

Huawei eKitStor Xtreme 300P							
Basic Specifications							
Model Number	HSSD-E021T9P 4L1N	HSSD-E023T8P 4L1N	HSSD-E027T6P 4L1N	HSSD-E021TP 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 <sup>1</sup>	1 DWPD, 5 years			3 DWPD, 5 years			
PBW <sup>2</sup>	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 <sup>-18</sup>						
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	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 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.

**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 eKit App


  
HUAWEI eKit Store

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**Beyond the Xtreme for Data Acceleration**

 **HUAWEI eKit**

# Huawei eKitStor Xtreme 300P

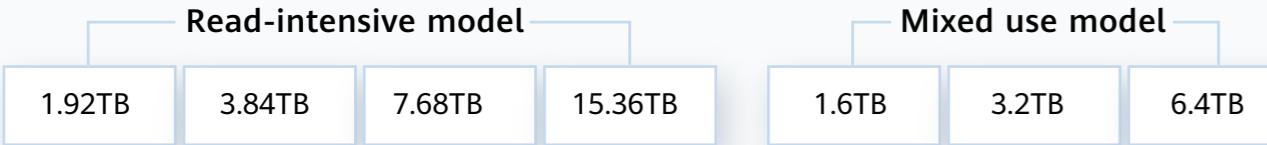
## High-Performance Enterprise SSD

## Huawei eKitStor Xtreme 300P

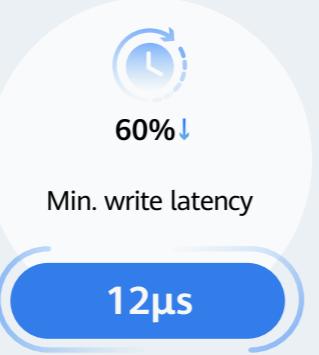
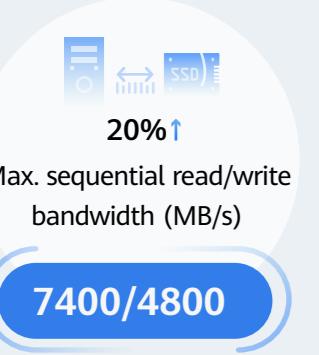
eKitStor Xtreme 300P is an enterprise NVMe PCIe SSD. It features high performance, fast response, and high reliability, greatly improving storage I/O performance. The SSD product can seamlessly fit into mainstream operating systems (OSs) and virtualization systems to enhance performance for database, 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.



### Single-disk capacity



## 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

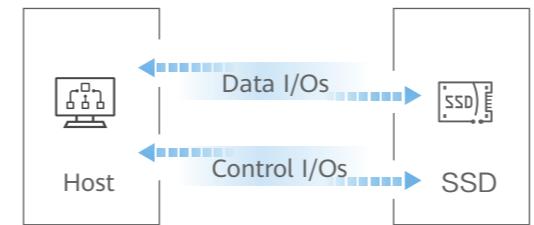
### NVMe 1.4

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.

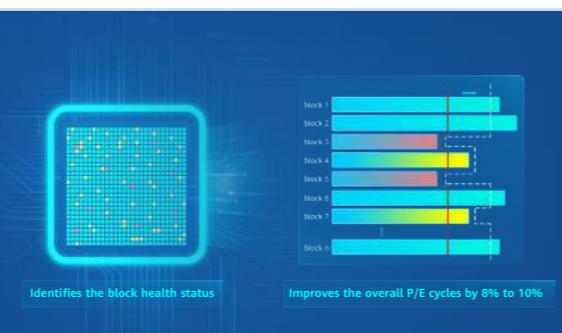
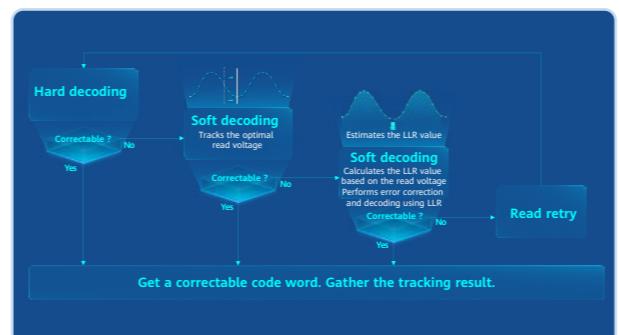
## Ultimate Reliability



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**.

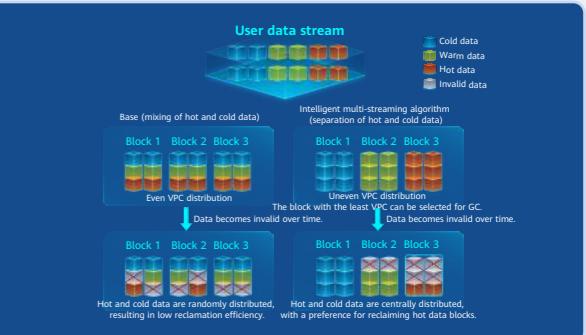


### Intelligent wear leveling

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%.

