

PRODUCT OVERVIEW

Embedded Solutions



Innovating Memories, Connecting Lives

DRAM Modules | SSD Solutions | Memory Cards | Flash Solutions

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About Transcend

30+ Years of Experience

Founded in 1989, Transcend Information Inc. is a leading global supplier of embedded memory products and storage solutions. Transcend has been granted over 150 patents for our award-winning products, developed by our in-house R&D team in close cooperation with our strategic component suppliers.

Global Support

Transcend operates 11 branch offices worldwide, including in Los Angeles, Maryland, Hamburg, Rotterdam, London, Tokyo, Seoul, Shanghai, Beijing, Shenzhen, and Hong Kong. Our headquarters and manufacturing site are both located in Taipei, creating an optimum product supply system with a global reach.

Stability & Reliability

Transcend utilizes selected components from 1st tier suppliers, and leverages advanced technologies such as Corner Bond, Anti-sulfur, Wide Temperature, SLC Mode, etc., to ensure reinforced structure, superior durability, and longer product use life under demanding industrial applications.



Our Strengths

Transcend's embedded storage solutions include SSDs, DRAM modules, memory cards, USB flash drives, and more, all designed to deliver advanced memory and storage technology. Our products can be found in applications across various industries, such as enterprise data servers, automotive, automated manufacturing, 5G networks, AIoT, healthcare, surveillance, and smart retail.

Top Quality Storage Solutions

- Branded chips to ensure the highest quality
- Exclusive software for efficient device management

R&D Expertise

- More than 150 patents
- 100+ person in-house R&D team
- Extensive embedded product development experience

Management of Product Life Cycle

- Embedded-grade product lifecycle management
- Fixed BOM management
- In-house ERP system
- Regular roadmap updates

Facilities & Production Process

- Highly automated production
- Rigorous reliability and environmental testing
- Stringent quality control: IQC, IPQC, FQC, OQC

Reliable Supply

- Strategic alliance and direct relationship with top-tier suppliers

Global Operation & Worldwide Support

- Professional technical support and failure analysis reports
- 11 branch offices worldwide
- Localized sales and FAE support

Applications

Transcend's embedded solutions are utilized across various industries.



Gaming

- Casino Gaming
- Lottery
- Player Tracking



Automation

- Robot Controllers
- Human Machine Interfaces
- Digital Twin Technology



Healthcare

- Medical Tablets & AIO PCs
- Medical Imaging
- Patient Monitoring



Transportation

- Fleet Management
- Event Recorders
- FSD (Full Self Driving) Auxiliary System



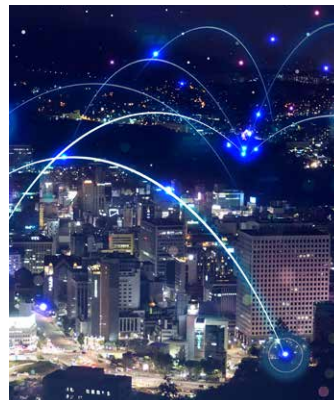
Network & Telecom

- Industrial Switches
- 5G Base Stations
- Network Security Appliances



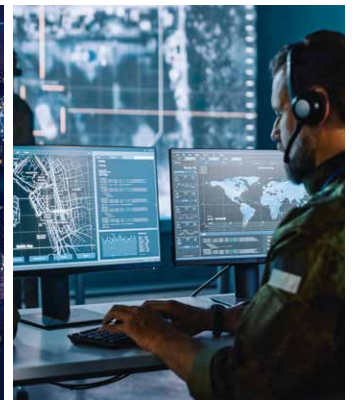
Embedded Computing

- Digital Signage
- Fanless PCs
- Embedded PCs



AIoT

- Edge Computing
- Smart City
- Smart Agriculture



Defense

- Rugged Laptops & Tablets
- Rugged Rackmount Devices

Solutions & Technologies

Transcend utilizes various technologies to optimize the durability, reliability, and stability of our memory and storage devices. We can also provide customized services to adapt our products to your requirements.



DURABILITY



112-layer 3D NAND Flash

112-layer 3D NAND Flash technology delivers higher capacities, performance, endurance, and lower costs, making it an ideal solution for modern storage needs. Transcend's 112-layer 3D NAND SSDs provide high I/O performance and low latency, making them perfect for 5G, automotive, AIoT, and cloud computing applications.



Dynamic Thermal Throttling

Our Dynamic Thermal Throttling technology ensures that our SSDs operate within a safe temperature range, thereby protecting users' data and prolonging the product lifespan. A built-in thermal sensor in the controller constantly monitors the drive temperature, and when the temperature exceeds a safe level, drive speeds are throttled down until a safe temperature is reached.



SLC Mode

SLC Mode SSDs strike a cost-performance balance between different flash types by emulating the behavior of SLC NAND flash. This provides users with SLC-level endurance and performance at a reasonable cost.

SECURITY



TCG Opal Compliance

TCG Opal SEDs (self-encrypting drives) are ideal for industries where data security is of crucial importance. Transcend's Opal-compliant SSDs incorporate hardware-based AES 256-bit encryption; ensuring data is safeguarded starting from the manufacture of the storage device to system installation and management. Furthermore, TCG Opal compliant SSDs do not impact host performance since encryption and decryption are conducted on the drives themselves. Transcend's Opal-compliant SSDs offer sector-specific security, allowing managers to grant different permissions to each user, ensuring compartmentalized data security. The SSDs also feature pre-boot authentication; they can only be booted when the user is verified, preventing unauthorized access.



AES Encryption

The Advanced Encryption Standard (AES) is a FIPS-approved cryptographic algorithm specifically used to protect electronic data. Transcend's SSDs equipped with hardware-based AES provide a comprehensive solution for applications that handle sensitive data or require high data security.

RELIABILITY



Anti-Sulfur Technology

Transcend's anti-sulfur DRAM modules meet the ISA Standard S71.04-2013 level G2 and the ASTM B809-95 standard. Anti-sulfur resistors, which have a protective layer above vulnerable silver alloys, are used exclusively to prevent malfunctions caused by sulfuration.



Wide Temperature

Transcend's products are stringently tested at the component level and at the device level within an extended thermal range. All wide-temperature products are required to pass rigorous tests conducted in a temperature and humidity chamber to ensure reliable performance in temperatures ranging from -40°C to 85°C. Wide-temperature DDR4 and DDR5 memory modules are tested to operate between -40°C to 95°C.



Extended Temperature

Products rated for extended temperatures are designed for reliable operation in temperatures ranging from -20°C to 75°C. Transcend offers this as standard on a wide range of 112-layer and 96-layer 3D NAND SSDs.



Corner Bond & Underfill

Corner Bond / Underfill are technologies used to increase reliability under high thermal stress, high gravitational acceleration and high fatigue cycle applications. By spreading stresses throughout the key components with a mechanical bond, less stress is concentrated on the solder joints. It is widely used in applications where stringent thermal cycling performance and shock resistance are required.



Conformal Coating

Conformal Coating increases protection for Transcend's embedded flash modules and DRAM products against various harsh environmental conditions such as moisture, dust, corrosion, extreme temperature, and chemical contaminants. Acrylic coatings are the most preferred choice for embedded applications due to their excellent moisture and electrical resistance.

STABILITY



Power Loss Protection (PLP) & Power Shield (PS)

Power Loss Protection (PLP) and Power Shield (PS) are two technologies provided by Transcend to prevent internal NAND flash data loss during a sudden power outage. When power is lost, the drive controller will stop accepting new write commands to ensure data integrity. PLP SSDs utilize tantalum capacitors to increase the amount of time the drive controller has to flush data from DRAM into NAND flash. Power Shield technology provides a power loss protection mechanism to Transcend's flash memory cards, USB flash drives, and other portable devices. The technology ensures that the device can complete the ongoing write operation and prevent data corruption or loss due to power interruption.

Embedded Software Solutions

Leverage our embedded software solutions to stand out from the others. See how Transcend can empower your business and boost your growth.



SDK Available

Software Development Kits (SDKs) can be provided to adapt our software to many operating systems.



Software and Hardware Integration

Seamlessly integrate hardware and software for complex applications.



From Edge to Cloud

Work in tandem between the cloud and the edge to achieve utmost flexibility.



Broad Support

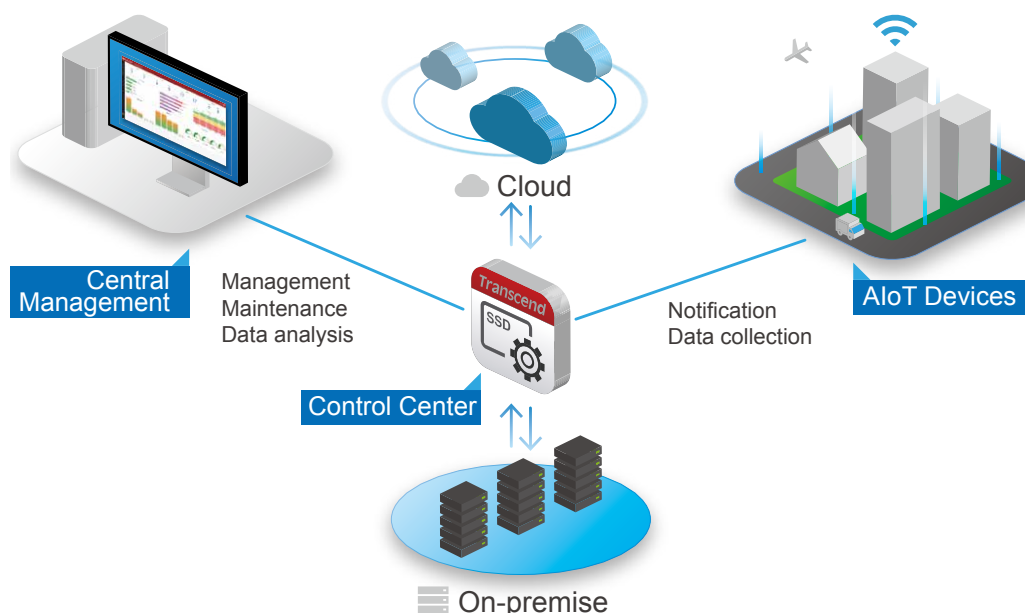
Our software solutions build strong foundations for SSDs, DRAM, flash and other devices.

Control Center

Management



Transcend's Control Center allows users to easily manage and monitor multiple storage devices deployed at the edge. Our SaaS solution is platform-agnostic and can be deployed on either public cloud services such as AWS or Azure or on private clouds.



Consolidated Information

Offers data analysis and clear information on an intuitive interface to help users make informed decisions.

Remote upgrade & monitoring

Allows for remote monitoring of device health status and firmware updates.

Early Warning System (EWS) & Instant Notices

Detects potential issues and notifies users in real-time, enabling them to take proactive measures.



Transcend's Scope Pro is a convenient software package suitable for offline embedded systems. It offers useful features such as drive information, S.M.A.R.T. analysis, diagnostic scans, health checks, and system cloning.

*Scope Pro CLI for Linux OS.



Efficient Monitoring

Monitor the health status of devices, including available, used, and total capacity, temperature, endurance, bad blocks, and wear-out indicators.

Optimized Performance

Conduct speed tests and health scans. Rearrange data stored in SSDs or memory cards to optimize performance.

System Clone

Perform a system clone by duplicating the operating system (OS), programs, and user data to a new Transcend SSD.

TCG Opal Toolbox | ATA Security Toolbox | UFD Security Toolbox

Transcend offers a wide range of security toolboxes for use with our embedded solutions to enhance data security.



Utilize the Opal Toolbox to configure passwords, locking ranges, initiate pre-boot authentication (PBA), and revert functions to increase drive security.



Determine the desired security level and perform lock, unlock, and drive erase functions.



Enable write protect and OTP functions (customized) to increase the security of USB flash drives.

One Touch Recovery



One Touch Recovery safeguards digital assets by backing up crucial data to hidden partitions.



Enhanced Efficiency

By backing up data beforehand, One Touch Recovery eliminates the hours spent restoring compromised systems.

Flexible Customization

Back up and restore data from user-defined disks. The maximum number of disks is tailored to fit each user's requirements.

Remote Backup & Recovery

Can be operated remotely, allowing users to respond to emergency situations quickly, minimizing downtime and related costs.

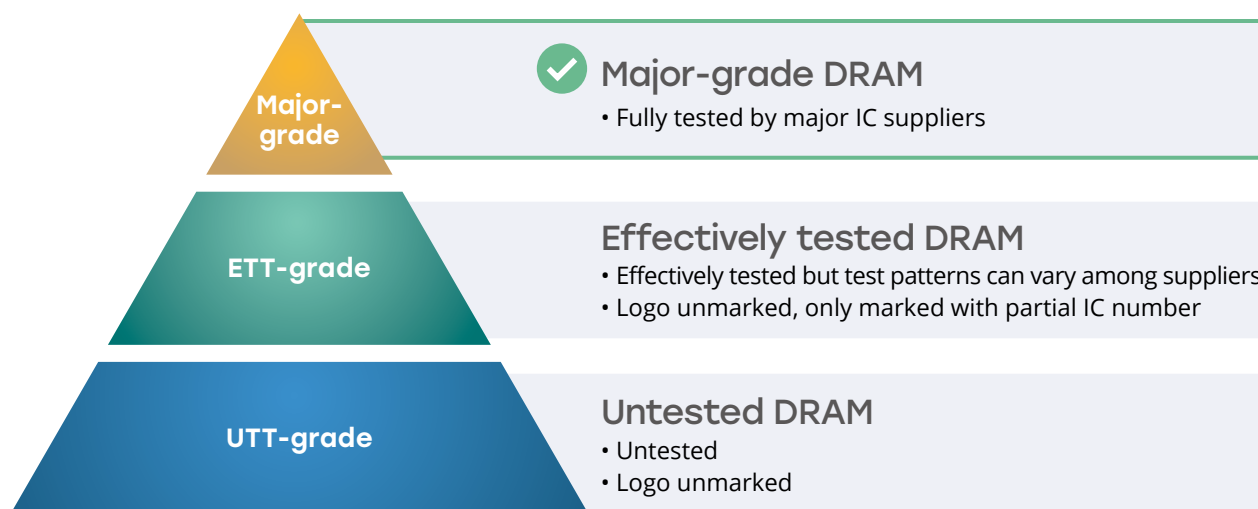
DRAM Modules

Transcend's DRAM modules are offered in a variety of form factors to accommodate different embedded devices used in industrial applications. Each DRAM module is manufactured using only the highest-quality DRAM memory chips and components, and is individually tested to ensure stability and compatibility.



IC Grade

Transcend's industrial-grade DRAM memory modules only utilize major-grade DRAM chips which have undergone the original IC manufacture's in-house testing procedures.



Product Line

	Module Type	Speed (MT/s)	Operating Temperature	Capacity
DDR5	CUDIMM / CSODIMM	6400	0°C~85°C / -40°C~85°C	16GB~32GB
	Unbuffered Long-DIMM / Unbuffered SO-DIMM	5600	0°C~95°C / -20°C~95°C / -40°C~95°C	8GB~48GB
		4800	0°C~95°C / -40°C~95°C	
	ECC Long-DIMM / ECC SO-DIMM	6400	0°C~85°C / -40°C~85°C	16GB~32GB
		5600	0°C~95°C / -20°C~95°C / -40°C~95°C	
		4800	0°C~95°C / -40°C~95°C	
	Registered Long-DIMM	6400	0°C~85°C / -40°C~85°C	16GB~64GB
		5600	0°C~95°C / -20°C~95°C / -40°C~95°C	
		4800	0°C~95°C / -40°C~95°C	
DDR4	Unbuffered Long-DIMM/ Unbuffered SO-DIMM	3200	0°C~95°C / -20°C~95°C / -40°C~95°C	4GB~32GB
		2666	0°C~95°C / -40°C~95°C	2GB~32GB
	ECC Long-DIMM / ECC SO-DIMM	3200	0°C~95°C / -20°C~95°C / -40°C~95°C	4GB~32GB
		2666	0°C~95°C / -40°C~95°C	4GB~32GB
	Registered Long-DIMM	3200	0°C~95°C / -20°C~95°C / -40°C~95°C	8GB~64GB
		2666	0°C~95°C / -40°C~95°C	4GB~32GB
DDR3	Unbuffered Long-DIMM / Unbuffered SO-DIMM	1866/1600	0°C~85°C / -40°C~85°C	1GB~8GB
	ECC Long-DIMM / ECC SO-DIMM			2GB~8GB
	Registered Long-DIMM		0°C~85°C	4GB~8GB

*Transcend offers technology customization options for selected models. Please contact us for more detailed information.

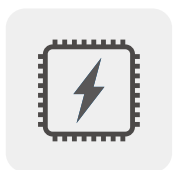
Product Highlights

DDR5 Memory Modules

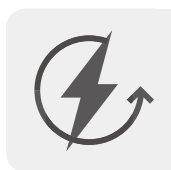
Unlock Next-Gen Performance and Efficiency

Transcend's embedded DDR5 DRAM modules follow JEDEC standards, featuring high I/O throughput and low latency. Designed for advanced performance, Transcend has integrated the client clock driver (CKD), specifically for DDR5 DRAM modules, which amplifies and buffers high-frequency signals from the CPU, ensuring high-speed transfer even at elevated frequencies and meeting stringent stability and performance requirements. The DDR5 standard introduces an on-DIMM power management integrated circuit (PMIC) for optimized energy control, enhanced power efficiency, and reduced signal complexity, while on-die ECC prevents bit errors to ensure data integrity and system reliability. Transcend's DDR5 product line includes a variety of module types, such as Unbuffered Long-DIMM, SO-DIMM, ECC Long-DIMM, SO-DIMM, and Registered Long-DIMM, with 30μ" gold finger PCBs and anti-sulfuration technology. Together, these features ensure that Transcend's DDR5 modules provide unparalleled performance and reliability in high-performance computing (HPC) applications.

Key Features



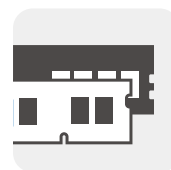
Power Management
IC (PMIC)



1.1V Low Power
Supply



On-Die ECC



Major-Grade DRAM
Components

JEDEC
Compliant

JEDEC®
Compliant



30μ" PCB Gold Fingers

Extra-thick gold-plated connectors enhance signal transmission and prevent corrosion, ensuring long-term reliability.



Anti-Sulfuration

Anti-sulfur resistors are protected from sulfide contamination resulting from industrial environments and pollution.

DDR5



Module Type	CUDIMM	CSODIMM	Long-DIMM	SO-DIMM
Speed	6400 MT/s		5600/4800 MT/s	
Capacity	16GB~32GB		8GB~64GB	
Voltage	1.1V			
PCB Height	1.23 inches	1.18 inches	1.23 inches	1.18 inches
30μ" PCB Gold Finger	Wide Temp. / ECC / Registered			
Anti-Sulfuration	Wide Temp. / ECC / Registered			
Operating Temperature	0℃~85℃ / -40℃~85℃		0℃~95℃ / -20℃~95℃ / -40℃~95℃	

DDR5-6400 Unbuffered DIMM

	Capacity	Component Composition	Rank x Org.	CU-DIMM	CSO-DIMM
Standard Temp. (0°C~85°C)	16GB	(2Gx8)x8	1Rx8	TS2GLA64V4E3	TS2GSA64V4E3
	32GB	(2Gx8)x16	2Rx8	TS4GLA64V4E3	TS4GSA64V4E3
Wide Temp. (-40°C~85°C)	16GB	(2Gx8)x8	1Rx8	TS2GLA64V4E3-I	TS2GSA64V4E3-I
	32GB	(2Gx8)x16	2Rx8	TS4GLA64V4E3-I	TS4GSA64V4E3-I

DDR5-5600 Unbuffered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Extended Temp. (-20°C~95°C)	8GB	(1Gx16)x4	1Rx16	TS1GLA64V6G	TS1GSA64V6G
	16GB	(2Gx8)x8	1Rx8	TS2GLA64V6E	TS2GSA64V6E
	32GB	(2Gx8)x16	2Rx8	TS4GLA64V6E	TS4GSA64V6E
Standard Temp. (0°C~95°C)	16GB	(2Gx8)x8	1Rx8	TS5600ALE-16G	TS5600ASE-16G
		(2Gx8)x8	1Rx8	TS2GLA64V6E1	TS2GSA64V6E1
	32GB	(2Gx8)x16	2Rx8	TS5600ALE-32G	TS5600ASE-32G
		(2Gx8)x16	2Rx8	TS4GLA64V6E1	TS4GSA64V6E1
Wide Temp. (-40°C~95°C)	48GB	(3Gx8)x16	2Rx8	TS6GLA64V6E3	TS6GSA64V6E3
	8GB	(1Gx16)x4	1Rx16	-	TS1GSA64V6G-I
	16GB	(2Gx8)x8	1Rx8	-	TS2GSA64V6E-I
	32GB	(2Gx8)x16	2Rx8	-	TS4GSA64V6E-I
	48GB	(3Gx8)x16	2Rx8	-	TS6GSA64V6E3-I

DDR5-4800 Unbuffered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Standard Temp. (0°C~95°C)	8GB	(1Gx16)x4	1Rx16	TS1GLA64V8G	TS1GSA64V8G
	16GB	(2Gx8)x8	1Rx8	TS2GLA64V8E	TS2GSA64V8E
	32GB	(2Gx8)x16	2Rx8	TS4GLA64V8E	TS4GSA64V8E
Wide Temp. (-40°C~95°C)	8GB	(1Gx16)x4	1Rx16	-	TS1GSA64V8G-I
	16GB	(2Gx8)x8	1Rx8	-	TS2GSA64V8E-I
	32GB	(2Gx8)x16	2Rx8	-	TS4GSA64V8E-I



DDR5-6400 ECC DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Standard Temp. (0°C~85°C)	16GB	(2Gx8)x10	1Rx8	TS2GLA72V4E3	TS2GSA72V4E3
	32GB	(2Gx8)x20	2Rx8	TS4GLA72V4E3	TS4GSA72V4E3
Wide Temp. (-40°C~85°C)	16GB	(2Gx8)x10	1Rx8	TS2GLA72V4E3-I	TS2GSA72V4E3-I
	32GB	(2Gx8)x20	2Rx8	TS4GLA72V4E3-I	TS4GSA72V4E3-I

DDR5-5600 ECC DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Extended Temp. (-20°C~95°C)	16GB	(2Gx8)x10	1Rx8	TS2GLA72V6E	TS2GSA72V6E
	32GB	(2Gx8)x20	2Rx8	TS4GLA72V6E	TS4GSA72V6E
Wide Temp. (-40°C~95°C)	16GB	(2Gx8)x10	1Rx8	TS2GLA72V6E-I	TS2GSA72V6E-I
	32GB	(2Gx8)x20	2Rx8	TS4GLA72V6E-I	TS4GSA72V6E-I

DDR5-4800 ECC DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Standard Temp. (0°C~95°C)	16GB	(2Gx8)x10	1Rx8	TS2GLA72V8E	TS2GSA72V8E
	32GB	(2Gx8)x20	2Rx8	TS4GLA72V8E	TS4GSA72V8E
Wide Temp. (-40°C~95°C)	16GB	(2Gx8)x10	1Rx8	TS2GLA72V8E-I	TS2GSA72V8E-I
	32GB	(2Gx8)x20	2Rx8	TS4GLA72V8E-I	TS4GSA72V8E-I



DDR5-6400 Registered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM
Standard Temp. (0°C~85°C)	16GB	(2Gx8)x10	1Rx8	TS2GAR80V4E3
	32GB	(2Gx8)x20	2Rx8	TS4GAR80V4E3
Wide Temp. (-40°C~85°C)	16GB	(2Gx8)x10	1Rx8	TS2GAR80V4E3-I
	32GB	(2Gx8)x20	2Rx8	TS4GAR80V4E3-I

DDR5-5600 Registered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM
Extended Temp. (-20°C~95°C)	16GB	(2Gx8)x10	1Rx8	TS2GAR80V6E
	32GB	(2Gx8)x20	2Rx8	TS4GAR80V6E
Wide Temp. (-40°C~95°C)	16GB	(2Gx8)x10	1Rx8	TS2GAR80V6E-I
	32GB	(2Gx8)x20	2Rx8	TS4GAR80V6E-I

DDR5-4800 Registered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM
Standard Temp. (0°C~95°C)	16GB	(2Gx8)x10	1Rx8	TS2GAR80V8E
	32GB	(2Gx8)x20	2Rx8	TS4GAR80V8E
	64GB	(4Gx4)x40	2Rx4	TS8GAR80V8F-SAM
Wide Temp. (-40°C~95°C)	16GB	(2Gx8)x10	1Rx8	TS2GAR80V8E-I
	32GB	(2Gx8)x20	2Rx8	TS4GAR80V8E-I

DDR4



Module Type	Long-DIMM	SO-DIMM
Speed	3200/2666 MT/s	
Capacity	2GB~64GB	
Voltage	1.2V	
PCB Height	Standard: 1.23 inches Very Low Profile: 0.74 inches	1.18 inches
30μ" PCB Gold Finger	Wide Temp. / ECC / Registered	
Anti-Sulfuration	Wide Temp. / ECC / Registered	
Operating Temperature	0°C~95°C / -20°C~95°C / -40°C~95°C	

DDR4-3200 Unbuffered DIMM

Extended Temp. (-20°C~95°C)	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
	4GB	(512Mx16)x4	1Rx16	TS512MLH64V2D2	TS512MSH64V2D2
		(512Mx8)x8	1Rx8	TS512MLH64V2H2	TS512MSH64V2H2
	8GB	(1Gx16)x4	1Rx16	TS1GLH64V2G2	TS1GSH64V2G2
		(1Gx8)x8	1Rx8	TS1GLH64V2B2	TS1GSH64V2B2
	16GB	(1Gx8)x16	2Rx8	TS2GLH64V2B2	TS2GSH64V2B2
		(2Gx8)x8	1Rx8	TS2GLH64V2E2	TS2GSH64V2E2
	32GB	(2Gx8)x16	2Rx8	TS4GLH64V2E2	TS4GSH64V2E2

*DDR4 2400MT/s and 2133MT/s are also available.

DDR4-3200 Unbuffered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Standard Temp. (0°C~95°C)	4GB	(512Mx16)x4	1Rx16	TS512MLH64V2D	TS512MSH64V2D
		(512Mx8)x8	1Rx8	TS512MLH64V2H	TS512MSH64V2H
		(512Mx8)x8	1Rx8	TS512MLH64V2H-G	-
	8GB	(1Gx16)x4	1Rx16	TS1GLH64V2G	TS1GSH64V2G
		(1Gx8)x8	1Rx8	TS1GLH64V2B	TS1GSH64V2B
		(1Gx8)x8	1Rx8	TS1GLH64V2B1	TS1GSH64V2B1
		(1Gx8)x8	1Rx8	TS1GLH64V2B4	TS1GSH64V2B4
		(1Gx8)x8	1Rx8	TS1GLH64V2B-G	TS1GSH64V2B-G
		(1Gx8)x8	1Rx8	TS1GLH64V2B1-G	TS1GSH64V2B1-G
	16GB	(1Gx8)x16	2Rx8	TS2GLH64V2B	TS2GSH64V2B
		(1Gx8)x16	2Rx8	TS2GLH64V2B1	TS2GSH64V2B1
		(1Gx8)x16	2Rx8	TS2GLH64V2B4	TS2GSH64V2B4
		(1Gx8)x16	2Rx8	TS2GLH64V2B-G	TS2GSH64V2B-G
		(2Gx8)x8	1Rx8	TS2GLH64V2E	TS2GSH64V2E
		(2Gx8)x8	1Rx8	TS2GLH64V2E1	TS2GSH64V2E1
		(2Gx8)x8	1Rx8	TS2GLH64V2E4	TS2GSH64V2E4
	32GB	(2Gx8)x16	2Rx8	TS4GLH64V2E	TS4GSH64V2E
		(2Gx8)x16	2Rx8	TS4GLH64V2E1	TS4GSH64V2E1
		(2Gx8)x16	2Rx8	TS4GLH64V2E4	TS4GSH64V2E4
		(2Gx8)x16	2Rx8	TS4GLH64V2E-G	TS4GSH64V2E-G
Wide Temp. (-40°C~95°C)	4GB	(512Mx16)x4	1Rx16	TS512MLH64V2D2-I	TS512MSH64V2D2-I
		(512Mx8)x8	1Rx8	TS512MLH64V2H2-I	TS512MSH64V2H2-I
	8GB	(1Gx16)x4	1Rx16	TS1GLH64V2G2-I	TS1GSH64V2G2-I
		(1Gx8)x8	1Rx8	TS1GLH64V2B2-I	TS1GSH64V2B2-I
	16GB	(1Gx8)x16	2Rx8	TS2GLH64V2B2-I	TS2GSH64V2B2-I
		(2Gx8)x8	1Rx8	TS2GLH64V2E2-I	TS2GSH64V2E2-I
	32GB	(2Gx8)x16	2Rx8	TS4GLH64V2E2-I	TS4GSH64V2E2-I
Very Low Profile (0°C~95°C)	4GB	(512Mx8)x8	1Rx8	TS512MLH64V2HL	-
	8GB	(1Gx8)x8	1Rx8	TS1GLH64V2BL	-
	16GB	(1Gx8)x16	2Rx8	TS2GLH64V2BL	-
	32GB	(2Gx8)x16	2Rx8	TS4GLH64V2E2L	-

DDR4-2666 Unbuffered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Standard Temp. (0°C~95°C)	2GB	(256Mx16)x4	1Rx16	TS256MLH64V6X	TS256MSH64V6X
	4GB	(512Mx16)x4	1Rx16	TS512MLH64V6D	TS512MSH64V6D
		(512Mx8)x8	1Rx8	TS512MLH64V6H	TS512MSH64V6H
		(512Mx8)x8	1Rx8	TS512MLH64V6H-G	-
	8GB	(512Mx8)x16	2Rx8	-	TS1GSH64V6H
		(1Gx8)x8	1Rx8	TS1GLH64V6B	TS1GSH64V6B
	16GB	(1Gx8)x16	2Rx8	TS2GLH64V6B	TS2GSH64V6B
	32GB	(2Gx8)x16	2Rx8	TS4GLH64V6E	TS4GSH64V6E
Wide Temp. (-40°C~95°C)	2GB	(256Mx16)x4	1Rx16	TS256MLH64V6X-I	TS256MSH64V6X-I
	4GB	(512Mx16)x4	1Rx16	TS512MLH64V6D-I	TS512MSH64V6D-I
		(512Mx8)x8	1Rx8	TS512MLH64V6H-I	TS512MSH64V6H-I
	8GB	(1Gx8)x8	1Rx8	TS1GLH64V6B-I	TS1GSH64V6B-I
	16GB	(1Gx8)x16	2Rx8	TS2GLH64V6B-I	TS2GSH64V6B-I
Very Low Profile (0°C~95°C)	32GB	(2Gx8)x16	2Rx8	TS4GLH64V6E-I	TS4GSH64V6E-I
	2GB	(256Mx16)x4	1Rx16	TS256MLH64V6XL	-
	4GB	(512Mx8)x8	1Rx8	TS512MLH64V6HL	-
	8GB	(1Gx8)x8	1Rx8	TS1GLH64V6BL	-
	16GB	(1Gx8)x16	2Rx8	TS2GLH64V6BL	-
	32GB	(2Gx8)x16	2Rx8	TS4GLH64V6EL-G	-

*DDR4 2400MT/s and 2133MT/s are also available.



DDR4-3200 ECC DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Extended Temp. (-20°C~95°C)	4GB	(512Mx8)x9	1Rx8	TS512MLH72V2H2	TS512MSH72V2H2
	8GB	(512Mx8)x18	2Rx8	TS1GLH72V2H2	TS1GSH72V2H2
		(1Gx8)x9	1Rx8	TS1GLH72V2B2	TS1GSH72V2B2
	16GB	(1Gx8)x18	2Rx8	TS2GLH72V2B2	TS2GSH72V2B2
		(2Gx8)x9	1Rx8	TS2GLH72V2E2	TS2GSH72V2E2
Standard Temp. (0°C~95°C)	32GB	(2Gx8)x18	2Rx8	TS4GLH72V2E2	TS4GSH72V2E2
	4GB	(512Mx8)x9	1Rx8	-	TS512MSH72V2H
	8GB	(512Mx8)x18	2Rx8	-	TS1GSH72V2H
		(1Gx8)x9	1Rx8	TS1GLH72V2B	TS1GSH72V2B
		(1Gx8)x9	1Rx8	TS1GLH72V2B4	TS1GSH72V2B4
	16GB	(1Gx8)x18	2Rx8	TS2GLH72V2B	TS2GSH72V2B
		(2Gx8)x9	1Rx8	TS2GLH72V2E	TS2GSH72V2E
	32GB	(2Gx8)x9	1Rx8	TS2GLH72V2E4	TS2GSH72V2E4
		(2Gx8)x18	2Rx8	TS4GLH72V2E	TS4GSH72V2E
		(2Gx8)x18	2Rx8	TS4GLH72V2E4	TS4GSH72V2E4
Wide Temp. (-40°C~95°C)	4GB	(512Mx8)x9	1Rx8	TS512MLH72V2H2-I	TS512MSH72V2H2-I
	8GB	(512Mx8)x18	2Rx8	TS1GLH72V2H2-I	TS1GSH72V2H2-I
		(1Gx8)x9	1Rx8	TS1GLH72V2B2-I	TS1GSH72V2B2-I
	16GB	(1Gx8)x18	2Rx8	TS2GLH72V2B2-I	TS2GSH72V2B2-I
		(2Gx8)x9	1Rx8	TS2GLH72V2E2-I	TS2GSH72V2E2-I
Very Low Profile (0°C~95°C)	32GB	(2Gx8)x18	2Rx8	TS4GLH72V2E2-I	TS4GSH72V2E2-I
	8GB	(1Gx8)x9	1Rx8	TS1GLH72V2BL	-
	16GB	(1Gx8)x18	2Rx8	TS2GLH72V2BL	-

DDR4-2666 ECC DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Standard Temp. (0°C~95°C)	4GB	(512Mx8)x9	1Rx8	TS512MLH72V6H	TS512MSH72V6H
	8GB	(1Gx8)x9	1Rx8	TS1GLH72V6B	TS1GSH72V6B
	16GB	(1Gx8)x18	2Rx8	TS2GLH72V6B	TS2GSH72V6B
	32GB	(2Gx8)x18	2Rx8	TS4GLH72V6E	TS4GSH72V6E
Wide Temp. (-40°C~95°C)	4GB	(512Mx8)x9	1Rx8	TS512MLH72V6H-I	TS512MSH72V6H-I
	8GB	(1Gx8)x9	1Rx8	TS1GLH72V6B-I	TS1GSH72V6B-I
	16GB	(1Gx8)x18	2Rx8	TS2GLH72V6B-I	TS2GSH72V6B-I
	32GB	(2Gx8)x18	2Rx8	TS4GLH72V6E-I	TS4GSH72V6E-I
Very Low Profile (0°C~95°C)	8GB	(1Gx8)x9	1Rx8	TS1GLH72V6BL	-
	16GB	(1Gx8)x18	2Rx8	TS2GLH72V6BL	-

*DDR4 2400MT/s and 2133MT/s are also available.



DDR4-3200 Registered DIMM

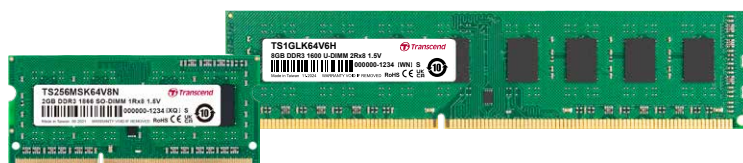
	Capacity	Component Composition	Rank x Org.	Long-DIMM
Extended Temp. (-20°C~95°C)	8GB	(1Gx8)x9	1Rx8	TS1GHR72V2B2
	16GB	(1Gx8)x18	2Rx8	TS2GHR72V2B2
		(2Gx8)x9	1Rx8	TS2GHR72V2E2
	32GB	(2Gx8)x18	2Rx8	TS4GHR72V2E2
Standard Temp. (0°C~95°C)	8GB	(1Gx8)x9	1Rx8	TS1GHR72V2B
		(1Gx8)x9	1Rx8	TS1GHR72V2B4
	16GB	(1Gx8)x18	2Rx8	TS2GHR72V2B
		(2Gx8)x9	1Rx8	TS2GHR72V2E
	32GB	(2Gx8)x18	2Rx8	TS4GHR72V2E
		(2Gx4)x36	2Rx4	TS4GHR72V2C-SAM
Wide Temp. (-40°C~95°C)	64GB	(4Gx4)x36	2Rx4	TS8GHR72V2F2-SAM
	8GB	(1Gx8)x9	1Rx8	TS1GHR72V2B2-I
	16GB	(1Gx8)x18	2Rx8	TS2GHR72V2B2-I
		(2Gx8)x9	1Rx8	TS2GHR72V2E2-I
Very Low Profile (0°C~95°C)	32GB	(2Gx8)x18	2Rx8	TS4GHR72V2E2-I
	8GB	(1Gx8)x9	1Rx8	TS1GHR72V2BL
	16GB	(1Gx8)x18	2Rx8	TS2GHR72V2BL
		(2Gx8)x9	1Rx8	TS2GHR72V2EL
	32GB	(2Gx8)x18	2Rx8	TS4GHR72V2EL

DDR4-2666 Registered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM
Standard Temp. (0°C~95°C)	4GB	(512Mx8)x9	1Rx8	TS512MHR72V6H
	8GB	(512Mx8)x18	2Rx8	TS1GHR72V6H
		(1Gx8)x9	1Rx8	TS1GHR72V6B
	16GB	(1Gx8)x18	2Rx8	TS2GHR72V6B
Wide Temp. (-40°C~95°C)	16GB	(1Gx8)x18	2Rx8	TS2GHR72V6B-I
	32GB	(2Gx8)x18	2Rx8	TS4GHR72V6E-I
Very Low Profile (0°C~95°C)	16GB	(1Gx8)x18	2Rx8	TS2GHR72V6BL

*DDR4 2400MT/s and 2133MT/s are also available.

DDR3



Module Type	Long-DIMM	SO-DIMM
Speed	1866/1600 MT/s	
Capacity	1GB~8GB	
Voltage	Standard: 1.5V Low Voltage: 1.35V	
PCB Height	Standard: 1.18 inches Very Low Profile: 0.74 inches	1.18 inches
30μ" PCB Gold Finger	Wide Temp. / ECC / Registered	
Anti-Sulfuration	Wide Temp. / ECC / Registered	
Operating Temperature	0°C~85°C / -40°C~85°C	

DDR3-1866 Unbuffered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Low Voltage (0°C~85°C)	2GB	(256Mx8)x8	1Rx8	-	TS256MSK64W8N
	4GB	(512Mx8)x8	1Rx8	TS512MLK64W8H	TS512MSK64W8H
	8GB	(512Mx8)x16	2Rx8	-	TS1GSK64W8H
Low Voltage+ Wide Temp. (-40°C~85°C)	2GB	(256Mx8)x8	1Rx8	-	TS256MSK64W8N-I
	4GB	(512Mx8)x8	1Rx8	-	TS512MSK64W8H-I
	8GB	(512Mx8)x16	2Rx8	-	TS1GSK64W8H-I

*DDR3 1333MT/s are also available.



DDR3-1600 Unbuffered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Standard Temp. (0°C~85°C)	2GB	(256Mx8)x8	1Rx8	TS256MLK64V6N	TS256MSK64V6N
	4GB	(256Mx8)x16	2Rx8	TS512MLK64V6N	TS512MSK64V6N
		(512Mx8)x8	1Rx8	TS512MLK64V6H	TS512MSK64V6H
	8GB	(512Mx8)x16	2Rx8	TS1GLK64V6H	TS1GSK64V6H
Wide Temp. (-40°C~85°C)	2GB	(256Mx8)x8	1Rx8	TS256MLK64V6N-I	TS256MSK64V6N-I
	4GB	(256Mx8)x16	2Rx8	TS512MLK64V6N-I	TS512MSK64V6N-I
		(512Mx8)x8	1Rx8	TS512MLK64V6H-I	TS512MSK64V6H-I
	8GB	(512Mx8)x16	2Rx8	TS1GLK64V6H-I	TS1GSK64V6H-I
Low Voltage (0°C~85°C)	2GB	(256Mx8)x8	1Rx8	TS256MLK64W6N	TS256MSK64W6N
		(256Mx16)x4	1Rx16	-	TS256MSK64W6X
	4GB	(256Mx8)x16	2Rx8	TS512MLK64W6N	TS512MSK64W6N
		(512Mx8)x8	1Rx8	TS512MLK64W6H	TS512MSK64W6H
		(512Mx8)x8	1Rx8	TS512MLK64W6H-G	-
	8GB	(512Mx8)x16	2Rx8	TS1GLK64W6H	TS1GSK64W6H
		(512Mx8)x16	2Rx8	TS1GLK64W6H-G	-
Low Voltage+ Wide Temp. (-40°C~85°C)	1GB	(128Mx8)x8	1Rx8	-	TS128MSK64W6U-I
	2GB	(256Mx8)x8	1Rx8	TS256MLK64W6N-I	TS256MSK64W6N-I
	4GB	(256Mx8)x16	2Rx8	TS512MLK64W6N-I	TS512MSK64W6N-I
		(512Mx8)x8	1Rx8	TS512MLK64W6H-I	TS512MSK64W6H-I
	8GB	(512Mx8)x16	2Rx8	TS1GLK64W6H-I	TS1GSK64W6H-I
Low Voltage+ Very Low Profile (0°C~85°C)	4GB	(512Mx8)x8	1Rx8	TS512MLK64W6HL	-

*DDR3 1333MT/s are also available.



DDR3-1600 ECC DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM	SO-DIMM
Standard Temp. (0°C~85°C)	2GB	(256Mx8)x9	1Rx8	TS256MLK72V6N	TS256MSK72V6N
	4GB	(512Mx8)x9	1Rx8	TS512MLK72V6H	-
		(256Mx8)x18	2Rx8	TS512MLK72V6N	-
	8GB	(512Mx8)x18	2Rx8	TS1GLK72V6H	TS1GSK72V6H
Wide Temp. (-40°C~85°C)	2GB	(256Mx8)x9	1Rx8	TS256MLK72V6N-I	-
	4GB	(512Mx8)x9	1Rx8	TS512MLK72V6H-I	-
		(256Mx8)x18	2Rx8	TS512MLK72V6N-I	-
	8GB	(512Mx8)x18	2Rx8	TS1GLK72V6H-I	TS1GSK72V6H-I
Low Voltage (0°C~85°C)	2GB	(256Mx8)x9	1Rx8	TS256MLK72W6N	-
	4GB	(512Mx8)x9	1Rx8	TS512MLK72W6H	TS512MSK72W6H
	8GB	(512Mx8)x18	2Rx8	TS1GLK72W6H	TS1GSK72W6H
Low Voltage+ Wide Temp. (-40°C~85°C)	2GB	(256Mx8)x9	1Rx8	TS256MLK72W6N-I	TS256MSK72W6N-I
	4GB	(512Mx8)x9	1Rx8	TS512MLK72W6H-I	TS512MSK72W6H-I
	8GB	(512Mx8)x18	2Rx8	TS1GLK72W6H-I	TS1GSK72W6H-I
Low Voltage+ Very Low Profile (0°C~85°C)	4GB	(512Mx8)x9	1Rx8	TS512MLK72W6HL	-
	8GB	(512Mx8)x18	2Rx8	TS1GLK72W6HL	-

DDR3-1600 Registered DIMM

	Capacity	Component Composition	Rank x Org.	Long-DIMM
Standard Temp. (0°C~85°C)	4GB	(256Mx8)x18	2Rx8	TS512MKR72V6N
	8GB	(512Mx8)x18	2Rx8	TS1GKR72V6H
Low Voltage (0°C~85°C)	4GB	(512Mx8)x9	1Rx8	TS512MKR72W6H
	8GB	(512Mx8)x18	2Rx8	TS1GKR72W6H
Very Low Profile (0°C~85°C)	8GB	(512Mx8)x18	2Rx8	TS1GKR72V6HL

SSD Solutions

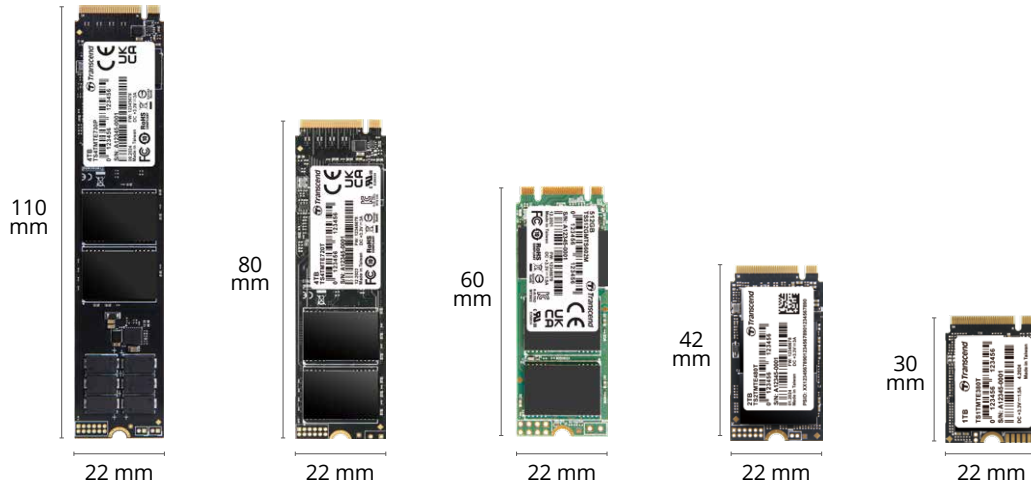
Transcend's Solid-State Drive (SSD) solutions offer fast and reliable performance in a wide variety of form factors, interfaces, and storage capacities suitable for devices operating in extreme industrial conditions. With support for Transcend's Power Shield (PS), Dynamic Thermal Throttling, and S.M.A.R.T. analysis technologies, our SSDs are designed for durability and reliability in large-scale embedded deployments.

Transcend also provides SSDs with technologies such as Power Loss Protection (PLP) to ensure data integrity in applications with unstable power supply; TCG Opal 2.0 to enhance data security; and SLC Mode to increase endurance and performance. These special product lines help address issues commonly encountered in embedded computing applications.



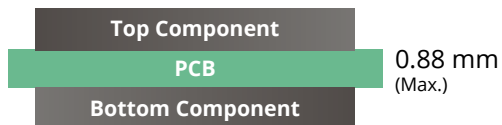
SSD Solutions

M.2 22110/2280/2260/2242/2230



Height= PCB+Top+Bottom

An example: Type 2280-D2-M,
D2=3.58 mm (0.88+1.35+1.35)



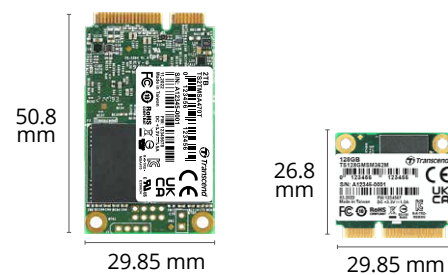
Type ID	Top (Max.)	Bottom (Max.)
S2	1.35 mm	-
S3	1.50 mm	-
D2	1.35 mm	1.35 mm
D5	1.50 mm	1.50 mm

(S: Single Sided, D: Double Sided)

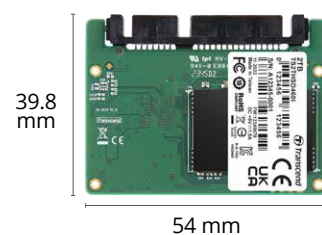
U.2 / 2.5"



mSATA / mSATA mini



Half-Slim



Data Center SSD

Interface	Form Factor	Model	DRAM	Capacity	Feature
PCIe Gen4	U.2	ETD410T	●	3840GB~7680GB	PLP & 8CH, Enterprise SSD
SATA III	2.5"	ETD210T	●	480GB~3840GB	PLP, Enterprise SSD

112-Layer 3D NAND Flash

Interface	Form Factor	Model	DRAM	Capacity	Feature
PCIe Gen4	U.2	UTE210T	●	512GB~8TB	PLP & 8CH
	M.2 22110	MTE730P	●	512GB~4TB	PLP & 8CH
	M.2 2280	MTE720T	●	512GB~4TB	
		MTE760T	-	256GB~2TB	TCG Opal
		MTE712A	●	128GB~2TB	TCG Opal
		MTE712P	●	128GB~2TB	TCG Opal & PLP
		MTE560P	●	40GB~640GB	TCG Opal, PLP & SLC Mode
		MTE560I	●	40GB~640GB	TCG Opal & SLC Mode
	M.2 2242	MTE480T	-	256GB~2TB	TCG Opal
	M.2 2230	MTE380T	-	256GB~1TB	TCG Opal
PCIe Gen3	M.2 2280	MTE672A	-	128GB~2TB	TCG Opal
	M.2 2242	MTE470A	-	128GB~2TB	TCG Opal
		MTE460T	-	128GB~1TB	
	M.2 2230	MTE370T	-	256GB~1TB	
SATA III	M.2 2280	MTS970T	●	128GB~4TB	
		MTS960T	-	64GB~2TB	
		MTS970A	●	128GB~4TB	TCG Opal
		MTS970P	●	128GB~1TB	PLP
		MTS260I	●	40GB~1280GB	SLC Mode
		MTS250I	-	20GB~640GB	SLC Mode
	M.2 2242	MTS570T	●	128GB~1TB	
		MTS560T	-	64GB~2TB	
		MTS570A	●	128GB~1TB	TCG Opal
		MTS570P	●	128GB~512GB	PLP
		MTS210I	●	40GB~320GB	SLC Mode
		MTS200I	-	20GB~320GB	SLC Mode
	2.5"	SSD470N	●	1TB~4TB	Direct Write
		SSD472K	●	128GB~4TB	
		SSD460K	-	64GB~2TB	
		SSD470A	●	128GB~4TB	TCG Opal
		SSD470P	●	128GB~1TB	PLP
		SSD550I	●	40GB~1280GB	SLC Mode
	mSATA	MSA470T	●	128GB~1TB	
		MSA460T	-	64GB~1TB	
		MSA470A	●	128GB~1TB	TCG Opal
		MSA470P	●	128GB~1TB	PLP
		MSA520I	●	40GB~320GB	SLC Mode
	Half-Slim	HSD460I	-	64GB~2TB	

*Wide-temp. models (-40°C~85°C) & Advanced Encryption Standard (AES) provided upon request. Please contact us to know more.

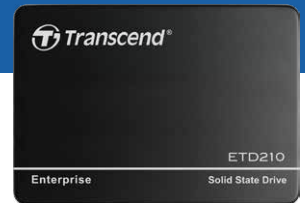
MLC NAND Flash

Interface	Form Factor	Model	DRAM	Capacity	Feature
SATA III	M.2 2280	MTS810M	●	32GB~256GB	
		MTS802M	●	32GB~1TB	
		MTS862K	●	16GB~32GB	SLC Mode
	M.2 2260	MTS602M	●	32GB~512GB	
	M.2 2242	MTS410M	●	16GB~128GB	
		MTS402M	●	16GB~512GB	
		MTS400P	●	32GB~64GB	PLP
		MTS462K	●	8GB~16GB	SLC Mode
	2.5"	SSD422K	●	32GB~1TB	
		SSD420K	●	16GB~1TB	
		SSD510K	●	16GB~128GB	SLC Mode
	mSATA	MSA380M	●	16GB~256GB	
		MSA372M	●	16GB~1TB	
	mSATA mini	MSM362M	-	16GB~128GB	
	Half-Slim	HSD372M	●	16GB~128GB	

Standard Temp.: 0°C~70°C
 Extended Temp.: -20°C~75°C
 Wide Temp.: -40°C~85°C

*Wide-temp. models (-40°C~85°C) & Advanced Encryption Standard (AES) provided upon request. Please contact us to know more.

Data Center SSD



Transcend's Enterprise SSD designed for read-intensive workloads. Boasting enterprise 3D NAND flash, and a DRAM cache, it delivers fast data transfer with superior Quality of Service, ultra-low latency, and exceptional endurance. The integrated Power Loss Protection ensures data integrity during power fluctuations.

	Enterprise SSD	Client SSD
Workload	Enterprise (JESD219)	Client (JESD218)
NAND Endurance	High (PE: 7~10K)	Low (PE: 1~3K)
Reliability	Featured with PLP, TCG Opal & Error Handling	Simple ECC function
Latency	0.5 ms (QoS=99.9%, ETD210T)	5.7 ms (QoS=99.6%, SSD452K)

Model	ETD410T	ETD210T
Form Factor	U.2	2.5"
Interface	PCIe Gen4 x4 (8CH)	SATA III 6Gb/s
Capacity	3840GB~7680GB	480GB~3840GB
Operating Temperature	0°C~70°C	
DRAM Cache	●	●
Power Loss Protection (PLP)	●	●
Performance (Sequential R/W*)	7400/6400 MB/s	530/510 MB/s
Endurance (TBW*)	14,016 TB	7,008 TB
Reliability (MTBF*)	3,000,000 hours	2,000,000 hours
DWPD*	1 (5 years)	
Dimensions	100.45 x 69.85 x 15 mm	100 x 69.85 x 7 mm
Ordering Information	TS3T84ETD410T ⋮ TS7T68ETD410T	TS480GETD210T ⋮ TS3T84ETD210T

R/W: Read/Write

TBW: Terabytes Written

MTBF: Mean Time Between Failures

DWPD: Drive Writes Per Day

*Value varies by capacity, user hardware, system configuration, and calculation method.
TBW and DWPD are based on the JEDEC JESD219 Enterprise Workload standard.

U.2 SSD



Model	UTE210T
Interface	PCIe Gen4 x4 (8CH)
Capacity	512GB~8TB
Operating Temperature	-20°C~75°C
DRAM Cache	●
Power Loss Protection (PLP)	●
Performance (Sequential R/W*)	7,400/6,600 MB/s
Endurance (TBW*)	11,520 TB
Reliability (MTBF*)	3,000,000 hours
DWPD*	1.32 (3 years)
Dimensions	100.45 x 69.85 x 7 mm
Ordering Information	TS512GUTE210T ⋮ TS8TUTE210T

PCIe Gen4 M.2 22110



Model	MTE730P
Interface	PCIe Gen4 x4 (8CH)
Capacity	512GB~4TB
Operating Temperature	-40°C~85°C
DRAM Cache	●
Power Loss Protection (PLP)	●
Corner Bond	●
30μ" PCB Gold Finger	●
Performance (Sequential R/W*)	7,500/6,700 MB/s
Endurance (TBW*)	5,920 TB
Reliability (MTBF*)	3,000,000 hours
DWPD*	1.35 (3 years)
Form Factor	22110-D5-M
Dimensions	110 x 22 x 3.88 mm
Ordering Information	TS512GMTE730P ⋮ TS4TMTE730P

*Value varies by capacity, user hardware, system configuration, and calculation method.

PCIe Gen4 M.2 2280



Model	MTE720T	MTE760T	MTE712A
Interface	PCIe Gen4 x4 (8CH)	PCIe Gen4 x4	PCIe Gen4 x4
Capacity	512GB~4TB	256GB~2TB	256GB~2TB
Operating Temperature		-20°C~75°C	
DRAM Cache	●	-	●
TCG Opal	-	●	●
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	●
Performance (Sequential R/W*)	7,500/6,700 MB/s	5,000/4,100 MB/s	3,800/3,000 MB/s
Endurance (TBW*)	5,920 TB	2,640 TB	4,480 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	1.35 (3 years)	1.2 (3 years)	1.99 (3 years)
Form Factor	2280-D2-M	2280-S2-M	2280-D2-M
Dimensions	80 x 22 x 3.58 mm	80 x 22 x 2.23 mm	80 x 22 x 3.58 mm
Ordering Information	TS512GMTE720T ⋮ TS4TMTE720T	TS256GMTE760T ⋮ TS2TMTE760T	TS256GMTE712A ⋮ TS2TMTE712A

Model	MTE712P	MTE560P	MTE560I
Interface		PCIe Gen4 x4	
Capacity	128GB~2TB	40GB~640GB	40GB~640GB
Operating Temperature		-40°C~85°C	
DRAM Cache	●	●	●
TCG Opal	●	●	●
Power Loss Protection (PLP)	●	●	-
SLC Mode	-	●	●
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	●
Performance (Sequential R/W*)	3,800/3,100 MB/s	3,800/3,200 MB/s	3,800/3,200 MB/s
Endurance (TBW*)	4,320 TB	38,000 TB	38,000 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	1.97 (3 years)	54.2 (3 years)	54.2 (3 years)
Form Factor	2280-D5-M	2280-D5-M	2280-D2-M
Dimensions	80 x 22 x 3.88 mm	80 x 22 x 3.88 mm	80 x 22 x 3.58 mm
Ordering Information	TS128GMTE712P ⋮ TS2TMTE712P	TS40GMTE560P ⋮ TS640GMTE560P	TS40GMTE560I ⋮ TS640GMTE560I

Graphene heatsink



Aluminum heatsink

Optional Graphene or Aluminum Heatsink

Transcend offers optional ultra-thin graphene or high performance aluminum heatsink options to improve heat dissipation.

*Value varies by capacity, user hardware, system configuration, and calculation method.

PCIe Gen4 M.2 2242/2230



Model	MTE480T	MTE380T
Interface	PCIe Gen4 x4	PCIe Gen4 x4
Capacity	256GB~2TB	256GB~1TB
Operating Temperature	-20°C~75°C	-20°C~75°C
DRAM Cache	-	-
TCG Opal	●	●
Corner Bond	●	●
30μ" PCB Gold Finger	●	●
Performance (Sequential R/W*)	5,000/4,100 MB/s	5,000/3,300 MB/s
Endurance (TBW*)	2,640 TB	1,320 TB
Reliability (MTBF*)	3,000,000 hours	3,000,000 hours
DWPD*	1.2 (3 years)	1.2 (3 years)
Form Factor	2242-S2-M	2230-S3-M
Dimensions	42 x 22 x 2.23 mm	30 x 22 x 2.38 mm
Ordering Information	TS256GMTE480T ⋮ TS2TMTE480T	TS256GMTE380T ⋮ TS1TMTE380T

PCIe Gen3 M.2 2280/2242/2230

Model	MTE672A	MTE470A	MTE460T	MTE370T
Interface	PCIe Gen3 x4	PCIe Gen3 x4	PCIe Gen3 x2	PCIe Gen3 x4
Capacity	128GB~2TB	128GB~2TB	128GB~1TB	256GB~1TB
Operating Temperature	-20°C~75°C			
DRAM Cache	-	-	-	-
TCG Opal	●	●	-	-
Corner Bond	●	●	●	●
30μ" PCB Gold Finger	●	●	●	●
Performance (Sequential R/W*)	2,000/1,700 MB/s	2,000/1,700 MB/s	1,700/1,500 MB/s	2,000/1,700 MB/s
Endurance (TBW*)	1,920 TB	1,800 TB	900 TB	960 TB
Reliability (MTBF*)	3,000,000 hours			
DWPD*	0.86 (3 years)	0.86 (3 years)	0.86 (3 years)	0.88 (3 years)
Form Factor	2280-S2-M	2242-S2-M	2242-D2-B-M	2230-S3-M
Dimensions	80 x 22 x 2.23 mm	42 x 22 x 3.58 mm	42 x 22 x 3.58 mm	30 x 22 x 2.38 mm
Ordering Information	TS128GMTE672A ⋮ TS2TMTE672A	TS128GMTE470A ⋮ TS2TMTE470A	TS128GMTE460T ⋮ TS1TMTE460T	TS256GMTE370T ⋮ TS1TMTE370T

*Value varies by capacity, user hardware, system configuration, and calculation method.

SATA III M.2 2280

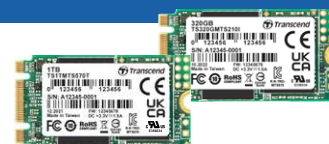


Model	MTS970T	MTS960T	MTS970A
Interface		SATA III 6Gb/s	
Capacity	128GB~4TB	64GB~2TB	128GB~4TB
Operating Temperature		-20°C~75°C	
DRAM Cache	●	-	●
TCG Opal	-	-	●
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	●
Performance (Sequential R/W*)	560/520 MB/s	560/500 MB/s	
Endurance (TBW*)	9,680 TB	4,376 TB	9,680 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	2.21 (3 years)	1.95 (3 years)	2.21 (3 years)
Form Factor	2280-D2-B-M	2280-S2-B-M	2280-D2-B-M
Dimensions	80 x 22 x 3.58 mm	80 x 22 x 2.23 mm	80 x 22 x 3.58 mm
Ordering Information	TS128GMTS970T ⋮ TS4TMTS970T	TS64GMTS960T ⋮ TS2TMTS960T	TS128GMTS970A ⋮ TS4TMTS970A

Model	MTS970P	MTS260I	MTS250I
Interface		SATA III 6Gb/s	
Capacity	128GB~1TB	40GB~1280GB	20GB~640GB
Operating Temperature		-40°C~85°C	
DRAM Cache	●	●	-
Power Loss Protection (PLP)	●	-	-
SLC Mode	-	●	●
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	●
Performance (Sequential R/W*)	560/520 MB/s	560/520 MB/s	560/500 MB/s
Endurance (TBW*)	2,400 TB	46,000 TB	22,000 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	2.14 (3 years)	52.3 (3 years)	44.6 (3 years)
Form Factor	2280-D5-B-M	2280-D2-B-M	2280-S2-B-M
Dimensions	80 x 22 x 3.88 mm	80 x 22 x 3.58 mm	80 x 22 x 2.23 mm
Ordering Information	TS128GMTS970P ⋮ TS1TMTS970P	TS40GMTS260I ⋮ TS1280GMTS260I	TS20GMTS250I ⋮ TS640GMTS250I

*Value varies by capacity, user hardware, system configuration, and calculation method.

SATA III M.2 2242



Model	MTS570T	MTS560T	MTS570A
Interface		SATA III 6Gb/s	
Capacity	128GB~1TB	64GB~2TB	128GB~1TB
Operating Temperature		-20°C~75°C	
DRAM Cache	●	-	●
TCG Opal	-	-	●
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	●
Performance (Sequential R/W*)	560/520 MB/s	560/510 MB/s	560/500 MB/s
Endurance (TBW*)	2,420 TB	4,376 TB	2,420 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	2.16 (3 years)	2 (3 years)	2.16 (3 years)
Form Factor		2242-D2-B-M	
Dimensions		42 x 22 x 3.58 mm	
Ordering Information	TS128GMTS570T ⋮ TS1TMTS570T	TS64GMTS560T ⋮ TS2TMTS560T	TS128GMTS570A ⋮ TS1TMTS570A

Model	MTS570P	MTS210I	MTS200I
Interface		SATA III 6Gb/s	
Capacity	128GB~512GB	40GB~320GB	20GB~320GB
Operating Temperature		-40°C~85°C	
DRAM Cache	●	●	-
Power Loss Protection (PLP)	●	-	-
SLC Mode	-	●	●
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	●
Performance (Sequential R/W*)	560/520 MB/s	560/520 MB/s	560/500 MB/s
Endurance (TBW*)	1,150 TB	11,500 TB	11,000 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	2.05 (3 years)	52.3 (3 years)	44.6 (3 years)
Form Factor	2242-D5-B-M	2242-D2-B-M	2242-D2-B-M
Dimensions	42 x 22 x 3.88 mm	42 x 22 x 3.58 mm	42 x 22 x 3.58 mm
Ordering Information	TS128GMTS570P ⋮ TS512GMTS570P	TS40GMTS210I ⋮ TS320GMTS210I	TS20GMTS200I ⋮ TS320GMTS200I

*Value varies by capacity, user hardware, system configuration, and calculation method.

112-Layer 3D NAND Flash

SATA III 2.5"



Model	SSD470N	SSD472K	SSD460K
Interface		SATA III 6Gb/s	
Capacity	1TB~4TB	128GB~4TB	64GB~2TB
Operating Temperature		-20°C~75°C	
DRAM Cache	●	●	-
Performance (Sequential R/W*)	560/510 MB/s	560/520 MB/s	560/500 MB/s
Endurance (TBW*)	7,600 TB	9,680 TB	4,376 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	1.91 (3 years)	2.16 (3 years)	1.95 (3 years)
Dimensions		100.45 x 69.85 x 6.8 mm	
Ordering Information	TS1TSSD470N ⋮ TS4TSSD470N	TS128GSSD472K ⋮ TS4TSSD472K	TS64GSSD460K ⋮ TS2TSSD460K

Model	SSD470A	SSD470P	SSD550I
Interface		SATA III 6Gb/s	
Capacity	128GB~4TB	128GB~1TB	40GB~1280GB
Operating Temperature	-20°C~75°C	-20°C~75°C	-40°C~85°C
DRAM Cache	●	●	●
TCG Opal	●	-	-
Power Loss Protection (PLP)	-	●	-
SLC Mode	-	-	●
Performance (Sequential R/W*)	560/500 MB/s	560/520 MB/s	560/520 MB/s
Endurance (TBW*)	9,448 TB	2,420 TB	46,000 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	2.21 (3 years)	2.16 (3 years)	32.8 (3 years)
Dimensions		100.45 x 69.85 x 6.8 mm	
Ordering Information	TS128GSSD470A ⋮ TS4TSSD470A	TS128GSSD470P ⋮ TS1TSSD470P	TS40GSSD550I ⋮ TS1280GSSD550I

*Value varies by capacity, user hardware, system configuration, and calculation method.

SATA III mSATA



Model	MSA470T	MSA460T	MSA470A
Interface		SATA III 6Gb/s	
Capacity	128GB~1TB	64GB~1TB	128GB~1TB
Operating Temperature		-20°C~75°C	
DRAM Cache	●	-	●
TCG Opal	-	-	●
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	●
Performance (Sequential R/W*)	560/520 MB/s	560/500 MB/s	560/500 MB/s
Endurance (TBW*)	2,420 TB	2,188 TB	2,420 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	2.16 (3 years)	2 (3 years)	2.16 (3 years)
Form Factor		MO-300A	
Dimensions		50.8 x 29.85 x 4.85 mm	
Ordering Information	TS128GMSA470T ⋮ TS1TMSA470T	TS64GMSA460T ⋮ TS1TMSA460T	TS128GMSA470A ⋮ TS1TMSA470A

SATA III mSATA/Half-Slim



Model	MSA470P	MSA520I	HSD460I
Interface		SATA III 6Gb/s	
Capacity	128GB~1TB	40GB~320GB	64GB~2TB
Operating Temperature		-40°C~85°C	
DRAM Cache	●	●	-
Power Loss Protection (PLP)	●	-	-
SLC Mode	-	●	-
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	-
Performance (Sequential R/W*)	560/520 MB/s	560/520 MB/s	560/500 MB/s
Endurance (TBW*)	2,400 TB	11,500 TB	3,740 TB
Reliability (MTBF*)		3,000,000 hours	
DWPD*	2.19 (3 years)	52.3 (3 years)	1.75 (3 years)
Form Factor	MO-300A	MO-300A	MO-297
Dimensions	50.8 x 29.85 x 4.85 mm	50.8 x 29.85 x 4.85 mm	54 x 39.8 x 4 mm
Ordering Information	TS128GMSA470P ⋮ TS1TMSA470P	TS40GMSA520I ⋮ TS320GMSA520I	TS64GHSD460I ⋮ TS2THSD460I

*Value varies by capacity, user hardware, system configuration, and calculation method.

SATA III M.2 2280



Model	MTS810M	MTS802M	MTS862K
Interface	SATA III 6Gb/s		
Capacity	32GB~256GB	32GB~1TB	16GB~32GB
Operating Temperature	0°C~70°C		
DRAM Cache	●	●	●
SLC Mode	-	-	●
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	●
Performance (Sequential R/W*)	550/420 MB/s	530/460 MB/s	530/150 MB/s
Endurance (TBW*)	740 TB	2,360 TB	580 TB
Reliability (MTBF*)	2,500,000 hours	2,500,000 hours	3,000,000 hours
DWPD*	2.6 (3 years)	2.6 (3 years)	14.8 (3 years)
Form Factor	2280-D2-B-M		
Dimensions	80 x 22 x 3.58 mm		
Ordering Information	TS32GMTS810M ⋮ TS256GMTS810M	TS32GMTS802M ⋮ TS1TMTS802M	TS16GMTS862K TS32GMTS862K

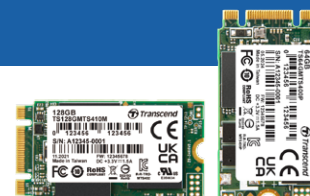
SATA III M.2 2260



Model	MTS602M
Interface	SATA III 6Gb/s
Capacity	32GB~512GB
Operating Temperature	0°C~70°C
DRAM Cache	●
Corner Bond	●
30μ" PCB Gold Finger	●
Performance (Sequential R/W*)	530/450 MB/s
Endurance (TBW*)	1,480 TB
Reliability (MTBF*)	2,500,000 hours
DWPD*	2.6 (3 years)
Form Factor	2260-D2-B-M
Dimensions	60 x 22 x 3.58 mm
Ordering Information	TS32GMTS602M ⋮ TS512GMTS602M

*Value varies by capacity, user hardware, system configuration, and calculation method.

SATA III M.2 2242



Model	MTS410M	MTS402M
Interface	SATA III 6Gb/s	
Capacity	16GB~128GB	16GB~512GB
Operating Temperature	0°C~70°C	
DRAM Cache	●	●
Corner Bond	●	●
30μ" PCB Gold Finger	●	●
Performance (Sequential R/W*)	550/260 MB/s	530/470 MB/s
Endurance (TBW*)	360 TB	1,100 TB
Reliability (MTBF*)	2,500,000 hours	
DWPD*	2.6 (3 years)	2 (3 years)
Form Factor	2242-D2-B-M	
Dimensions	42 x 22 x 3.58 mm	
Ordering Information	TS16GMTS410M ⋮ TS128GMTS410M	TS16GMTS402M ⋮ TS512GMTS402M

Model	MTS400P	MTS462K
Interface	SATA III 6Gb/s	
Capacity	32GB~64GB	8GB~16GB
Operating Temperature	-40°C~85°C	0°C~70°C
DRAM Cache	●	●
Power Loss Protection (PLP)	●	-
SLC Mode	-	●
Corner Bond	●	●
30μ" PCB Gold Finger	●	●
Performance (Sequential R/W*)	335/109 MB/s	300/150 MB/s
Endurance (TBW*)	180 TB	260 TB
Reliability (MTBF*)	2,500,000 hours	3,000,000 hours
DWPD*	2 (3 years)	15.2 (3 years)
Form Factor	2242-D5-B-M	2242-D2-B-M
Dimensions	42 x 22 x 3.88 mm	42 x 22 x 3.58 mm
Ordering Information	TS32GMTS400P TS64GMTS400P	TS8GMTS462K TS16GMTS462K

*Value varies by capacity, user hardware, system configuration, and calculation method.

SATA III 2.5"

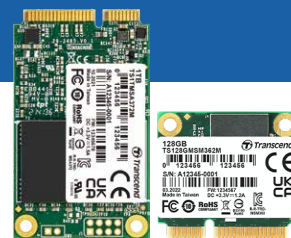


Model	SSD422K	SSD420K
Interface	SATA III 6Gb/s	
Capacity	32GB~1TB	16GB~1TB
Operating Temperature	0°C~70°C	
DRAM Cache	●	●
Performance (Sequential R/W*)	550/460 MB/s	530/470 MB/s
Endurance (TBW*)	2,940 TB	
Reliability (MTBF*)	2,000,000 hours	
DWPD*	2.6 (3 years)	
Dimensions	100.45 x 69.85 x 6.8 mm	
Ordering Information	TS32GSSD422K ⋮ TS1TSSD422K	TS16GSSD420K ⋮ TS1TSSD420K

Model	SSD510K
Interface	SATA III 6Gb/s
Capacity	16GB~128GB
Operating Temperature	0°C~70°C
DRAM Cache	●
Power Loss Protection (PLP)	-
SLC Mode	●
Performance (Sequential R/W*)	530/440 MB/s
Endurance (TBW*)	2,840 TB
Reliability (MTBF*)	1,500,000 hours
DWPD*	15.2 (3 years)
Dimensions	100.45 x 69.85 x 6.8 mm
Ordering Information	TS16GSSD510K ⋮ TS128GSSD510K

*Value varies by capacity, user hardware, system configuration, and calculation method.

SATA III mSATA/mSATA mini



Model	MSA380M	MSA372M	MSM362M
Interface		SATA III 6Gb/s	
Capacity	16GB~256GB	16GB~1TB	16GB~128GB
Operating Temperature		0°C~70°C	
DRAM Cache	●	●	-
Corner Bond	●	●	●
30μ" PCB Gold Finger	●	●	●
Performance (Sequential R/W*)	550/420 MB/s	550/450 MB/s	520/220 MB/s
Endurance (TBW*)	740 TB	2,360 TB	168 TB
Reliability (MTBF*)		2,500,000 hours	
DWPD*	2.6 (3 years)	2.6 (3 years)	1.19 (3 years)
Form Factor	MO-300A	MO-300A	MO-300B
Dimensions	50.8 x 29.85 x 4.85 mm	50.8 x 29.85 x 4.85 mm	26.8 x 29.85 x 3.85 mm
Ordering Information	TS16GMSA380M ⋮ TS256GMSA380M	TS16GMSA372M ⋮ TS1TMSA372M	TS16GMSA372M ⋮ TS1TMSA372M

SATA III Half-Slim

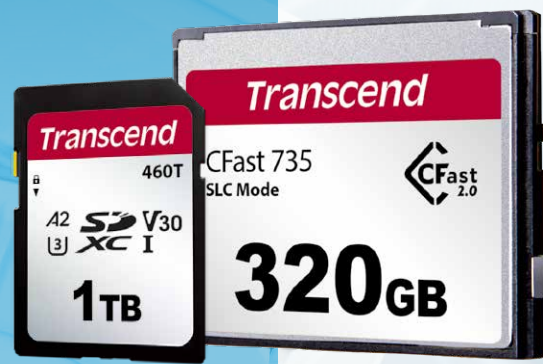


Model	HSD372M
Interface	SATA III 6Gb/s
Capacity	16GB~128GB
Operating Temperature	0°C~70°C
DRAM Cache	●
Corner Bond	●
30μ" PCB Gold Finger	-
Performance (Sequential R/W*)	530/200 MB/s
Endurance (TBW*)	360 TB
Reliability (MTBF*)	2,500,000 hours
DWPD*	2.6 (3 years)
Form Factor	MO-297
Dimensions	54 x 39.8 x 4 mm
Ordering Information	TS16GHSD372M ⋮ TS128GHSD372M

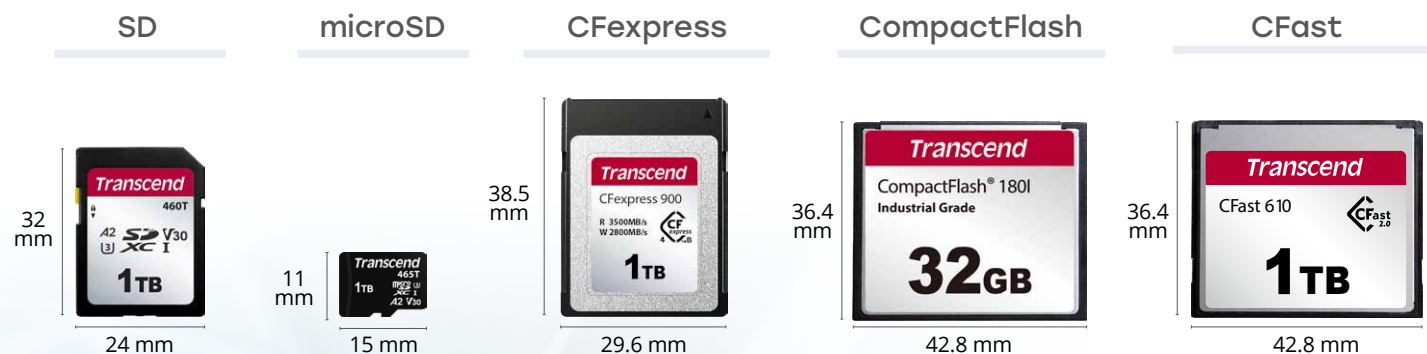
*Value varies by capacity, user hardware, system configuration, and calculation method.

Memory Cards

Transcend's memory cards combine the advantages of high performance and exceptional endurance, making them ideal for demanding industrial applications. Our memory card series includes SD, microSD, CFexpress, CompactFlash, and CFast cards.



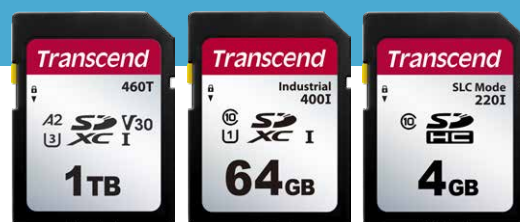
Memory Cards



Product Line

Form Factor	Model	Flash Type	Capacity	Operating Temperature
SD	SDC460T / SDC460I	112-layer 3D TLC	64GB~1TB	-25°C~85°C / -40°C~85°C
	SDC240I	112-layer 3D TLC (SLC Mode)	20GB~320GB	-40°C~85°C
	SDC410M	MLC	2GB~32GB	-25°C~85°C
	SDC400I		8GB~64GB	-40°C~85°C
	SDC220I	MLC (SLC Mode)	128MB~4GB	-40°C~85°C
microSD	USD465T / USD465I	162-layer 3D TLC	256GB~1TB	-25°C~85°C / -40°C~85°C
	USD460T / USD460I	112-layer 3D TLC	64GB~512GB	-25°C~85°C / -40°C~85°C
	USD240I	112-layer 3D TLC (SLC Mode)	20GB~160GB	-40°C~85°C
	USD410M	MLC	2GB~32GB	-25°C~85°C
	USD400I		8GB~64GB	-40°C~85°C
	USD220I	MLC (SLC Mode)	2GB~16GB	-40°C~85°C
CFexpress	CFE900	112-layer 3D TLC	256GB~1TB	-10°C~70°C
	CFE860	112-layer 3D TLC (SLC Mode)	80GB~320GB	-10°C~70°C
CompactFlash	CF170	MLC	8GB~64GB	-25°C~85°C
	CF180 / CF180I	MLC (SLC Mode)	128MB~32GB	-25°C~85°C / -40°C~85°C
Cfast	CFX610 / CFX610I	112-layer 3D TLC	64GB~1TB	-5°C~70°C / -40°C~85°C
	CFX735 / CFX735I	112-layer 3D TLC (SLC Mode)	20GB~320GB	-5°C~70°C / -40°C~85°C
	CFX730 / CFX730I	112-layer 3D TLC (SLC Mode)	20GB~320GB	-5°C~70°C / -40°C~85°C
	CFX602 / CFX602I	MLC	8GB~256GB	-5°C~70°C / -40°C~85°C
	CFX722I	MLC (SLC Mode)	4GB~128GB	-40°C~85°C

SD Cards



Model	SDC460T	SDC460I	SDC240I
Flash	112-layer 3D TLC	112-layer 3D TLC	112-layer 3D TLC (SLC Mode)
Capacity	64GB~1TB	64GB~1TB	20GB~320GB
Operating Temperature	-25°C~85°C	-40°C~85°C	-40°C~85°C
Performance (Sequential R/W*)	100/85 MB/s	100/85 MB/s	100/85 MB/s
Endurance (TBW*)	2,660 TB	2,660 TB	27,048 TB
Standard	SD 6.1/5.1	SD 6.1/5.1	SD 6.1
Connector	9 pin		
Dimensions	24 x 32 x 2.1 mm		
Ordering Information	TS64GSDC460T ⋮ TS1TSDC460T	TS64GSDC460I ⋮ TS1TSDC460I	TS20GSDC240I ⋮ TS320GSDC240I

Model	SDC410M	SDC400I	SDC220I
Flash	MLC	MLC	MLC (SLC Mode)
Capacity	2GB~32GB	8GB~64GB	128MB~4GB
Operating Temperature	-25°C~85°C	-40°C~85°C	-40°C~85°C
Performance (Sequential R/W*)	95/30 MB/s	75/33 MB/s	22/20 MB/s
Endurance (TBW*)	86 TB	128 TB	66 TB
Standard	SD 5.1/3.0	SD 3.01	SD 3.01/2.0
Connector	9 pin		
Dimensions	24 x 32 x 2.1 mm		
Ordering Information	TS2GSDC410M ⋮ TS32GSDC410M	TS8GSDC400I ⋮ TS64GSDC400I	TS128MSDC220I ⋮ TS4GSDC220I

R/W: Read/Write
TBW: Terabytes Written

*Value varies by capacity, user hardware, system configuration, and calculation method.

microSD Cards

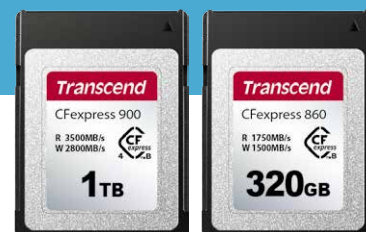


Model	USD465T	USD465I	USD460T	USD460I
Flash	162-layer 3D TLC	162-layer 3D TLC	112-layer 3D TLC	112-layer 3D TLC
Capacity	256GB~1TB	256GB~1TB	64GB~512GB	64GB~512GB
Operating Temperature	-25°C~85°C	-40°C~85°C	-25°C~85°C	-40°C~85°C
Performance (Sequential R/W*)	100/80 MB/s			
Endurance (TBW*)	2,660 TB	2,660 TB	1,343 TB	1,343 TB
Standard	SD 6.1	SD 6.1	SD 6.1/5.1	SD 6.1/5.1
Connector	8 pin			
Dimensions	11 x 15 x 1 mm			
Ordering Information	TS256GUSD465T ⋮ TS1TUSD465T	TS256GUSD465I ⋮ TS1TUSD465I	TS64GUSD460T ⋮ TS512GUSD460T	TS64GUSD460I ⋮ TS512GUSD460I

Model	USD240I	USD410M	USD400I	USD220I
Flash	112-layer 3D TLC (SLC Mode)	MLC	MLC	MLC (SLC Mode)
Capacity	20GB~160GB	2GB~32GB	8GB~64GB	2GB~16GB
Operating Temperature	-40°C~85°C	-25°C~85°C	-40°C~85°C	-40°C~85°C
Performance (Sequential R/W*)	100/80 MB/s	95/50 MB/s	95/70 MB/s	80/45 MB/s
Endurance (TBW*)	13,526 TB	86 TB	125 TB	300 TB
Standard	SD 6.1	SD 5.1/3.0	SD 3.01	SD 3.01/2.0
Connector	8 pin			
Dimensions	11 x 15 x 1 mm			
Ordering Information	TS20GUSD240I ⋮ TS160GUSD240I	TS2GUSD410M ⋮ TS32GUSD410M	TS8GUSD400I ⋮ TS64GUSD400I	TS2GUSD220I ⋮ TS16GUSD220I

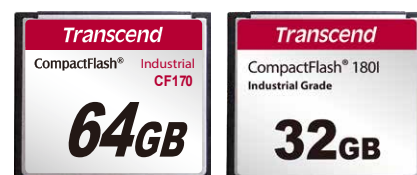
*Value varies by capacity, user hardware, system configuration, and calculation method.

CFexpress Cards



Model	CFE900	CFE860
Flash	112-layer 3D TLC	112-layer 3D TLC (SLC Mode)
Capacity	256GB~1TB	80GB~320GB
Operating Temperature	-10°C~70°C	
Performance (Sequential R/W*)	3,500/2,800 MB/s	1,750/1,500 MB/s
Endurance (TBW*)	2,240 TB	11,500 TB
Standard	CFexpress Type B	
Dimensions	38.5 x 29.6 x 3.8 mm	
Ordering Information	TS256GCFE900 ⋮ TS1TCE900	TS80GCFE860 ⋮ TS320GCFE860

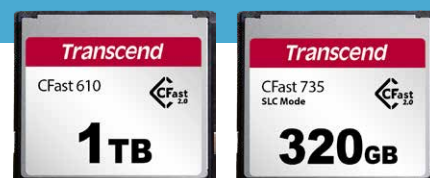
CompactFlash Cards



Model	CF170	CF180	CF180I
Flash	MLC	MLC (SLC Mode)	MLC (SLC Mode)
Capacity	8GB~64GB	128MB~32GB	128MB~32GB
Operating Temperature	-25°C~85°C	-25°C~85°C	-40°C~85°C
Performance (Sequential R/W*)	87/67 MB/s	85/75 MB/s	85/75 MB/s
Endurance (TBW*)	85 TB	420 TB	420 TB
Standard	True IDE		
Connector	50 pin		
Dimensions	42.8 x 36.4 x 3.3 mm		
Ordering Information	TS8GCF170 ⋮ TS64GCF170	TS128MCF180 ⋮ TS32GCF180	TS128MCF180I ⋮ TS32GCF180I

*Value varies by capacity, user hardware, system configuration, and calculation method.

CFast Cards



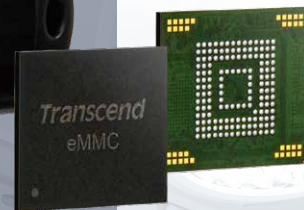
Model	CFX610	CFX610I	CFX735	CFX735I
Flash	112-layer 3D TLC	112-layer 3D TLC	112-layer 3D TLC (SLC Mode)	112-layer 3D TLC (SLC Mode)
Capacity	64GB~1TB	64GB~1TB	20GB~320GB	20GB~320GB
Operating Temperature	-5°C~70°C	-40°C~85°C	-5°C~70°C	-40°C~85°C
Performance (Sequential R/W*)	550/520 MB/s	550/520 MB/s	550/520 MB/s	550/520 MB/s
Endurance (TBW*)	1,580 TB	1,580 TB	18,000 TB	18,000 TB
Standard	SATA III 6Gb/s			
Connector	24 pin			
Dimensions	42.8 x 36.4 x 3.3 mm			
Ordering Information	TS64GCFX610 ⋮ TS1TCFX610	TS64GCFX610I ⋮ TS1TCFX610I	TS20GCFX735 ⋮ TS320GCFX735	TS20GCFX735I ⋮ TS320GCFX735I

Model	CFX730	CFX730I	CFX602	CFX602I	CFX722I
Flash	112-layer 3D TLC (SLC Mode)	112-layer 3D TLC (SLC Mode)	MLC	MLC	MLC (SLC Mode)
Capacity	20GB~320GB	20GB~320GB	8GB~256GB	8GB~256GB	4GB~128GB
Operating Temperature	-5°C~70°C	-40°C~85°C	-5°C~70°C	-40°C~85°C	-40°C~85°C
Performance (Sequential R/W*)	550/520 MB/s	550/520 MB/s	510/340 MB/s	510/340 MB/s	540/425 MB/s
Endurance (TBW*)	18,000 TB	18,000 TB	360 TB	360 TB	1,800 TB
Standard	SATA III 6Gb/s				
Connector	24 pin				
Dimensions	42.8 x 36.4 x 3.3 mm				
Ordering Information	TS20GCFX730 ⋮ TS320GCFX730	TS20GCFX730I ⋮ TS320GCFX730I	TS8GCFX602 ⋮ TS256GCFX602	TS8GCFX602I ⋮ TS256GCFX602I	TS4GCFX722I ⋮ TS128GCFX722I

*Value varies by capacity, user hardware, system configuration, and calculation method.

Flash Solutions

Transcend's flash solutions include USB flash drives, USB flash modules, and eMMC. Our USB flash drives feature a compact and portable design, ideal for applications where reliability and data retention are crucial. Our flash modules offer a simple solution for integrating SSD storage technology into legacy PC- and laptop-based systems.

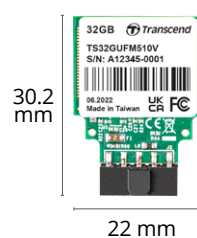
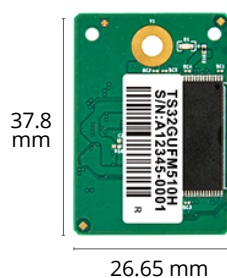


Flash Solutions

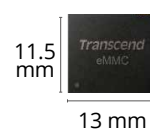
USB Flash Drive



USB Flash Module



eMMC



Product Line

Form Factor	Model	Flash Type	Capacity	Operating Temperature
USB Flash Drives	JF282T	112-layer 3D TLC	64GB~512GB	0°C~70°C
	JF180I	112-layer 3D TLC (SLC Mode)	16GB	-40°C~85°C
	JF270M	MLC	8GB~32GB	0°C~70°C
USB Flash Modules	UFM510H	MLC	2GB~32GB	0°C~70°C
	UFM510V		8GB~32GB	0°C~70°C
eMMC	EMC410T	96-layer 3D TLC	32GB	-25°C~85°C
	EMC310M	MLC	16GB	-25°C~85°C

USB Flash Drives



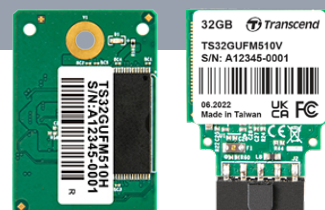
Model	JF282T	JF180I
Flash	112-layer 3D TLC	112-layer 3D TLC (SLC Mode)
Capacity	64GB~512GB	16GB
Operating Temperature	0°C~70°C	-40°C~85°C
Performance (Sequential R/W*)	255/115 MB/s	155/135 MB/s
Interface	USB 3.1 Gen 1	USB 3.0
Connector	USB Type-A	
Dimensions	61.5 x 18.6 x 8.7 mm	
Ordering Information	TS64GJF282T ⋮ TS512GJF282T	TS16GJF180I

Model	JF270M
Flash	MLC
Capacity	8GB~32GB
Operating Temperature	0°C~70°C
Performance (Sequential R/W*)	160/40 MB/s
Interface	USB 3.1 Gen 1
Connector	USB Type-A
Dimensions	61.5 x 18.6 x 8.7 mm
Ordering Information	TS8GJF270M ⋮ TS32GJF270M

R/W: Read/Write

*Value varies by capacity, user hardware, system configuration, and calculation method.

USB Flash Modules



Model	UFM510H	UFM510V
Flash	MLC	
Capacity	2GB~32GB	8GB~32GB
Operating Temperature	0°C~70°C	
Performance (Sequential R/W*)	42/21 MB/s	
Interface	USB 2.0	
Connector	10 pin USB port	
Dimensions	37.8 x 26.65 x 5.81 mm	30.2 x 22 x 6 mm
Ordering Information	TS2GUFM510H ⋮ TS32GUFM510H	TS8GUFM510V ⋮ TS32GUFM510V

eMMC



Model	EMC410T	EMC310M
Flash	96-layer 3D TLC	MLC
Capacity	32GB	16GB
Operating Temperature	-25°C~85°C	
Performance (Sequential R/W*)	290/155 MB/s	280/100 MB/s
Form Factor	e.MMC5.1 (BGA-153)	
Dimensions	11.5 x 13 x 1 mm	
Bus Speed Mode	HS400	
Bus Width Supported	x1, x4, x8	
Clock Frequency Supported	0MHz~200MHz	
Ordering Information	TS32GEMC410T	TS16GEMC310M

*Value varies by capacity, user hardware, system configuration, and calculation method.

World-Class Manufacturing Base



High-Speed SMT Lines

Transcend operates 15 high-speed Surface Mount Technology (SMT) production lines in its Taipei factory. Highly automated facilities are widely implemented to guarantee consistent quality, high capacity, and to minimize human errors.

Proven Quality

From product development to mass production, Transcend follows rigorous procedures to ensure products deliver advanced reliability and stability. We conduct environmental testing in walk-in chambers where different temperatures and humidity can be simulated. We also carry out full-scale burn-in tests to identify defective components. Certified by ISO 9001, ISO 14001, and QC080000 certifications, we operate our manufacturing process under internationally-acknowledged standards.

Quality Control

Transcend adopts a stringent quality control process in production. The process includes four stages: Incoming Quality Control (IQC), In-Process Quality Control (IPQC), Final Quality Control (FQC), and Outgoing Quality Control (OQC). The entire QC process covers material checking at the very beginning, through to final inspection before the products are shipped to our customers.

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