XITC

Xinsheng Intelligent Technology Co., Ltd

PRODUCT BROCHURE

Thank you for reading this brochure!

Explore infinite possibilities and continue to empower you.

For more product details, technology updates or industry solutions, please follow our official channels.

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Company Profile

8 Years
Industrial Experience

70%
R&D Staff Proportion

>150M
R&D Investment（$）

4+3
SATA | PCIe | eMMC | DDR
Industrial | Enterprise | Consumer

>25 Mpcs
Shipment
Controllers and Modules

COMPANY PROFILE

Xinsheng Intelligent Technology Co., Ltd

Xinsheng Intelligent Technology Co., Ltd. was established in 2018 and is a leading provider of solid-state storage controller chips and solutions.

With 70% of its workforce in R&D, 45% holding a master' s degree or higher. The team brings over a decade of experience in IC design and mass production of solid-state drive. Since its establishment, the company has always adhered to the concept of independent intellectual property rights. It has launched the world 's first 12nm PCIe 4.0 SSD controller based on the RISC-V architecture, PCIe 3.0 SSD controller, enterprise-grade SATA 3.0 SSD controller Support TCG Opal, and dozens of solid-state storage solutions. The product cover data centers, edge computing, industrial control, consumer terminals, and automotive electronics fields.

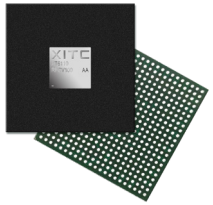
Leveraging strong R&D capabilities and industry experience, Xinsheng Intelligent Technology has undertaken various research projects and developed key technologies with independent intellectual property rights. Recognized as a high-tech and specialized enterprise, it continues to innovate, delivering solid-state storage solutions tailored to diverse applications. Committed to advancing the digital economy, the company strives to maximize data value while contributing to cybersecurity and technological growth.

COMPANY PROFILE

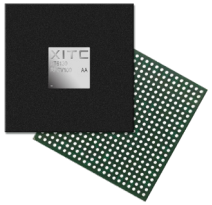
Storage Controller

Storage Controller/SATA/PCIe/eMMC

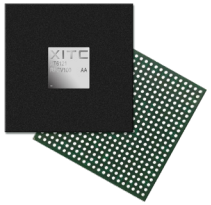
SATA Controller



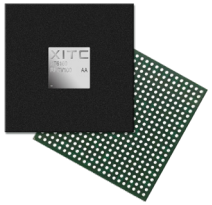
XT6110
SATA III，4CH x 8CE
Supports up to 4TB



XT6120
SATA III，8CH x 4CE
Supports up to 8TB

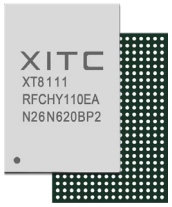


XT6121
SATA III，2CH x 8CE
Supports up to 2TB

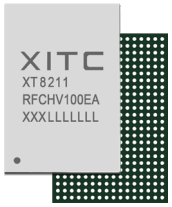


XT6160
SATA III，8CH x 4CE
Supports up to 16TB

PCIe Controller



XT8111
PCIe 3.0 x4，4CH x 8CE
NVMe 1.3 Protocol
Supports up to 8TB



XT8211
PCIe 4.0 x4，4CH x 8CE
NVMe 1.4 Protocol
Supports up to 8TB
TCG Opal 2.0

XT8310
PCIe 5.0X4，16CH x 8CE
NVMe 2.0 Protocol
Supports up to 32TB
TCG Opal 2.0

eMMC Controller

XT5521
eMMC 5.1，1CH x 4CE
Supports up to 128GB

Solid State Drive

SS2000SE

SATA III

2.5inch

Product Introduction

The SS2000SE series enterprise-grade SATA SSD is based on independently developed controller XT6120EN and firmware, paired with next-generation 3D TLC NAND Flash, delivering industry-leading high performance, low latency, high reliability, and long lifespan for data center and enterprise clients.The product is widely applicable to enterprise data centers, telecommunications, internet, financial, and government sectors, serving as system disks and data disks for enterprise servers and storage arrays.

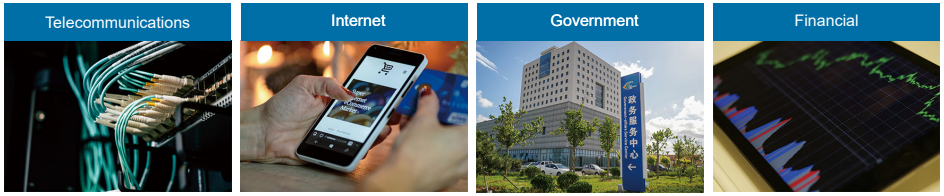
High-Performance Read-Intensive SSD

High-Performance Read-Intensive SSDThis product is specially engineered for read-intensive applications and can serve as boot drives, system drives, and data drives in enterprise servers and storage systems.Sequential Read Performance: Up to 560 MB/sRandom Read Performance: Up to 98K IOPS The drive effortlessly handles high-load read workloads, delivering consistent performance under demanding conditions.

Comprehensive Data Reliability Assurance

NANDXtra Data Reliability Engine, through intelligent wear leveling technology, globally optimizes data writes, effectively enhancing flash lifespan and reliability. Meanwhile, leveraging ECC, LDPC, Read Retry, and other technologies significantly strengthens data error correction capabilities; adopting RAID, data scrubbing, high-temperature protection, and bad block management comprehensively safeguards disk and data security.

Application scenario



Product specification

Form Factor

2.5inch

Usable Capacity(GB)

	480	960	1,920	3,840
TBW(TB) @JESD218 Client Workload	876	1,752	3,504	7,008

Performance

128KB Sequential Read (MB/s)	Up to 560
128KB Sequential Write (MB/s)	Up to 520
4K Random Read (Steady State) IOPS	Up to 98,000
4K Random Write (Steady State) IOPS	Up to 45,000

Power(Watt)

≤1.6(idle); ≤4.0(active)

NAND Flash

3D TLC

Interface

SATA III (6.0Gbps)

Temperature

0~70 ℃(Operation)
-40~+85 ℃(Storage)

MTBF

≥2,000,000 hours

UBER

≤10^{-17}

Endurance

1 DWPD for 5 years

Vibration/Shock Resistance

3.13G @ 5~800 Hz
1,000G @ 0.5 ms, 3 axis

Advanced Features

Enhanced PLP (Power Loss Protection), E2E, RAID+, ECC, 4K LDPC, High-Temperature Protection, TRIM, Online Upgrade, SMART, AES256 (Optional), etc.

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above performance metrics were obtained through testing on an x86 server (direct-attached SSD mode) combined with a CentOS platform, using the FIO v3.7 tool (bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary due to differences in testing configurations and environmental conditions.

SS6000SE

SATA III

2.5inch

M.2 2280

Product Introduction

The SS6000SE series SATA SSD utilizes 3D TLC NAND Flash particles, integrated with XITC proprietary firmware algorithms and Intelligent Block Management Technology (IBMT). Through deep optimization of flash read/write mechanisms, the product delivers significantly enhanced performance, reliability, and cost-effectiveness.With capacity options ranging from 240GB to 7.68TB, this solution provides a versatile, one-stop enterprise-grade SATA SSD platform for diverse data center needs.

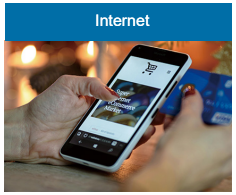
High-performance enterprise SSD

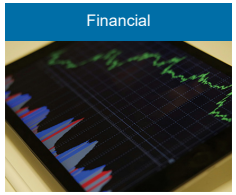
This product is specially engineered for read-intensive applications and can serve as boot drives, system drives, and data drives in enterprise servers and storage systems.Sequential Read Performance: Up to 560 MB/s Random Read Performance: Up to 98K IOPS The drive effortlessly handles high-load read workloads, delivering consistent performance under demanding conditions.

Comprehensive Data Reliability Assurance

NANDXtra Data Reliability Engine, through intelligent wear leveling technology, globally optimizes data writes, effectively enhancing flash lifespan and reliability. Meanwhile, leveraging ECC, LDPC, Read Retry, and other technologies significantly strengthens data error correction capabilities; adopting RAID, data scrubbing, high-temperature protection, and bad block management comprehensively safeguards disk and data security.

Application scenario





Product specification

Form Factor	2.5inch					M.2 2280-B-M		
Usable Capacity(GB)	480	960	1,920	3,840	7,680	240	480	960
TBW(TB) @JESD218 Client Workload								
Read-intensive	876	1,752	3,504	7,008	14,016	438	876	1,752
Mixed Workload	2,628	5,256	10,512	21,024				

Performance	2.5inch	M.2 2280-B-M
128KB Sequential Read (MB/s)	Up to 560	Up to 560
128KB Sequential Write (MB/s)	Up to 520/530	Up to 520
4K Random Read (Steady State) IOPS	Up to 98,000	Up to 98,000
4K Random Write (Steady State) IOPS	Up to 50,000/80,000	Up to 30,000

Power(Watt)	2.5inch	M.2 2280-B-M
	≤1.4(idle); ≤3.0(active)	≤1.1(idle); ≤3.0(active)

Vibration/Shock Resistance	2.5inch	M.2 2280-B-M
	3.13G @ 5~800 Hz 1,000G @ 0.5 ms, 3 axis	20G @ 20~2,000 Hz 1,500G @ 0.5 ms, 3 axis

NAND Flash

3D TLC

Interface

SATA III (6.0Gbps)

Temperature

0~70 ℃(Operation)
-40~+85 ℃(Storage)

MTBF

≥2,500,000 hours

UBER

≤10^{-17}

Endurance

1 DWPD for 5 years
3 DWPD for 5 years(2.5inch)

Advanced Features

4K LDPC, RAID, SRAM ECC, DRAM ECC, E2EDP, TRIM, SMART, High-Temperature Protection, Power Loss Protection, Online Upgrade, Secure Boot, National Cryptography (Optional), TCG Opal2.0 (Optional)

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above performance metrics were obtained through testing on an x86 server (direct-attached SSD mode) combined with a CentOS platform, using the FIO v3.7 tool (bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary due to differences in testing configurations and environmental conditions.

DS1000

SATA III

2.5inch

mSATA

Product Introduction

The DS1000 series is XITC latest high-performance, high-reliability industrial-grade SATA SSD, primarily designed for high-reliability and wide-temperature applications. Built on XITC's self-developed XT6110 SATA SSD controller and high-reliability gTLC technology, the DS1000 series achieves industry-leading performance, reliability, and compatibility.

Application of Media Analysis Achievements

XITC has fully integrated media analysis findings into its firmware algorithms, ensuring data integrity and consistency across diverse scenarios such as Data Retention, Read Disturb, High Write/Low Read, Low Write/High Read, and Cross-Temperature Range Read/Write operations.

Industrial-Grade Features

All models support Hardware-level Power Loss Protection.
All models support Intelligent Data Erasure.
All models feature Sulfur Resistance Design.
All models support customizable processes such as Underfill, Sidefill,and Conformal Coating (Three-Proof Coating).

Application scenario

Rail Transit

Industrial Data Acquisition

Ruggedized Computers

Specialized Industrial Control Equipment

Product specification

Form Factor

	2.5inch			mSATA		
Usable Capacity(GB)						
	1,024	2,048	4,000	512	1,024	2,048
TBW(TB) @JESD218 Client Workload						
	1,440	2,880	5,760	720	1,440	2,880

Performance

128KB Sequential Read (MB/s)	Up to 560
128KB Sequential Write (MB/s)	Up to 490
4K Random Read (Steady State) IOPS	Up to 86,800
4K Random Write (Steady State) IOPS	Up to 83,600

Power(Watt)

2.5inch	mSATA
≤1.1(idle); ≤3.2(active)	≤1(idle); ≤2.8(active)

NAND Flash

KIOXIA Bics5

Interface

SATA III (6.0Gbps)

Temperature

-40~85°C(Operation)
-55~95 ℃(Storage)

MTBF

≥2,000,000 hours

UBER

$\leq 10^{-16}$

Vibration/Shock Resistance

15G @ 10~2,000 Hz
1,000G @ 0.5 ms, 3 axis

Advanced Features

Wide Temperature Range (-40℃~85℃) Application,Direct Write Mode,Soft Erasure Function
PLP (Power Loss Protection)

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above data were obtained through testing on an x86-based Windows OS platform using CrystalDiskMark V6.1 (Bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary depending on testing configurations and environmental conditions.

DS2200

Quasi-wide temperature

SATA III

Product Introduction

The XITC DS2200 Quasi-wide Temperature Series is an all-new industrial-grade product lineup. Built on the core of XITC's next-generation SATA controller architecture, it features newly self-developed direct-write firmware, YMTC 3D TLC NAND flash, and advanced 3D TLC application technology.

This series delivers excellent endurance and ensures stable operation within a standard temperature range of -20℃ to 75℃. It is available in four form factors—M.2 2242, M.2 2280, mSATA, and 2.5-inch—with capacities ranging from 64GB to 2TB.

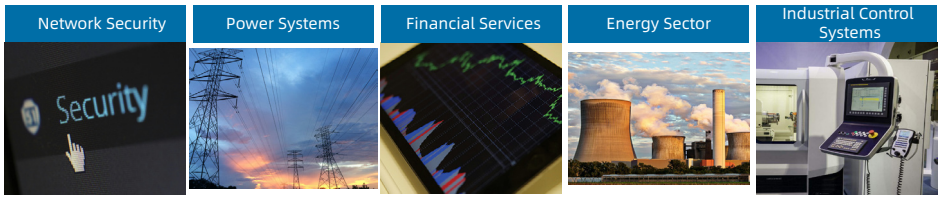
Application of Media Analysis Achievements

XITC has fully integrated media analysis findings into its firmware algorithms, ensuring data integrity and consistency across diverse scenarios such as Data Retention, Read Disturb, High Write/Low Read, Low Write/High Read, and Cross-Temperature Range Read/Write operations.

Customization Options

Built-in hardware-based encryption algorithm module,supporting customizable security features including permission control,PBA (Pre-Boot Authentication),full-disk/partition encryption, hidden partitions,and more.

Application scenario



Product specification

Form Factor			
2.5inch	mSATA	M.2 2280	M.2 2242
Usable Capacity(GB)			
128~2,048	64~2,048	128~2,048	64~512
TBW(TB) @JESD218 Client Workload			
120~2,000	60~2,000	120~2,000	60~500

Performance

128KB Sequential Read (MB/s)	Up to 560
128KB Sequential Write (MB/s)	Up to 410
4K Random Read (Steady State) IOPS	Up to 57,000
4K Random Write (Steady State) IOPS	Up to 64,000

Power(Watt)

≤0.6(idle)
≤1.3(active)

NAND Flash

YMTC 3D TLC

≥2,000,000 hours

Interface

SATA III (6.0Gbps)

≤10^{-16}

Temperature

-20~75 ℃(Operation)
-40~85°C(Storage)

Vibration/Shock Resistance

15G @ 10~2,000 Hz
1,000G @ 0.5 ms, 3 axis

Advanced Features

Supports Secure Erase

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above data were obtained through testing on an x86-based Windows OS platform using CrystalDiskMark V6.1 (Bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary depending on testing configurations and environmental conditions.

DS2200

Standard-Temperature

SATA III

Product Introduction

The DS2200 series standard-temperature products take XITC' s next-generation industrial-grade storage solution, built around a cutting-edge controller architecture and enhanced by proprietary Direct Write Firmware, 3D TLC NAND flash memory, and intelligent particle application technology. Designed for reliability, these drives deliver robust endurance and stable operation across a standard temperature range (-0℃ to 70℃). They feature comprehensive compatibility with four form factors: mSATA,2.5-inch, 2280, 2242 and offer flexible capacity options ranging from64GB to 1TB.

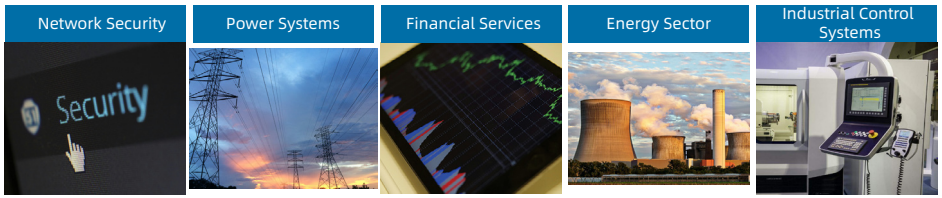
Application of Media Analysis Achievements

XITC has fully integrated media analysis findings into its firmware algorithms, ensuring data integrity and consistency across diverse scenarios such as Data Retention, Read Disturb, High Write/Low Read, Low Write/High Read, and Cross-Temperature Range Read/Write operations.

Customization Options

Built-in hardware-based encryption algorithm module,supporting customizable security features including permission control,PBA (Pre-Boot Authentication),full-disk/partition encryption, hidden partitions,and more.

Application scenario



Product specification

Form Factor

2.5inch	mSATA	M.2 2280	M.2 2242

Usable Capacity(GB)

128~1,024	64~1,024	128~1,024	64~512

TBW(TB)
@JESD218 Client Workload

120~1,000	60~1,000	120~1,000	60~500

Performance

128KB Sequential Read (MB/s)	Up to 560
128KB Sequential Write (MB/s)	Up to 440
4K Random Read (Steady State) IOPS	Up to 60,000
4K Random Write (Steady State) IOPS	Up to 62,000

Power(Watt)

≤0.6(idle)	≤0.6(idle)	≤0.6(idle)	≤0.6(idle)
≤1.3(active)	≤1.2(active)	≤1.1(active)	≤1.1(active)

NAND Flash

3D TLC

Interface

SATA III (6.0Gbps)

Temperature

0~70 ℃(Operation)
-40~85 ℃(Storage)

MTBF

≥2,000,000 hours

UBER

$\leq 10^{-16}$

Vibration/Shock Resistance

15G @ 10~2,000 Hz
1,000G @ 0.5 ms, 3 axis

Advanced Features

Security Erasure Function, Full-Disk SLC Cache Function

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above data were obtained through testing on an x86-based Windows OS platform using CrystalDiskMark V6.1 (Bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary depending on testing configurations and environmental conditions.

DS2200

Wide-Temperature

SATA III

Product Introduction

The DS2200 series wide-temperature products take XITC next-generation architecture controller as the core technology, adopting a self-developed Direct Write Firmware, integrating Industrial-Grade TLC NAND flash memory, and combining with XITC intelligent particle application technology to create a new-generation industrial-grade product. These products exhibit excellent durability, operating stably under wide-temperature conditions (-40℃ to 85℃).Covering complete specifications, the series supports four form factors – mSATA, 2.5-inch, 2280, and 2242 – with capacity options from 128GB to 2TB.

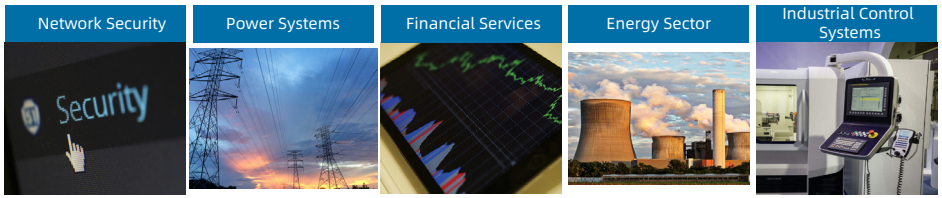
Application of Media Analysis Achievements

XITC has fully integrated media analysis findings into its firmware algorithms, ensuring data integrity and consistency across diverse scenarios such as Data Retention, Read Disturb, High Write/Low Read, Low Write/High Read, and Cross-Temperature Range Read/Write operations.

Industrial-Grade Features

All models support Hardware-level Power Loss Protection.
All models support Intelligent Data Erasure.
All models feature Sulfur Resistance Design.
All models support customizable processes such as Underfill, Sidefill, and Conformal Coating (Three-Proof Coating).
Built-in Security Customization.
Integrated hardware-based encryption algorithm module, supporting customizable security features including permission control, PBA (Pre-Boot Authentication), full-disk/partition encryption, and hidden partitions.

Application scenario



Product specification

Form Factor			
2.5inch	mSATA	M.2 2280	M.2 2242
Usable Capacity(GB)			
128~2,048	128~2,048	512~2,048	128~512
TBW(TB) @JESD218 Client Workload			
120~2,000	120~2,000	500~2,000	120~500

Performance

128KB Sequential Read (MB/s)	Up to 560
128KB Sequential Write (MB/s)	Up to 410
4K Random Read (Steady State) IOPS	Up to 41,000
4K Random Write (Steady State) IOPS	Up to 51,000

Power(Watt)

≤0.6(idle)
≤1.5(active)

NAND Flash

3D TLC

≥2,000,000 hours

Interface

SATA III (6.0Gbps)

≤10^{-16}

Temperature

-40~85 ℃(Operation)
-55~95°C(Storage)

Vibration/Shock Resistance

20G @ 10~2,000 Hz
1,000G @ 0.5 ms, 3 axis

Advanced Features

Sulfur Resistance Design,Data Erasure,PLP (Power Loss Protection)

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above data were obtained through testing on an x86-based Windows OS platform using CrystalDiskMark V6.1 (Bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary depending on testing configurations and environmental conditions.

DS2130

SATA III

2.5inch

mSATA

M.2 2242

Product Introduction

The DS2130 series of wide-temperature products are built around XITC' s next-generation architecture controller, integrating self-developed direct-write firmware, YMC 3D TLC NAND flash memory, and XITC Xtrans-SLC application technology to create a new-generation industrial-grade product. These products exhibit excellent durability, operating stably within the standard temperature range of -40 ° C to 85 ° C. The series offers comprehensive specifications, covering three form factors—mSATA, 2.5-inch, and 2242—with capacities available from 8GB to 128GB.

Application of Media Analysis Achievements

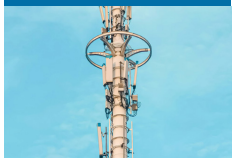
XITC has fully integrated media analysis findings into its firmware algorithms, ensuring data integrity and consistency across diverse scenarios such as Data Retention, Read Disturb, High Write/Low Read, Low Write/High Read, and Cross-Temperature Range Read/Write operations.

High Endurance

Incorporates YMTC 3D TLC particles and integrates XITC's proprietary Xtra-SLC particle application technology, achieving up to 100K program/erase cycles.

Application scenario

5G Base Station



Program Controlled Switch

Firewall

Gateway Router

Product specification

Form Factor	2.5inch	mSATA	M.2 2242
Usable Capacity(GB)	128	8~64	8~32
TBW(TB) @JESD218 Client Workload	2,560	380~1,280	380~800

Performance

128KB Sequential Read (MB/s)	Up to 560
128KB Sequential Write (MB/s)	Up to 400
4K Random Read (Steady State) IOPS	Up to 49,000
4K Random Write (Steady State) IOPS	Up to 61,000

Power(Watt)

≤0.6(idle);≤1.5(active)

NAND Flash

YMTC 3D TLC
(Application of pSLC)

Interface

SATA III (6.0Gbps)

Temperature

-40~85°C(Operation)
-55~95 ℃(Storage)

MTBF

≥2,000,000 hours

UBER

≤10^{-16}

Vibration/Shock Resistance

20G @ 10~2,000 Hz
1,000G @ 0.5 ms, 3 axis

Advanced Features

Sulfur Resistance Design,Fully Domestic Component BOM,Long Lifespan

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above data were obtained through testing on an x86-based Windows OS platform using CrystalDiskMark V6.1 (Bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary depending on testing configurations and environmental conditions.

ES2200

SATA III

2.5inch

Product Introduction

The ES2200 series of solid-state drives utilize 3D TLC NAND flash, delivering higher performance, lower latency, and reduced power consumption. These SSDs feature the same host interfaces and physical dimensions as mechanical hard drives, enabling quick and seamless replacement. The series offers strong endurance and stable operation within a standard temperature range of 0 ° C to 70° C. Available in 2.5-inch form factor with capacities of 256GB, 512GB, 1TB, and 2TB.

Cost-effective with wide compatibility

It uses a proven design, offers a cost-effective HDD replacement, and maintains high compatibility across diverse platforms and environments.

Reliable and stable

Based on proprietary LDPC ECC and data protection technologies, the drive delivers three times more P/E cycles for 3D TLC SSDs. It also supports static data refresh to ensure data integrity, while offering higher performance, lower latency, and reduced power consumption.

Application scenario

Product specification

Form Factor

2.5inch

Usable Capacity(GB)

	256	512	1,024	2,048
TBW(TB) @JESD218 Client Workload	125	250	500	1000

Performance

128KB Sequential Read (MB/s)	Up to 550
128KB Sequential Write (MB/s)	Up to 510
4K Random Read (Steady State) IOPS	Up to 72,000
4K Random Write (Steady State) IOPS	Up to 77,000

Power(Watt)

≤0.3(idle);≤1(active)

NAND Flash

3D TLC

Interface

SATA III (6.0Gbps)

Temperature

0~70 ℃(Operation)
-40~85 ℃(Storage)

MTBF

≥1,500,000 hours

Vibration/Shock Resistance

1,500G @ 0.5 ms, 3 axis

Advanced Features

The proprietary LDPC ECC and data protection technology boost the P/E cycles of 3D TLC SSDs to three times the original amount. A global wear-leveling algorithm extends the drive's lifespan by balancing program/erase operations, while a static data refresh mechanism ensures long-term data integrity.

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above data were obtained through testing on an x86-based Windows OS platform using CrystalDiskMark V6.1 (Bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary depending on testing configurations and environmental conditions.

ES2210

SATA III

2.5inch

Product Introduction

The ES2210 series solid-state drives , built with 3D QLC NAND flash, deliver higher cost-effectiveness, lower latency, and reduced power consumption. These drives maintain the same host interfaces and physical dimensions as HDDs for easy replacement, and offer good endurance with stable operation at 0° C to 70° C. Available in a 2.5-inch form factor with capacities of 512GB and 1TB.

Cost-effective with wide compatibility

It uses a proven design, offers a cost-effective HDD replacement, and maintains high compatibility across diverse platforms and environments.

Reliable and stable

Based on proprietary LDPC ECC and data protection technologies, the drive delivers three times more P/E cycles for 3D TLC SSDs. It also supports static data refresh to ensure data integrity, while offering higher performance, lower latency, and reduced power consumption.

Application scenario

Product specification

Form Factor		
	2.5inch	
Usable Capacity(GB)		
	512	1,024
TBW(TB) @JESD218 Client Workload		
	150	300

Performance

128KB Sequential Read (MB/s)	Up to 554
128KB Sequential Write (MB/s)	Up to 521

Power(Watt)

≤0.3(idle);≤1.7(active)

NAND Flash

3D QLC

Interface

SATA III (6.0Gbps)

Temperature

0~70 ℃(Operation)
-40~85 ℃(Storage)

MTBF

≥1,500,000 hours

Vibration/Shock Resistance

1,000G @ 0.5 ms, 3 axis

Advanced Features

The proprietary LDPC ECC and data protection technology boost the P/E cycles of 3D TLC SSDs to three times the original amount. A global wear-leveling algorithm extends the drive's lifespan by balancing program/erase operations, while a static data refresh mechanism ensures long-term data integrity.

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above performance metrics were obtained through testing on an x86 server (direct-attached SSD mode) combined with a CentOS platform, using the FIO v3.7 tool (bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary due to differences in testing configurations and environmental conditions.

SP5000

PCIe 5.0

U.2 15mm

Product Introduction

SP5000 Series Enterprise PCIe SSD is a high-performance storage solution based on XITC's XT8310 controller, adopting 2.5-inch U.2 form factor and PCIe Gen5 x4 interface. It offers capacity options ranging from 1.6TB to 30.72TB, supporting 1 DWPD and 3 DWPD write endurance levels. Compliant with NVMe 2.0 and NVMe-MI 1.2b specifications, the series features full data path protection, power loss protection, secure erase, and online firmware upgrade capabilities, delivering cost-effective enterprise-grade storage solutions for data centers and corporate clients.

Dual-port design

Dual-port design provides two independent data channels, ensuring continued system access to data through the alternate channel in the event of a single-channel failure, thereby enhancing storage access stability and reliability.

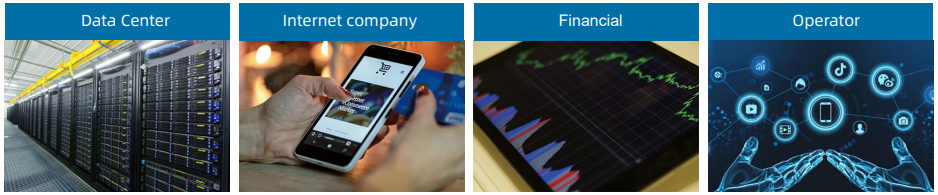
Data Reliability

Full Path Data Protection
Enhanced Power-Loss Data Protection
$>10^{-18}$ Data Reliability

High Serviceability

Supports NVMe-MI
Online Firmware Upgrade
Standard Interface Log Collection

Application scenario



Product specification

Form Factor

U.2 15mm

Usable Capacity (TB)

1 DWPD	1.92	3.84	7.68	15.36	30.72
3 DWPD	1.6	3.2	6.4	12.8	25.6

TBW(TB)

@JESD219 Enterprise Workload

1 DWPD	3,504	7,008	14,016	28,032	56,064
3 DWPD	8,760	17,520	35,040	70,080	140,160

Performance

128KB Sequential Read (MB/s)	Up to 14,000
128KB Sequential Write (MB/s)	Up to 8,500
4K Random Read (Steady State) IOPS	Up to 3,000,000
4K Random Write (Steady State) IOPS	Up to 900,000

Power(Watt)

≤9(idle); ≤25(active)

NAND Flash

3D TLC

Interface

PCIe Gen5.0

Temperature

0~70 ℃(Operation)
-40~+85 ℃(Storage)

MTBF

≥2,500,000 hours

UBER

$\leq 10^{-18}$

Endurance

1 DWPD(1.92TB~30.72TB)
(For 5 years)
3 DWPD(1.6TB~25.6TB)
(For 5 years)

Vibration/Shock Resistance

16.3G @ 10~2000 Hz
1,000G @ 0.5 ms

Advanced Features

S. M.A.R.T features,TRIM command,PLP power-off protection, E2E end-to-end data protection,AES-XTS 256 hardware encryption,SRAM ECC,High temperature protection, in disk RAID, online upgrade, hot swapping

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above performance metrics were obtained through testing on an x86 server (direct-attached SSD mode) combined with a CentOS platform, using the FIO v3.7 tool (bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary due to differences in testing configurations and environmental conditions.

DP2100

PCIe 3.0

M.2 2242

Product Introduction

Equipped with a PCIe 3.0 controller chip and 3D TLC NAND flash memory, the DP2100 utilizes a PCIe 3.0 x4 interface and NVMe 1.4 protocol to deliver high-performance storage solutions. This industrial-grade SSD is engineered for deployment in industrial control computers, industrial automation systems, black box data recorders, industrial IPCs, fiber optic terminal devices, compact computers, development boards, process control units, and data loggers, providing a comprehensive cross-scenario industrial-grade SSD solution.

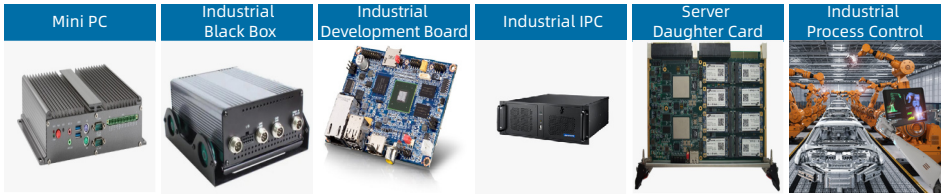
Reliable, stable, efficient

RAID functionality enhances reliability by 122x.
SRAM ECC ensures data integrity.
Adopts 3D TLC NAND and proprietary Intelligent Block Management Technology (IBMT) to extend lifespan and accommodate extreme temperatures.
DRAM-less design reduces power-loss risks, supports PLN/PLA functions with 5x improvement in cache protection efficiency.

customizable

Supports customizable hardware/firmware features , providing enhanced service and support to customers.

Application scenario



Product specification

Form Factor

M.2 2242

Usable Capacity(GB)

	256	512	1,024	2,048
TBW(TB) @JESD218 Client Workload	320	650	1300	2600

Performance

128KB Sequential Read (MB/s)	Up to 2,480
128KB Sequential Write (MB/s)	Up to 2,285
4K Random Read (Steady State) IOPS	Up to 249,000
4K Random Write (Steady State) IOPS	Up to 284,000

Power(Watt)

≤0.4(idle); ≤1.6(active)

NAND Flash

3D TLC

Interface

PCIe Gen 3.0

Temperature

0~70 ℃(Operation)
-40~+85 ℃(Storage)

MTBF

≥1,500,000 hours

UBER

$\leq 10^{-16}$

Endurance

0.7 DWPD for 5 years

Vibration/Shock Resistance

20G @ 20~2000 Hz
1,500G @ 0.5 ms, 3 axis

Advanced Features

ATA Security Encryption Function, Secure Erase Function, ECC Error Correction Function, Host LED Control Function, PLN Function

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above performance metrics were obtained through testing on an x86 server (direct-attached SSD mode) combined with a CentOS platform, using the FIO v3.7 tool (bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary due to differences in testing configurations and environmental conditions.

DP2100HE

PCIe 3.0

M.2 2242

Product Introduction

Equipped with a PCIe 3.0 controller chip and 3D TLC NAND flash memory, the DP2100HE utilizes a PCIe 3.0 x4 interface and NVMe 1.4 protocol to deliver high-performance storage solutions. This industrial-grade SSD is engineered for deployment in industrial control computers, industrial automation systems, black box data recorders, industrial IPCs, fiber optic terminal devices, compact computers, development boards, process control units, and data loggers, providing a comprehensive cross-scenario industrial-grade SSD solution.

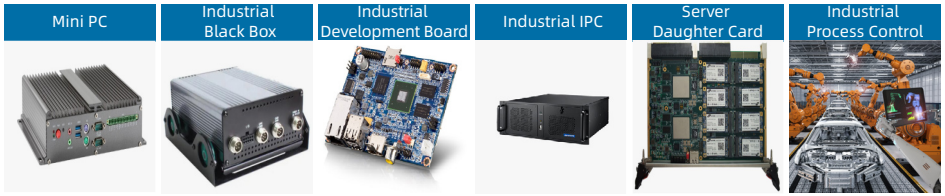
Reliable, stable, efficient

RAID functionality enhances reliability by 122x.
SRAM ECC ensures data integrity.
Adopts 3D TLC NAND and proprietary Intelligent Block Management Technology (IBMT) to extend lifespan and accommodate extreme temperatures.
DRAM-less design reduces power-loss risks, supports PLN/PLA functions with 5x improvement in cache protection efficiency.

Customizable and High Endurance

The DP2100HE supports customized hardware/firmware features, providing enhanced service and support to customers. Equipped with YMTC 3D TLC NAND and XITC proprietary Xtra-SLC particle application technology, it achieves up to 100K endurance cycles.

Application scenario



Product specification

Form Factor

M.2 2242

Usable Capacity(GB)	dTLC				pSLC			
	32	64	128	240	16	32	64	128
TBW(TB) @JESD218 Client Workload	50	100	200	400	625	1250	2500	5000

Performance

128KB Sequential Read (MB/s)	Up to 3,300
128KB Sequential Write (MB/s)	Up to 2,400
4K Random Read (Steady State) IOPS	Up to 450,000
4K Random Write (Steady State) IOPS	Up to 400,000

Power(Watt)

≤0.4(idle); ≤1.1(active)

NAND Flash

3D TLC

Interface

PCIe Gen 3.0

Temperature

0~70 ℃(Operation)
-40~+85 ℃(Storage)

MTBF

≥2,000,000 hours

UBER

$\leq 10^{-16}$

Endurance

0.88 DWPD for 5 years

Vibration/Shock Resistance

20G @ 10~2000 Hz
1,500G @ 0.5 ms, 3 axis

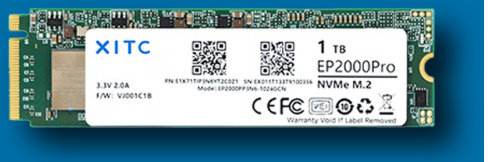
Advanced Features

ATA Security Encryption Function, Secure Erase Function, ECC Error Correction Function, Host LED Control Function, PLN Function

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above performance metrics were obtained through testing on an x86 server (direct-attached SSD mode) combined with a CentOS platform, using the FIO v3.7 tool (bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary due to differences in testing configurations and environmental conditions.

EP2000 Pro

PCIe 3.0



M.2 2280

Product Introduction

The EP2000 Pro series SSDequips with XITC's PCIe3.0 Controller Chip, adopts 3D TLC NAND, and features a PCIe3.0 x4 High-Speed Interfacesupporting NVMe 1.4 Protocol.Integrated with NANDXtra®and NANDSafe™ Technologies, it significantly enhances memory cell durability and system reliability.This Desktop-Grade PCIe SSD is widely adopted in notebooks, workstations, all-in-one PCs, thin clients, OPS, desktops, and game consoles, delivering a Full-Scenario Coverage Solutionfor consumer and commercial applications.

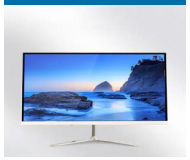
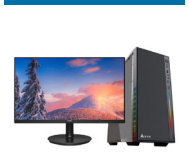
High Performance, High Efficiency

The EP2000 Pro series integrates XITC's high-speed Flash I/Oand Dynamic SLC Cache technology,delivering 15%~25% faster performancein office applications compared to similar PCIe3.0 products, while accelerating multimedia applications by 5%~20%.

High Compatibility, Long Lifespan

The EP2000 Pro series is compatible with mainstream platforms such as Windows, Kirin, and UOS, meeting the needs of work scenarios such as office, gaming, and design. Integrated with NANDXtra® and NANDSafe™ technologies, it significantly enhances memory cell durability and system reliability. Widely adopted in notebooks, workstations, all-in-one PCs, thin clients, OPS , desktops, and gaming consoles, this solution delivers a full-scenario desktop-grade SSDfor diverse applications.

Application scenario

Notebooks	Workstations	All-in-One PCs	OPS	Desktops
				

Product specification

Form Factor

M.2 2280

Usable Capacity(GB)

TBW(TB) @JESD218 Client Workload	256	512	1,024	2,048
	150	300	600	1200

Performance

128KB Sequential Read (MB/s)	Up to 3,500
128KB Sequential Write (MB/s)	Up to 3,400
4K Random Read (Steady State) IOPS	Up to 520,000
4K Random Write (Steady State) IOPS	Up to 590,000

Power(Watt)

≤0.1(idle); ≤3.7(active)

NAND Flash

3D TLC

Interface

PCIe Gen 3.0

Temperature

0~70/-20~70 ℃(Operation)
-40~+85 ℃(Storage)

MTBF

≥1,500,000 hours

UBER

$\leq 10^{-16}$

Endurance

0.55 DWPD for 3 years

Vibration/Shock Resistance

20G @ 20~2000 Hz
1,500G @ 0.5 ms,3axis

Advanced Features

ATA Security Encryption Function, Secure Erase Function, ECC Error Correction Function, Host LED Control Function

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above performance metrics were obtained through testing on an x86 server (direct-attached SSD mode) combined with a CentOS platform, using the FIO v3.7 tool (bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary due to differences in testing configurations and environmental conditions.

EP2100

PCIe 3.0

M.2 2280

Product Introduction

Powered by advanced NAND flash technology, the XITC EP2100 SSD is the perfect HDD replacement. Free of fragile mechanical parts, it offers exceptional durability, speed, and energy efficiency. Built-in global wear-leveling significantly boosts MTBF for reliable long-term operation. Its standard form factor ensures seamless compatibility and easy upgrades, delivering lightning-fast, low-latency performance for any computing device.

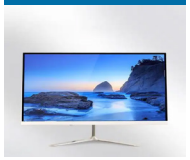
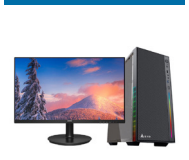
High Performance, High Efficiency

The EP2100 Pro series integrates XITC's high-speed Flash I/Oand Dynamic SLC Cache technology,delivering 15%~25% faster performancein office applications compared to similar PCIe3.0 products, while accelerating multimedia applications by 5%~20%.

High Compatibility, Long Lifespan

The EP2100 Pro series is compatible with mainstream platforms such as Windows, Kirin, and UOS, meeting the needs of work scenarios such as office, gaming, and design. Integrated with NANDXtra® and NANDSafe™ technologies, it significantly enhances memory cell durability and system reliability. Widely adopted in notebooks, workstations, all-in-one PCs, thin clients, OPS , desktops, and gaming consoles, this solution delivers a full-scenario desktop-grade SSDfor diverse applications.

Application scenario

Notebooks	Workstations	All-in-One PCs	OPS	Desktops
				

Product specification

Form Factor

M.2 2280

Usable Capacity(GB)

	128	256	512	1,024
TBW(TB) @JESD218 Client Workload	65	125	250	500

Performance

128KB Sequential Read (MB/s)	Up to 3,600
128KB Sequential Write (MB/s)	Up to 3,200

Power(Watt)

≤0.1(idle); ≤3.7(active)

NAND Flash

3D TLC

Interface

PCIe Gen 3x4

Temperature

20~70 ℃(Operation)
-40~+85 ℃(Storage)

MTBF

≥1,500,000 hours

Vibration/Shock Resistance

1,500G @ 0.5 ms,Half-sine shock

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above performance metrics were obtained through testing on an x86 server (direct-attached SSD mode) combined with a CentOS platform, using the FIO v3.7 tool (bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary due to differences in testing configurations and environmental conditions.

EP3000

PCIe 4.0

M.2 2280

Product Introduction

XITC EP3000 equips with XITC's PCIe3.0 Controller Chip, adopts 3D TLC NAND, and features a PCIe3.0 x4 High-Speed Interface supporting NVMe 1.4 Protocol. Integrated with NANDXtra® and NANDSafe™ Technologies, it significantly enhances memory cell durability and system reliability. This Desktop-Grade PCIe SSD is widely adopted in notebooks, workstations, all-in-one PCs, thin clients, OPS , desktops, and game consoles, delivering a Full-Scenario Coverage Solution for consumer and commercial applications.

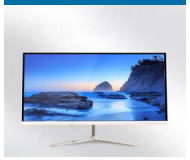
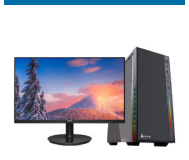
High Performance, High Efficiency

The EP3000 series integrates XITC's high-speed Flash I/O and Dynamic SLC Cache technology, delivering 15%~25% faster performance in office applications compared to similar PCIe3.0 products, while accelerating multimedia applicationsby 5%~20%.

High Compatibility, Long Lifespan

The EP3000 series is compatible with mainstream platforms such as Windows, Kirin, and UOS, meeting the needs of work scenarios such as office, gaming, and design. . Integrated with NANDXtra® and NANDSafe™ technologies, it significantly enhances memory cell durability and system reliability. Widely adopted in notebooks, workstations, all-in-one PCs, thin clients, OPS, desktops, and gaming consoles, this solution delivers a full-scenario desktop-grade SSDfor diverse applications.

Application scenario

Notebooks	Workstations	All-in-One PCs	OPS	Desktops
				

Product specification

Form Factor

M.2 2280

Usable Capacity(GB)

TBW(TB) @JESD218 Client Workload	256	512	1,024	2,048
	150	300	600	1200

Performance

128KB Sequential Read (MB/s)	Up to 5,000
128KB Sequential Write (MB/s)	Up to 5,000
4K Random Read (Steady State) IOPS	Up to 600,000
4K Random Write (Steady State) IOPS	Up to 600,000

Power(Watt)

≤0.5(idle); ≤7(active)

NAND Flash

3D TLC/QLC

Interface

PCIe Gen 4.0

Temperature

0~70/-20~70 ℃(Operation)
-40~+85 ℃(Storage)

MTBF

≥1,500,000 hours

UBER

$\leq 10^{-16}$

Endurance

0.55 DWPD for 3 years

Vibration/Shock Resistance

20G @ 20~2000 Hz
1,500G @ 0.5 ms,3axis

Advanced Features

ATA Security Encryption Function, Secure Erase Function, ECC Error Correction Function, Host LED Control Function

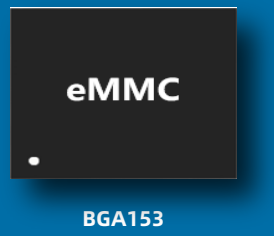
1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above performance metrics were obtained through testing on an x86 server (direct-attached SSD mode) combined with a CentOS platform, using the FIO v3.7 tool (bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary due to differences in testing configurations and environmental conditions.

Embedded Storage

Embedded Storage/eMMC

E110-X0I
Standard Capacity

eMMC 5.1



BGA153

Product Introduction

The E110-X0I series Standard capacity products are meticulously engineered with a self-developed controller and high-performance NAND flash solutions, targeting industrial-grade embedded markets demanding high reliability and extended lifespan (e.g., power, energy, rail transportation). These devices retain eMMC's inherent advantages: excellent vibration resistance, low power consumption, compact form factor, and pin-to-pin compatibility.

High Reliability

Self-developed high-reliability firmware strategies and LDPC error correction algorithms ensure data stability and reliability.

Long Lifespan

The product delivers up to 40,000 P/E cycles in pSLC mode, designed to meet industrial-grade storage selection requirements with over 10 years of service life.

Low power consumption

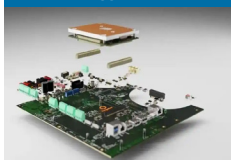
Through optimized internal circuit design and low-power components, eMMC maintains low power consumption levels during read/write operations and data processing tasks.

Application scenario

Industrial-grade board card

Industrial embedded system

COM-E



IPE

Product specification

Form Factor: BGA153

Usable Capacity(GB)	4	8	16	32
Performance				
128KB Sequential Read (MB/s)	Up to 300	Up to 300	Up to 300	Up to 300
128KB Sequential Write (MB/s)	Up to 130	Up to 130	Up to 210	Up to 240
4K Random Read (Steady State) IOPS	Up to 4,500	Up to 4,500	Up to 4,500	Up to 4,500
4K Random Write (Steady State) IOPS	Up to 2,000	Up to 2,000	Up to 2,000	Up to 2,000
Power(mA)				
active write	80(ICC);90(ICCQ)	80(ICC);95(ICCQ)	120(ICC);95(ICCQ)	130(ICC);95(ICCQ)
active read	110(ICC);150(ICCQ)	110(ICC);150(ICCQ)	110(ICC);150(ICCQ)	120(ICC);150(ICCQ)
standby	50(ICC);95(ICCQ)	50(ICC);100(ICCQ)	70(ICC);150(ICCQ)	120(ICC);110(ICCQ)
sleep	40(ICC);70(ICCQ)	50(ICC);70(ICCQ)	60(ICC);70(ICCQ)	110(ICC);80(ICCQ)

P/E Cycles: 40,000

Voltage: Memory Power (VCC): 3.3 V; Interface Power (VCCQ): 1.8 V or 3.3 V

NAND Flash	Interface	Temperature
pSLC	eMMC 5.1	-40~85 ℃(Operation) -40~85 ℃(Storage)

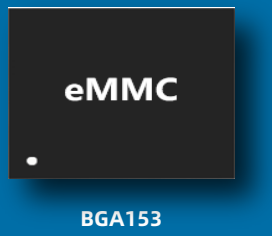
Advanced Features

LDPC,PLP (Power Loss Protection),Wear Leveling ,Health Monitoring & Diagnostics, Data Integrity & Security Protection

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. All performance metrics were tested at an ambient temperature of 25°C using the HS400 reader and CrystalDiskMark. Results may vary depending on testing tools and operational environments.

Embedded Storage/eMMC

E110-X0I
High Capacity
eMMC 5.1



BGA153

Product Introduction

The E110-X0I series of high-capacity products are engineered with a self-developed controller and high-performance NAND flash solutions, specifically targeting general industrial-grade applications requiring large storage capacities, such as industrial streaming media and industrial UAVs. These devices retain the inherent advantages of eMMC technology, including excellent vibration resistance, ultra-low power consumption, compact form factor, and pin-to-pin compatibility.

High Reliability

The product employs proprietary high-reliability firmware strategies and LDPC error correction algorithms to ensure data integrity and system reliability.

High-capacity

The product supports up to 128GB capacity under industrial-grade quasi-wide temperature conditions.

Low power consumption

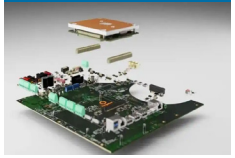
Through optimized internal circuit design and low-power components, eMMC maintains low power consumption during read/write operations and processing tasks.

Application scenario

Industrial Camera

Quasi-Industrial Wide Temperature Board Card

COM-E



Industrial Streaming Media Devices

Product specification

Form Factor		
	BGA153	
Usable Capacity(GB)	64	128
Performance		
128KB Sequential Read (MB/s)	Up to 295	Up to 295
128KB Sequential Write (MB/s)	Up to 210	Up to 210
4K Random Read (Steady State) IOPS	Up to 4,500	Up to 4,500
4K Random Write (Steady State) IOPS	Up to 1,750	Up to 1,750
Power(mA)		
active write	95(ICC);85(ICCQ)	100(ICC);85(ICCQ)
active read	105(ICC);130(ICCQ)	105(ICC);130(ICCQ)
standby	70(ICC);105(ICCQ)	70(ICC);105(ICCQ)
sleep	75(ICC);100(ICCQ)	75(ICC);100(ICCQ)
P/E Cycles	3,000	
Voltage	Memory Power (VCC): 3.3 V; Interface Power (VCCQ): 1.8 V or 3.3 V	

NAND Flash	Interface	Temperature
TLC	eMMC 5.1	-40~75 ℃(Operation) -40~85 ℃(Storage)

Advanced Features

LDPC,PLP (Power Loss Protection),Wear Leveling ,Health Monitoring & Diagnostics, Data Integrity & Security Protection

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. All performance metrics were tested at an ambient temperature of 25°C using the HS400 reader and CrystalDiskMark. Results may vary depending on testing tools and operational environments.

Embedded Storage/BGA SSD

US2200

SATA III

Product Introduction

The US2200 product series is engineered with a self-developed controller and high-performance NAND flash, specifically targeting embedded applications requiring large storage capacities, such as ruggedized PCs, industrial streaming media, and industrial UAVs. These devices deliver exceptional vibration resistance, low power consumption, compact form factor, and high-capacity storage capabilities.

High Reliability

The product integrates a self-developed controller, high-reliability firmware strategies, and LDPC error correction algorithms, utilizing YMTC industrial-grade NAND flash to deliver enhanced stability and reliability for industrial-grade performance.

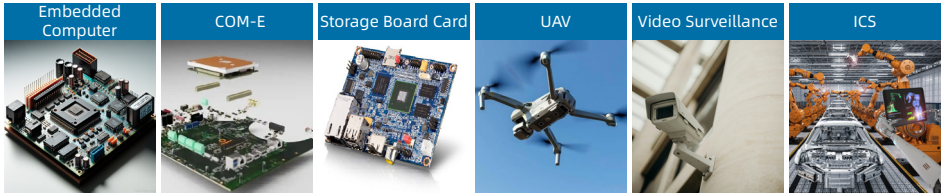
High-capacity

The TLC-based products, offering capacities up to 1TB, enable industrial embedded systems to implement high-density storage solutions even within confined spaces.

Low power consumption

The product adopts a split power supply design, achieving lower operational power consumption and extending runtime endurance for battery-dependent applications.

Application scenario



Product specification

Form Factor	BGA156				
Usable Capacity(GB)	60	128	256	512	1,024
Performance					
128KB Sequential Read (MB/s)	Up to 235	Up to 440	Up to 540	Up to 500	Up to 500
128KB Sequential Write (MB/s)	Up to 60	Up to 120	Up to 220	Up to 390	Up to 410
4K Random Read (Steady State) IOPS	Up to 13,000	Up to 26,000	Up to 42,000	Up to 42,000	Up to 42,000
4K Random Write (Steady State) IOPS	Up to 14,000	Up to 26,000	Up to 40,000	Up to 48,000	Up to 55,000

Power(Watt)

≤0.5(idle);≤1.5(active)

P/E Cycles

3,000

Voltage

VCC: 2.5 V VCCQ: 1.2 V

VDD/VDDA: 1.1 V; VDDIO/VDDHA: 3.3 V

NAND Flash

iTLC

Interface

SATA3.1

Temperature

-40~85 ℃(Operation)
-40~95 ℃(Storage)

Advanced Features

Security Erasure Function,FOTA,Adaptive Thermal Throttling,Health Monitoring & Data Scrubbing, RAID,SRAM ECC,Wear Leveling,Bad Block Management,PLP (Power Loss Protection)(optional), Logical Sanitization(optional),Physical Destruction(optional)

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above data were obtained through testing on an x86-based Windows OS platform using CrystalDiskMark V6.1 (Bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary depending on testing configurations and environmental conditions.

Embedded Storage/BGA SSD

US2230

SATA III

BGA156

Product Introduction

The US2230 product series is meticulously engineered with a self-developed controller and high-performance NAND flash solutions, specifically targeting embedded applications demanding high-reliability and long lifespan, such as industrial-grade boards, power, energy, and rail transportation sectors. These devices deliver superior vibration resistance, low power consumption, compact form factor, and extended endurance capabilities.

High Reliability

The solution integrates a self-developed controller, high-reliability firmware strategies, and LDPC error correction algorithms, combined with YMTC industrial-grade NAND flash, delivering enhanced stability and reliability for industrial-grade quality performance.

Long Lifespan

The pSLC-mode product delivers up to 60,000 program/erase cycles (pSLC), engineered to meet 10+ years of industrial-grade storage requirements.

Low power consumption

The product adopts a split power supply design, achieving lower operational power consumption and extending runtime endurance for battery-dependent applications.

Application scenario

Product specification

Form Factor	BGA156		
Usable Capacity(GB)	32	64	128
Performance			
128KB Sequential Read (MB/s)	Up to 535	Up to 560	Up to 560
128KB Sequential Write (MB/s)	Up to 385	Up to 400	Up to 410
4K Random Read (Steady State) IOPS	Up to 40,000	Up to 56,500	Up to 58,000
4K Random Write (Steady State) IOPS	Up to 58,000	Up to 59,000	Up to 60,000
Power(Watt)	≤0.5(idle);≤1.1(active)		
P/E Cycles	60,000		
Voltage	VCC：2.5 V VCCQ：1.2 V VDD/VDDA：1.1 V；VDDIO/VDDHA：3.3 V		

NAND Flash	Interface	Temperature
iTLC@pSLC	SATA3.1	-55~85 ℃(Operation) -55~95 ℃(Storage)

Advanced Features

Security Erasure Function,FOTA,Adaptive Thermal Throttling,Health Monitoring & Data Scrubbing, RAID,SRAM ECC,Wear Leveling,Bad Block Management,PLP (Power Loss Protection)(optional), Logical Sanitization(optional),Physical Destruction(optional)

1. 1GB=1,000,000,000 Bytes;1 MB/s = 1,000,000 Bytes/second
2. The above data were obtained through testing on an x86-based Windows OS platform using CrystalDiskMark V6.1 (Bandwidth and IOPS were measured under queue depths Q32T1 and Q8T8, respectively). Performance data may vary depending on testing configurations and environmental conditions.

Memory Module

Memory Module/DDR4

XAP40A

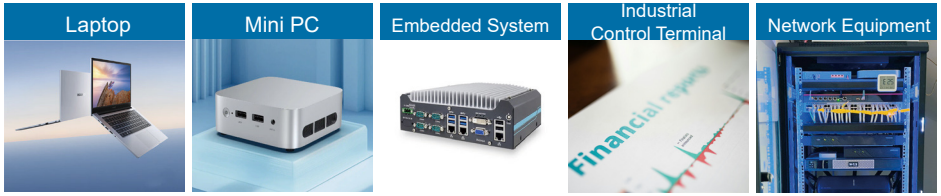
SODIMM

Product Introduction

The XAP40A series is a DRAM product designed by XITC specifically for DDR4 platforms, delivering a transfer rate of up to 3200 MT/s, which effectively enhances device data transfer performance and offers excellent platform compatibility.

- Utilizes mainstream DDR4 IC
- Supports mainstream capacities and specifications of 8GB and 16GB
- Supports 3200 MT/s, meeting performance requirements of domestic and x86 desktop and laptop processors
- Stable IC supply with secured availability

Application scenario



Product specification

Technology Generation	DDR4	
Capacity (GB)		
	8	16
Performance		
Clock Speed	1600 MHz	1600 MHz
Transfer Rate	3200 MT/s	3200 MT/s
Features		
Bus Width	x64	x64
Bandwidth	PC4-25600	PC4-25600
Latency	22-22-22	22-22-22
ECC		
	NO	NO
IC		
IC Configuration(1)	JHICC 1Gb x8	JHICC 1Gb x8
IC Configuration(2)	Samsung 1Gb x8	Samsung 1Gb x8
IC Configuration(3)	Hynix 1Gb x8	Hynix 1Gb x8
IC Quantity	8	16
Operational Specifications		
Operating Voltage	1.2V	1.2V
Operating Temperature	0℃ ~ 85℃	0℃ ~ 85℃
Form Factor (mm)		
	69.6x 30	69.6x 30

1.For additional capacity requirements, please contact your sales representative.
2.Specifications may vary by model and capacity; actual features are subject to the specific product.

Memory Module/DDR4

XAP40A

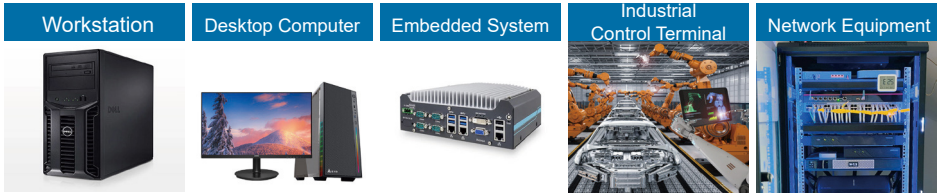
UDIMM

Product Introduction

The XAP40A series is a DRAM product designed by XITC specifically for DDR4 platforms, delivering a transfer rate of up to 3200 MT/s, which effectively enhances device data transfer performance and offers excellent platform compatibility.

- Utilizes DDR4 IC
- Supports mainstream capacities and specifications of 8GB and 16GB
- Supports 3200 MT/s, meeting performance requirements of domestic and x86 desktop and laptop processors
- Stable IC supply with secured availability

Application scenario



Product specification

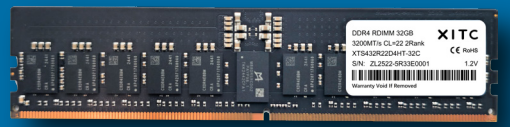
Technology Generation	DDR4	
Capacity (GB)		
	8	16
Performance		
Clock Speed	1600 MHz	1600 MHz
Transfer Rate	3200 MT/s	3200 MT/s
Features		
Bus Width	x64	x64
Bandwidth	PC4-25600	PC4-25600
Latency	22-22-22	22-22-22
ECC		
	NO	NO
IC		
IC Configuration	JHICC 1Gb x8 Samsung 1Gb x8 Hynix 1Gb x8	JHICC 1Gb x8 Samsung 1Gb x8 Hynix 1Gb x8
IC Quantity	8	16
Operational Specifications		
Operating Voltage	1.2V	1.2V
Operating Temperature	0℃ ~ 85℃	0℃ ~ 85℃
Form Factor (mm)		
	133.35x 30.75	133.35x 30.75

1.For additional capacity requirements, please contact your sales representative.
2.Specifications may vary by model and capacity; actual features are subject to the specific product.

Memory Module/DDR4

XAS40A

RDIMM



Product Introduction

DDR4 RDIMM products, designed by XITC for servers and workstations, offer optional capacities of 16GB, 32GB, with support for data rates up to 3200 MT/s. They are suitable for applications such as database systems, high-performance computing (HPC), virtualization, big data analytics, and cloud services.

- Utilizes DDR4 IC
- Supports mainstream capacities and specifications of 16GB,32GB
- Supports 3200 MT/s, meeting performance requirements of domestic and x86 desktop and laptop processors
- Stable IC supply with secured availability

Application scenario

Product specification

Technology Generation	DDR4	
Capacity (GB)		
	16	32
Performance		
Clock Speed	1600 MHz/1466 MHz	1600 MHz/1466 MHz
Transfer Rate	3200 MT/s/2933 MT/s	3200 MT/s/2933 MT/s
Features		
Bus Width	x72	x72
Bandwidth	PC4-25600	PC4-25600
Latency	22-22-22-52	22-22-22-52
ECC		
	YES	YES
IC		
IC Configuration	Samsung 2G×4/JHICC 2G x4	Samsung 2G×4/JHICC 2G x4
IC Quantity	18	36
Operational Specifications		
Operating Voltage	1.2V	1.2V
Operating Temperature	0℃ ~ 85℃	0℃ ~ 85℃
Form Factor (mm)		
	133.35x 30.75	133.35x 30.75

1.For additional capacity requirements, please contact your sales representative.
2.Specifications may vary by model and capacity; actual features are subject to the specific product.

Memory Module/DDR5

XAP50A

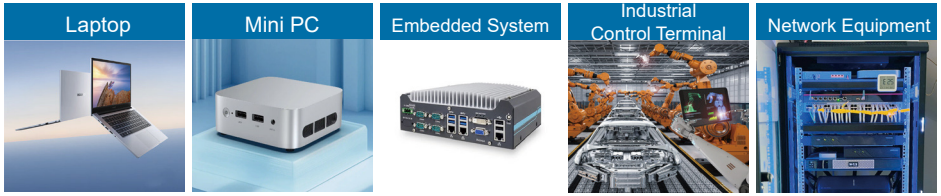
SODIMM

Product Introduction

The XAP50A series is a DRAM product designed by XITC specifically for DDR5 platforms, delivering a transfer rate of up to 5600 MT/s, which effectively enhances device data transfer performance and offers excellent platform compatibility.

- Utilizes mainstream DDR5 IC from international first-tier manufacturers
- Supports mainstream capacities and specifications of 16GB, 32GB
- Supports 5600 MT/s, meeting performance requirements of domestic and x86 desktop and laptop processors
- Fully self-developed design, production, and testing processes with secured supply

Application scenario



Product specification

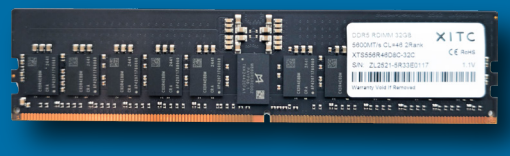
Technology Generation	DDR5	
Capacity (GB)	**16**	**32**
Performance		
Clock Speed	2800 MHz	2800 MHz
Transfer Rate	5600 MT/s	5600 MT/s
Features		
Bus Width	x64	x64
Bandwidth	PC5-44800	PC5-44800
Latency	46-46-46-90	46-46-46-90
ECC		
	NO	NO
IC		
IC Configuration	Samsung 1G x8	Samsung 2G x8
IC Quantity	16	16
Operational Specifications		
Operating Voltage	1.1V	1.1V
Operating Temperature	0℃ ~ 85℃	0℃ ~ 85℃
Form Factor (mm)		
	69.6x 30	69.6x 30

1.For additional capacity requirements, please contact your sales representative.
2.Specifications may vary by model and capacity; actual features are subject to the specific product.

Memory Module/DDR5

XAP50A

UDIMM

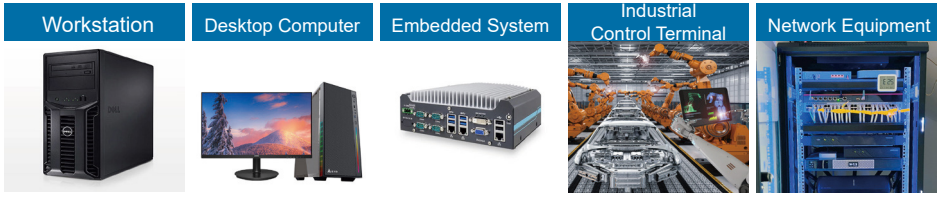


Product Introduction

The XAP50A series is a DRAM product designed by XITC specifically for DDR5 platforms, delivering a transfer rate of up to 5600 MT/s, which effectively enhances device data transfer performance and offers excellent platform compatibility.

- Utilizes mainstream DDR5 IC from international first-tier manufacturers
- Supports mainstream capacities and specifications of 16GB, 32GB
- Supports 5600 MT/s, meeting performance requirements of domestic and x86 desktop and laptop processors
- Fully self-developed design, production, and testing processes with secured supply

Application scenario



Product specification

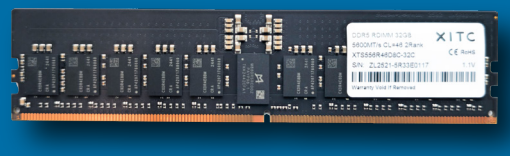
Technology Generation	DDR5	
Capacity (GB)	**16**	**32**
Performance		
Clock Speed	2800 MHz	2800 MHz
Transfer Rate	5600 MT/s	5600 MT/s
Features		
Bus Width	x64	x64
Bandwidth	PC5-44800	PC5-44800
Latency	46-46-46-90	46-46-46-90
ECC		
	NO	NO
IC		
IC Configuration	Samsung 1G x8	Samsung 2G x8
IC Quantity	16	16
Operational Specifications		
Operating Voltage	1.1V	1.1V
Operating Temperature	0℃ ~ 85℃	0℃ ~ 85℃
Form Factor (mm)		
	133.35x 30.75	133.35x 30.75

1.For additional capacity requirements, please contact your sales representative.
2.Specifications may vary by model and capacity; actual features are subject to the specific product.

Memory Module/DDR5

XAS50A

RDIMM



Product Introduction

Designed for next-generation server platforms by XITC, it supports high-speed data transfer rates of up to 5600 MT/s and offers large capacities of 32GB, 64GB, accelerating both traditional and modern memory-intensive workloads such as virtualization, cloud storage, machine learning, AI, and high-performance computing.

- Utilizes mainstream DDR5 IC from international first-tier manufacturers
- Supports mainstream capacities and specifications of 32GB, 64GB
- Supports up to 5600 MT/s, meeting performance requirements of domestic and x86 server processors.
- Fully self-developed design, production, and testing processes with secured supply

Application scenario

Product specification

Technology Generation	DDR5	
Capacity (GB)	**32**	**64**
Performance		
Clock Speed	2800 MHz	2800 MHz
Transfer Rate	5600 MT/s	5600 MT/s
Features		
Bus Width	x80	x80
Bandwidth	PC5-44800	PC5-44800
Latency	46-46-46-90	46-46-46-90
ECC	YES	YES
IC		
IC Configuration	Samsung 2Gx8 CXMT 2Gx8 Hynix 2G×8	Hynix 4Gx4 CXMT 4Gx4
IC Quantity	20	40
Operational Specifications		
Operating Voltage	1.1V	1.1V
Operating Temperature	0℃ ~ 85℃	0℃ ~ 85℃
Form Factor (mm)	133.35x 30.75	133.35x 30.75

1.For additional capacity requirements, please contact your sales representative.
2.Specifications may vary by model and capacity; actual features are subject to the specific product.
3.The 96GB and the CXMT-based 64GB products are scheduled for mass production in Q3 2025.

Portable Storage

Portable Storage/Micro SD Card / Trans Flash Card

T100

Micro SD Card / Trans Flash Card

Product Introduction

The XITC T100 series high-speed Micro SD Card / TransFlash Card utilizes high-quality, high-speed flash technology to ensure data stability and durability. It supports high-definition photo capture, 1080P video recording, and fast file transfer, making it suitable for dash cams, action cameras, drones, personal computers, tablets, and other devices. With flexible capacity options ranging from 8GB to 128GB, it features water-resistant, anti-magnetic, and shock-resistant properties, adapting to complex outdoor environments. It is a reliable choice for everyday storage and content creation.

- Flexible Capacity Options
- High Transfer Speed
- High Compatibility
- Multi-Scenario Applications

Application scenario

Product specification

Product Shape	microSDXC				
Product Size	11mm x 15mm x1mm				
Compatibility	Compatible with host devices supporting microSDHC and microSDXC				
Speed Class	UHS-I, U3, V30, Class10				
Capacity (GB)	8	16	32	64	128
Performance					
Sequential Read (MB/s)	20	70	80	80	85
Sequential Write (MB/s)	10	15	26	45	50
Operating Temperature	0°C to 70°C (operating); -20°C to 85°C (non-operating)				
Operating Humidity	8% to 95% RH (non-condensing)				
Shock Resistance	Passes IEC 60068-2-31 standard 1.5-meter free-fall test				
Durability	Passes IEC 60512-100 standard 10,000 insertion/extraction cycles				
Others	Supports card detection mode and error correction capability				

1. For additional capacity requirements, please contact your sales representative.
2. Specifications may vary by model and capacity; actual features are subject to the specific product.

Portable Storage/Micro SD Card / Trans Flash Card

T150

High-Speed, High-Capacity Micro SD Card / Trans Flash Card

Product Introduction

The XITC T150 series high-speed, high-capacity Micro SD Card / TransFlash Card enables free storage of photos, videos, and files. It offers a combination of large capacity and high endurance, supporting capacities from 256GB to 1TB, helping individuals and enterprises cope with the explosively growing data storage demands of today's society, including HD video recording, large file storage, and expanded storage. The T150 series undergoes rigorous testing to ensure stable product performance and an excellent user experience.

- Capacity up to 1TB
- High Transfer Speed
- Designed for HD Video Storage
- Multi-Scenario Applications

Application scenario

Product specification

Product Shape	microSDXC		
Product Size	11mm x 15mm x1mm		
Compatibility	Compatible with host devices supporting microSDHC and microSDXC		
Speed Class	UHS-I, U3, V30, Class10		
Capacity (GB)	256	512	1024
Performance			
Sequential Read (MB/s)	70	70	70
Sequential Write (MB/s)	50	50	50
Operating Temperature	0°C to 70°C (operating); -20°C to 85°C (non-operating)		
Operating Humidity	8% to 95% RH (non-condensing)		
Shock Resistance	Passes IEC 60068-2-31 standard 1.5-meter free-fall test		
Durability	Passes IEC 60512-100 standard 10,000 insertion/extraction cycles		
Others	Supports card detection mode and error correction capability		

1. For additional capacity requirements, please contact your sales representative.
2. Specifications may vary by model and capacity; actual features are subject to the specific product.

Portable Storage/Solid State USB Flash Drive

U2000

USB2.0
Solid State USB Flash Drive

Product Introduction

The XITC U2000 Series Classic USB Flash Drive is your ideal companion, whether you're transferring critical research data for your graduation thesis, carrying presentation materials for a roadshow, or sharing photos and videos. It features a classic Type-A connector, supports the USB 2.0 protocol for plug-and-play convenience, and boasts a metal exterior for enhanced durability and a premium feel. With an ultra-compact design measuring just 32.6 mm in length, it occupies minimal space and is highly portable. The U2000 series also supports custom laser-etched patterns, making it suitable for both corporate bulk procurement and personalized gift-giving.

Flexible Capacity Options

The U2000 series supports multiple capacities from 8GB to 128GB, meeting your storage needs for both office files and large movie files.

Compact Size Design

The U2000 series features a Type-A interface with a compact length of only 32.6 mm, ensuring easy portability.

Plug and Play

The U2000 series supports the USB 2.0 protocol with plug-and-play functionality, ensuring seamless connectivity with both new and old computers.

Support for Customization

The U2000 series features a metal exterior, serving as an ideal platform for personalized creativity. It supports laser-etched customization, putting you in full control of the design.

Product specification

Interface Protocol	
	USB 2.0
Capacity (GB)	
	8GB、16GB、32GB、64GB、128GB
Performance	
Read Speed(MB/s)	Up to 25
Write Speed(MB/s)	Up to 18
Product Dimensions	
	32.6mm x 12.9mm x 4.6mm
Product Weight	
	4.8g
Operating Temperature	
	-40℃ ~ +70℃(operating)
Durability	
	5,000 insertion/removal cycles
Compatibility	
	Windows 7/8/8.1/10/11 Mac OS 10.9 and above Linux Kernel 2.6 and above

1. The end loop is made of rubber and foldable.
2. For bulk customization of laser-etched appearance, contact your sales representative.
3. For more appearance designs and capacities, contact your sales representative.

Portable Storage/Solid State USB Flash Drive

U3000

USB3.2
Solid State USB Flash Drive

Product Introduction

The XITC U3000 Series vibrant USB flash drive embodies your pursuit of a colorful lifestyle. Combining high-speed performance and versatile compatibility, it is the ideal companion for your digital needs. Supporting USB 3.2 Gen1 protocol, it ensures rapid file transfers. With dual Type-A and Type-C ports, it offers effortless connectivity across devices. The vibrant exterior design allows you to express creativity freely. Offering up to 128GB of storage, it securely holds your favorite music, precious photos, and important documents in one compact solution.

Flexible Capacity Options

The U3000 series supports multiple capacities ranging from 8GB to 128GB, meeting your storage needs for both office files and large movie files.

Colorful Exterior Design

The U3000 series offers multiple color options, putting you in control of personalized aesthetics.

Dual-Port Plug and Play

Supports dual-port design (Type-A & Type-C) with Plug and Play (PnP). Ensures seamless connectivity across both computers and mobile devices.

High Compatibility

Supports USB 3.2 Gen1 protocol, enabling easy cross-platform data transfer.

Product specification

Interface Protocol	
	USB 3.2 Gen1
Capacity (GB)	
	8GB、16GB、32GB、64GB、128GB
Performance	
Read Speed(MB/s)	Up to 120
Write Speed(MB/s)	Up to 50
Product Dimensions	
	65.6mm x 19.0mm x 9.6mm
Product Weight	
	14.8g
Operating Temperature	
	-40℃ ~ +70℃(operating)
Durability	
	5,000 insertion/removal cycles
Compatibility	
	Windows 7/8/8.1/10/11 Mac OS 10.9 and above Linux Kernel 2.6 and above

1. For additional capacity requirements, please contact your sales representative.
2. Specifications may vary by model and capacity; actual features are subject to the specific product.

Portable Storage/Solid State USB Flash Drive

U3500

USB3.2
High-Speed Solid-State USB Drive

Product Introduction

The XITC U3500 Series High-Speed USB Flash Drive delivers transfer speeds of up to 500 MB/s, designed for professionals and efficiency-focused users. Leveraging a dedicated controller and high-speed flash memory, it fully utilizes the maximum performance of the USB 3.2 Gen1 protocol, enabling seamless file transfers across computers, phones, and tablets. This eliminates waiting time, ensuring instant data movement. The U3500 also features a full-metal body and a rotating design, offering portability and robust protection for your data on the go.

High-Speed Data Transfer

The U3500 utilizes a dedicated controller and high-speed flash memory, supporting speeds of up to 500 MB/s for lightning-fast file transfers.

Full-Metal Enclosure Design

The U3500 series features a full-metal enclosure design with a refined texture, providing robust protection for your data.

Dual-Port Plug and Play

Supports dual-port design (Type-A & Type-C) with Plug and Play (PnP). Ensures seamless connectivity across both computers and mobile devices.

Support for Customization

The U3500 series exterior serves as an ideal platform for personalized creativity, supporting laser-etched customization—your design, your rules.

Product specification

Interface Protocol	USB 3.2 Gen1	
Product Shape	Type-A & C 2-in-1	
Capacity (GB)	128	256
Performance		
Read Speed(MB/s)	Up to 400	Up to 500
Write Speed(MB/s)	Up to 300	Up to 400
Product Dimensions	67.9mm x 16.8mm x 10.0 mm	
Product Weight	25g	
Operating Temperature	-40℃ ~ +70℃(operating)	
Durability	5,000 insertion/removal cycles	
Compatibility	Windows 7/8/8.1/10/11 Mac OS 10.9 and above Linux Kernel 2.6 and above	

1. For additional capacity requirements, please contact your sales representative.
2. Specifications may vary by model and capacity; actual features are subject to the specific product.

Portable Storage/PSSD

EM110

Encrypted PSSD

Product Introduction

Crafted with a metal chassis reinforced by high-strength composite materials, this drive features a USB 3.2 Gen2 interface, delivering sequential read speeds up to 1050 MB/s for lightning-fast data transfers. SED (Self-Encrypting Drive) full-disk hardware encryption combined with fingerprint authentication ensures bank-grade data security, while an IP65 rating for water and dust resistance and 2-meter drop protection guarantee reliability in harsh environments. Weighing just 95g with a credit-card-sized form factor, it offers plug-and-play compatibility across diverse platforms. Magnetic connectivity enables effortless attachment to phones, tablets, and computers. With capacities ranging from 256GB to 4TB and backed by a 3-year warranty, it empowers efficient and secure data management for the digital era.

Comprehensive Security Protection

All models feature SED (Self-Encrypting Drive) technology with a dedicated encryption chip for real-time data encryption, ensuring near-zero decryption probability. Includes a fingerprint unlock module supporting multiple enrollments with ≤0.3s unlock speed, eliminating traditional password risks.

High-Speed Data Transfer

The entire series utilizes a USB 3.2 Gen2x1 interface, delivering transfer speeds of up to 1050 MB/s. This represents an approximately 9.5x improvement over traditional External HDDs, enabling the transfer 1TB file in just minutes.

Cross-Platform Plug and Play

The product series supports plug-and-play compatibility across all systems, including Windows, macOS, Android, and iOS, delivering seamless connectivity with phones, tablets, gaming consoles, and other devices.

Customized App Management

The customized APP delivers automated data protection and advanced security policies, supporting scheduled backups and rapid recovery for designated files or photos to achieve seamless data protection. It also features a write-protection mode that locks the drive in a read-only state, effectively guarding against malware, accidental deletion, or tampering. This provides irreversible write protection for accessing confidential data in public environments, specifically meeting the security needs of IT administrators.

Product specification

Model	EM110	EM110F	EM110S
Capacity	256GB/512GB/1TB/2TB/4TB		512GB/1TB/2TB/4TB
Interface	USB Type-C		
Dimensions	40x 74 x 8 mm		
Weight	≤95g	≤95g	≤95g
SED Encryption	●	●	●
Password Unlock	●	●	●
Write Protection Mode	●	●	●
Magnetic Attachment	●	●	●
Fingerprint Unlock	○	●	○
Private Partition	○	○	●
Protection Rating	IP65		
Drop protection	2M		
Operating Temperature	0°C~50°C		
System Compatibility	Windows11/10/8.1/7、Mac OS 10.11+、Android、IOS HarmonyOS* PlayStation™ (System Software 4.50 or later)		

1.1GB = 1 billion bytes, 1TB = 1 trillion bytes. Actual user-accessible capacity may be less and varies depending on the operating environment.
2.The above performance is based on read speed calculations. 1 MB/s = 1 million bytes transferred per second. Performance may vary based on internal testing, host device, usage conditions, drive capacity, and other factors
3.HarmonyOS currently only supports plug-and-play mode.

Disclaimer

1.The information contained in this manual (including but not limited to controller chip parameters and SSD module specifications) is for reference only. We reserve the right to implement technical modifications and product optimizations without prior notice.

2.Product performance data stated herein is based on laboratory environment testing. Actual performance may vary depending on system configurations, temperature conditions, and workload variations.

3.Product appearance, functionality, and accessories are subject to the physical product. Trademarks and patents are owned by our company and respective rights holders.

Xinsheng Intelligent Technology (Hunan) Co., Ltd. retains the sole interpretation right of this disclaimer.

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