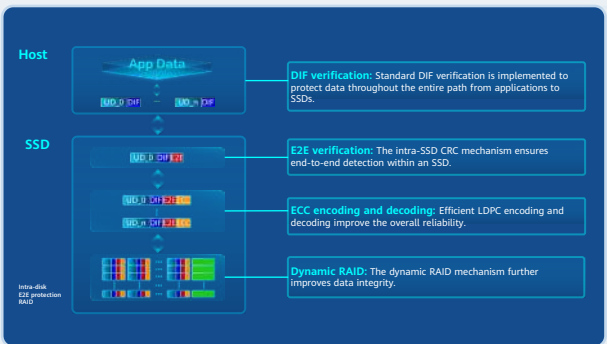
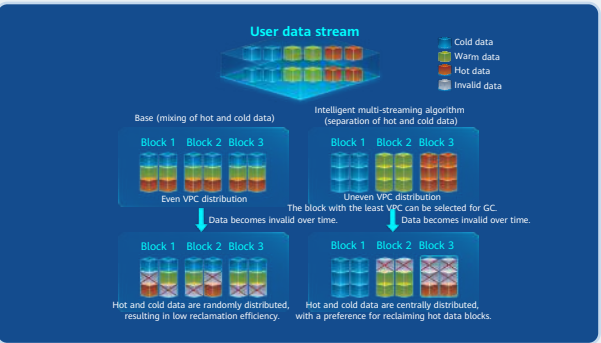
UBER improves to 10⁻¹⁸, 10 times better than the industry benchmark.

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%.

