

# Apacer

Apacer Industrial SSD & DRAM Solutions

## Access Endless Possibilities for a Sustainable Tomorrow

Brochure





## In a World

## Where Data Drives Every Decision,

Apacer leads the charge in technology innovation, providing state-of-the-art SSD and DRAM solutions tailored to both consumer and industrial needs. From purpose-driven applications to immersive entertainment, we ensure seamless data storage, fast processing, and unmatched reliability for a wide spectrum of use cases.

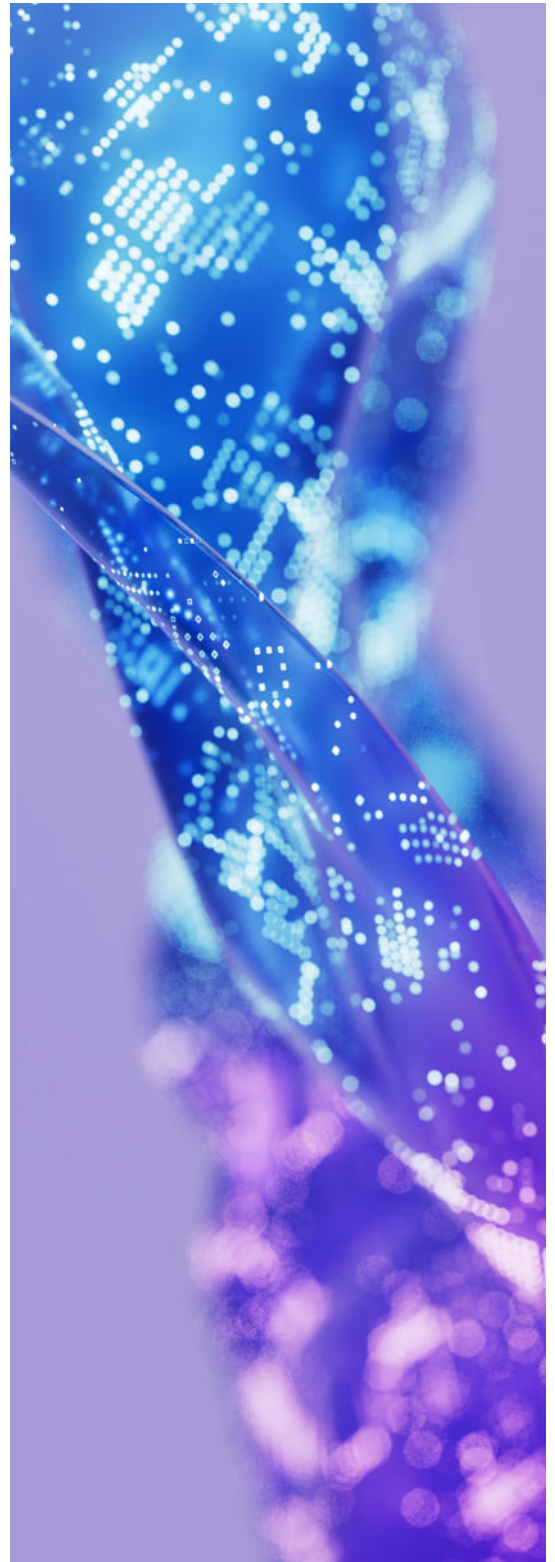
At Apacer, we go beyond delivering products — we partner with you to solve challenges, optimize performance, and future-proof your operations. With our commitment to excellence and a focus on empowering businesses and individuals, we help you unlock the full potential of your data.

**Access the Best — Where Reliability Meets Innovation.**

**“At Apacer, innovation is at the heart of everything we do. We're unlocking the full potential of data, no matter where it resides, and delivering transformative solutions that drive business growth and enrich lives worldwide.”**

**Gibson Chen**

President of Apacer



## Tailored Storage Solutions for Every Industry Need

In today's digital era, industries face growing challenges in managing data, ensuring security, and maintaining efficiency.

Apacer delivers reliable, high-performance storage solutions to address these obstacles, empowering businesses to streamline operations, boost productivity, and drive digital transformation.



### Retail Devices

Optimize POS systems with durable storage to streamline transactions and enhance service.



### Factory Automation

Increase productivity and uptime with high-performance storage.



### Rugged Systems

Built to endure extreme conditions, ensuring reliable performance for critical applications.



### Server & Networking

Scalable solutions to accelerate connectivity and enhance infrastructure.



### Transportation

Ensure smoother transportation systems and operational efficiency with real-time data processing.



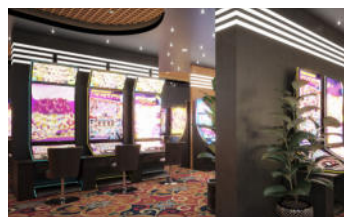
### Healthcare

Reliable solutions ensuring data integrity and seamless operation of healthcare devices.



### Surveillance

Ensure reliable 24/7 recording with superior endurance for uninterrupted surveillance.



### Casino Gaming

Secure, high-endurance storage for seamless gaming and sensitive data protection.



## Purpose-built SSD & DRAM for Industrial Applications

Apacer offers innovative storage solutions tailored to meet the unique demands of industrial applications. Designed for reliability, endurance, and performance, our purpose-built SSD and DRAM ensure seamless operation in challenging environments, from heavy workloads to mission-critical tasks, driving business success.



## Featured SSD Technologies for Industrial Applications

### Data Integrity



#### CoreRescue Series

##### Seamless System Recovery Made Simple

Unexpected system crashes and data corruption can bring business operations to a halt. Apacer's CoreRescue series provides a one-step recovery process with 4 versatile options:

1. **CoreRescue Button** for instant recovery
2. **CoreRescue USB** for USB self recovery
3. **CoreRescue OOB** for remote out-of-band management
4. **CoreRescue ASR** for automated system recovery



#### CoreSnapshot Series

##### Instant Recovery, Minimal Downtime

Apacer's CoreSnapshot enables one-second recovery from system failures or data corruption through intelligent SSD firmware, ensuring quick restoration and minimal downtime.

### Power Stability



#### DataDefender™ Plus

##### Real-Time Voltage Monitoring

Apacer DataDefender™ Plus enables real-time monitoring of power voltage and recording voltage instability counts in the S.M.A.R.T. log.



#### CorePower

##### Ensuring Data Stability During Power Failures

CorePower integrates a backup power supply to ensure stable data transmission, minimize data loss, and ensure uninterrupted operations during unexpected power outages.



## Security



### TCG Opal 2.0

#### Safeguard Your Data with Built-in Encryption

Apacer's TCG Opal 2.0 compliant self-encrypting drives (SEDs) protect sensitive data with built-in AES encryption, ensuring secure storage without impacting system performance.



### Write Protect

#### Shield Your SSD from Unauthorized Changes

Apacer's Write Protect technology restricts SSDs to read-only mode, ensuring no unauthorized data is written and safeguarding internal data from tampering. It can be activated via hardware or software controls.

## Longevity



### SLC-liteX

#### Redefining Endurance with 100,000 P/E Cycles

Apacer's SLC-liteX technology delivers up to 100,000 P/E cycles, providing exceptional durability and reliability for long-term use.



### Over-Provisioning

#### Extending SSD Lifespan and Performance Stability

Over-provisioning reserves memory for garbage collection, wear-leveling, and bad block management, boosting SSD lifespan and ensuring stable performance.

## Value-added Software



### SSDWidget 2.0

#### Proactive SSD Health Management for Continuity

Apacer's SSDWidget 2.0 provides a user-friendly interface for real-time SSD health monitoring and workload analysis, preventing failures from excessive tasks in demanding environments.



### Out-of-Band Management (OOB)

#### Manage Systems Anytime, Anywhere

Apacer's Out-of-Band Management ensures remote system control, enabling monitoring, troubleshooting, and recovery—even during system crashes or attacks.





## Durability



### CoreGlacier™

#### Cool Your SSD for Peak Performance

Apacer's CoreGlacier™ enhances SSD cooling by efficiently transferring heat to a fluid medium, protecting NAND Flash components and preventing hardware damage or data corruption.



### Sidefill

#### Reinforce Connections for Durability

Apacer's Sidefill technology fortifies solder joint connections, making them more robust and resistant to vibrations while facilitating heat dissipation to prevent thermal damage.



### Wide-temperature

#### Reliable Operation in Extreme Environments

Apacer's Wide-temperature SSDs operate seamlessly in temperatures ranging from -40°C to 85°C, ensuring reliability in harsh and fluctuating conditions.



### Thermal Throttling

#### Ensure Performance Under Heat

Apacer's Thermal Throttling dynamically adjusts frequency to manage device temperature, sustaining performance and enhancing data reliability during overheating conditions.



### 30μ Gold Finger

#### Enhance Signal Integrity and Durability

Apacer equips memory modules with 30μ gold-plated gold fingers, improving data transmission reliability and resistance to environmental hazards.

Apacer supports customized firmware solutions for enhanced performance, security, and seamless integration.

## Featured DRAM Technologies for Industrial Applications



### Anti-sulfuration

#### Extend System Lifespan with Anti-sulfuration Technology

Apacer's world-first patented Anti-sulfuration memory modules use an exclusive alloy to replace standard silver electrodes, addressing corrosion issues and significantly enhancing system longevity.



### Underfill

#### Enhance Reliability Against Shock and Vibration

Apacer's Underfill technology strengthens solder joints between the solder balls and printed circuit boards, improving product reliability and resistance to thermal and mechanical shocks.



### Wide Temperature

#### Reliable Operation in Extreme Environments

Apacer's Wide-temperature memory modules operate seamlessly in temperatures ranging from -40°C ~ 85°C, ensuring reliability in harsh and fluctuating conditions.



### 30μ 30μ Gold Finger

#### Enhance Signal Integrity and Durability

Apacer equips memory modules with 30μ gold-plated gold fingers, improving data transmission reliability and resistance to environmental hazards.



### Extremely Rugged XR-DIMM

#### Boost Durability with Ruggedized Design

Apacer's Rugged XR-DIMM features a durable 300-pin connector and mounting holes, offering superior anti-vibration and anti-shock performance. Certified with RTCA DO-160G/MIL-STD-810G, it ensures enhanced reliability for mission-critical applications.



### Conformal Coating

#### Protect Against Dust and Liquid Damage

Apacer's Conformal Coating applies a protective film to printed circuit boards, safeguarding devices from dust ingress and liquid immersion, ensuring consistent performance in harsh environments.



### Fully Lead-free Resistor

#### Eco-friendly for Future Sustainability, No RoHS Exemptions Required

Apacer's world-first Fully Lead-free Resistor technology, surpassing RoHS standards without requiring exemptions. This technology is widely implemented in Apacer DDR5 memory modules, reducing environmental impact and setting a new benchmark for eco-friendly practices.

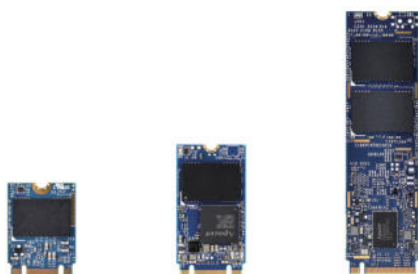




## PCIe

### Features

- **Superb Performance with Low Latency** - Enhance processing speed and reduce delays for better efficiency.
- **NVMe Specification Compliance** - Ensure smooth integration with existing systems.
- **Transmission Speeds Up to 7,130 MB/Sec** - Accelerate data transfer, eliminating bottlenecks.
- **Thermal Throttling Support** - Prevent overheating, ensuring stable performance under load.
- **End-to-End Data Protection** - Protect sensitive data with comprehensive security.



2230

2242

2280



CFexpress Card



2.5" SSD



PCIe BGA SSD

### Specification

- **M.2**
- **Capacity :** 2230-3D TLC : 60GB-1920GB; 2242-3D TLC : 240GB-3840GB ; 2280-3D TLC : 120GB-3840GB
- **Interface :** 2230/2242/2280-Compliant with PCIe Gen4 x4 interface
- **Others :**
  - Built-in LDPC ECC and S.M.A.R.T. SSDWidget
  - CoreGlacier™ Technology support
  - DataDefender™ and DataRAID™ support
  - AES 256 and Signed FW Anti-sulfuration (Optional) support
  - SLC-liteX and Commercial Extended Temp. (-25°C ~ 85°C) are available.

### Specification

- **CFexpress Card & 2.5" & BGA SSD**
- **Capacity :** CFexpress-3D TLC 60GB-1024GB ; 2.5"-3D TLC 960GB-16TB ; BGA SSD-3D TLC 60GB-960GB
- **Interface :**
  - CFexpress : compliant with PCIe Gen3 x2 interface/ Gen4 x2 interface
  - 2.5"/BGA SSD : compliant with PCIe Gen3 x4/ Gen4 x4 interface
- **Others :**
  - Built-in LDPC ECC and S.M.A.R.T. SSDWidget
  - Power Failure Management
  - TRIM, Wide-temperature and AES 256 support
  - Write Protect Switch (CFexpress only)
  - SLC-liteX is available



## SATA M.2

### Features

- **M.2 (NGSFF) Connector** - Compact size, high speed, and efficiency.
- **Global Wear-leveling and Block Management** - Ensure having lower erase counts to extend SSD lifespan.
- **Built-in ATA Secure Erase and S.M.A.R.T. Functions** - Restore and manage the drives.
- **TRIM Support** - Improves compatibility, endurance and performance.
- **Thermal Throttling (Optional)** - Ensure performance under heat.



2242

2280

### Specification

- **Capacity** : 2242-3D TLC 30GB-1024GB; SLC-liteX : 10GB-320GB; 2280-3D TLC 30GB-2048GB; SLC-liteX : 10GB-640GB
- **Interface** : SATA 3 (6 Gbit/s) interface
- **Others** :
  - LDPC ECC, S.M.A.R.T. and SSDWidget support
  - DEVSLP, Thermal Sensor, DataDefender™ and DataRAID™ support
  - AES 256 and End-to-End Data Protection support
  - TCG Opal 2.0, CorePower and Anti-sulfuration support (Optional)
  - SLC/MLC/SLC-liteX / Commercial Extended Temp. (-25°C ~ 85°C) are available

## SATA MO-297/MO-300

### Features

- **JEDEC MO-297/MO-300 Standard Compliance** - Ensure smooth integration with existing systems.
- **Global Wear-leveling and Block Management** - Ensure having lower erase counts to extend SSD lifespan.
- **Built-in ATA Secure Erase and S.M.A.R.T. Functions** - Restore and manage the drives.
- **TRIM Support** - Improves compatibility, endurance, and performance.



MO-300

MO-300B

MO-297

### Specification

- **Capacity** : MO-300-3D TLC 30GB-2048GB; MO-300B-3D TLC 30GB-960GB; MO-297-3D TLC 120GB-2048GB
- **Interface** : SATA 3 (6 Gbit/s) interface
- **Others** :
  - LDPC ECC, S.M.A.R.T. and SSDWidget support
  - DEVSLP, Thermal Sensor, DataDefender™ and DataRAID™ support
  - AES 256 and End-to-End Data Protection support
  - TCG Opal 2.0 support (Optional)
  - SLC/MLC/SLC-liteX are available



## SATA 7-pin Module

### Features

- **7-Pin SATA Connector** - Ensure smooth integration with existing systems.
- **Write Protect by Hardware Switch (Optional)** - Shield your SSD from unauthorized changes.
- **TRIM Support** - Improves compatibility, endurance and performance.
- **Built-in ATA Secure Erase and S.M.A.R.T. Functions** - Restore and manage the drives.
- **Global Wear-leveling and Block Management** - Ensure having lower erase counts to extend SSD lifespan.
- **Unique Hook Design** - Prevent cable from falling off or loosening.
- **Thermal Throttling (Optional)** - Ensure performance under heat.

### Specification



7P/180D LPH

- **Capacity :** 7Pin-3D TLC 30GB-480GB
- **Others :**
  - LDPC ECC, S.M.A.R.T. and SSDWidget support
  - Thermal Sensor and DataRAID™ support
  - AES 256, End-to-End Data Protection and TCG Opal 2.0 (Optional) support
  - Power Failure Management and Multi-PowerPath Technology support
  - SLC/MLC/SLC-liteX are available

## Industrial CFast Card

### Features

- **CFast 2.0 Specification Compliance** - Ensure smooth integration with existing systems.
- **Global Wear-leveling and Block Management** - Ensure having lower erase counts to extend SSD lifespan.
- **Built-in ATA Secure Erase and S.M.A.R.T. Functions** - Restore and manage the drives.
- **Intelligent Power Failure Recovery** - Ensure data integrity
- **TRIM Support** - Improves compatibility, endurance and performance.
- **DEVSLP Support** - Reduce power consumption.
- **Thermal Throttling (Optional)** - Ensure performance under heat.

### Specification



- **Capacity :** 3D TLC 30GB-960GB; SLC-liteX 10GB-320GB
- **Others :**
  - LDPC ECC, S.M.A.R.T. and SSDWidget support
  - Thermal Sensor, DataDefender™ and DataRAID™ support
  - AES 256 and End-to-End Data Protection support
  - Write Protect and CorePower support (Optional)
  - SLC/MLC/SLC-lite are available



## Industrial CF Card

### Features

- **Global Wear-leveling Technology** - Ensure having lower erase counts to extend SSD lifespan.
- **Built-in ATA Secure Erase and S.M.A.R.T. Functions** - Restore and manage the drives.
- **Intelligent Power Failure Recovery** - Ensure data integrity
- **Wide-temperature Support** - Ensure reliability under extreme temperatures.
- **Lock Switch Design for Write-protection (Optional)** - Shield your SSD from unauthorized changes.



## Industrial SD & microSD Card

### Features

- **SD 3.0 and SD 6.0 Specification Compliance** - Ensure smooth integration with existing systems.
- **S.M.A.R.T. Support** - Self-monitoring System to monitor SSD Status.
- **Global Wear-leveling and Block Management** - Ensure having lower erase counts to extend SSD lifespan.
- **Low Power Consumption (Optional)** - Save more power for your device.
- **SD Mode and SPI Mode Support** - Multi-mode for diverse applications.



SD Card



microSD Card

### Specification

- **Capacity :** SLC 256MB-64GB; MLC 8GB-128GB; SLC-liteX 4GB-32GB
- **Others :**
  - Built-in ATA Secure Erase and S.M.A.R.T. functions
  - Intelligent Power Failure Recovery support
  - Wide-temperature support
  - Write Protect Switch (Optional)
  - SLC-lite is available

### Specification

- **Capacity :**
  - **SD Card**-SLC 256MB-32GB; MLC 8GB-128GB
  - **microSD Card**-SLC 256MB-8GB; MLC 8GB-128GB; 3D TLC 64GB-512GB
- **Others :**
  - Page Mapping support
  - Wide-temperature support
  - Intelligent Power Failure Recovery support
  - SLC-lite/SLC-liteX are available



## Industrial USB Drive

### Features

- **ECC Engine** - Ensure reliable data integrity with error detection and correction.
- **Power Saving Implemented** - Reduce energy consumption for longer-lasting performance.
- **Advanced Wear-leveling Algorithms** - Increase drive lifespan by preventing early wear.
- **Optional Wide-temperature -40°C ~ 85°C** - Operate reliably in extreme temperatures.
- **TLC and SLC-liteX Products Support Page Mapping** - Improve data management and storage efficiency.
- **Lock Switch Design for Write-protection (UH110-UFD4 Only)** - Prevent unauthorized data modifications.
- **Air 15KV ESD Protection (UV110-UFD5)** - Safeguard the device from electrostatic discharge.
- **USB Type-C Industry-grade Product** - Ensure fast and stable connectivity with USB Type-C.
- **High Performance (UT130-UFD9)** - Support USB 3.2 Gen2 transfer rates up to 970 MB/s.

### Specification



Metal

Plastic

- **Capacity** : SLC 256MB-32GB; MLC 8GB-128GB; **3D TLC** 16GB-1TB; SLC-liteX 4GB-64GB
- **Others** :
  - Flash Bad-block Management support
  - S.M.A.R.T. support
  - Power Failure Management support
  - Smart Read Refresh™

## Industrial USB Disk Module

### Features

- **Linux/Windows Support** - Compatible with major operating systems.
- **Shock Resistance, Anti-vibration and Low Power Consumption** - Ensure system stability.
- **TLC and SLC-liteX Products Support Page Mapping** - Improve data management and storage efficiency.
- **Lock Switch Design for Write-protection (Optional)** - Prevent unauthorized data modifications.

### Specification



SLC/MLC

TLC

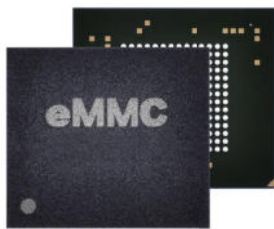
- **Capacity** : SLC 128MB-32GB; MLC 8GB-128GB; **3D TLC** 16GB-256GB; SLC-liteX 8GB-64GB
- **Others** :
  - Compliant with standard USB specifications
  - Wide-temperature support
  - Built-in S.M.A.R.T. function
  - Pitch size 2.00 mm and 2.54 mm support



## eMMC

### Features

- **Embedded Design Flexibility** - Provide reliable SSD for various applications.
- **Low Power Consumption** - Save more power for your device.
- **Extreme Temperature Adaptability** - Reliable performance under temperature changes.



eMMC

### Specification

- **Grade** : Industrial/Commercial
- **Form Factor** : 153 Ball FBGA
- **Interface** : eMMC5.1 HS400
- **Capacity** :
  - Industrial : **3D TLC** 32GB-128GB; **MLC** 8GB-16GB; **SLC-liteX** 16GB-32GB
  - Commercial : **3D TLC** 16GB-128GB; **MLC** 8GB



We drive customer success with cutting-edge storage solutions and end-to-end customization across software, firmware, and hardware.





## Enterprise

### Features

- **Adopts the Latest eTLC/TLC 3D NAND Flash Memory Technology** - Improve data management and storage efficiency.
- **Optimized QoS** - Improve latency and stability.
- **CoreGlacier™ Support** - Cool your SSD for peak performance.
- **DataDefender™ Support** - Protect data from power outages with real-time monitoring.
- **End-to-End Data Protection** - Protect sensitive data with comprehensive security.
- **AES 256-bit Hardware Encryption and Signed Firmware Technology Support** - Ensure data security.
- **Advanced Power Protection Technology Support** - Ensure data integrity under abnormal power supply conditions.

### Specification



U.3/2.5"



M.2 2280



E1.S

- **Form Factor** : PCIe U.3/M.2 2280/M.2 22110/E1.S/E3.S; **SATA** 2.5"/M.2 2280
- **Capacity** :
  - PCIe : **U.3** : eTLC 1.6TB-30.72TB; **M.2 2280** : BiCS5 TLC/eTLC 480GB-3.84TB; **M.2 22110** : BiCS5 eTLC 480GB-3.84TB; **E1.S** : BiCS5 eTLC 480GB-3.84TB; **E3.S** : TLC 1.6TB-15.36TB
  - SATA : **2.5"** : BiCS5 TLC 240GB-7.68TB; **M.2 2280** : BiCS5 TLC/eTLC 240GB-7.68TB;
- **Interface** : PCIe Gen5 x4/SATA 3.2 (6Gb/s) interface
- **Others** :
  - CorePower support
  - TCG Opal and Namespace support (Optional)

## WORM Drive/Card

### Features

- **Write Once Read Many** - Prevent important data from being deleted, modified or overwritten.
- **100 Years Data Retention** - Ensure data integrity with non-rewritable storage function.
- **S.M.A.R.T. Support** - Self-monitoring system to monitor SSD status.

### Specification



USB drive



SD



microSD

- **Capacity** :
  - USB drive** : MLC 8GB-32GB; **SD** : MLC 8GB-128GB; **microSD** : MLC 8GB-128GB
- **Interface** : USB2.0 Type-A/SD 6.1 interface
- **Others** :
  - Inherent characteristics : file system support : FAT32 only and files must be written "one by one" and sequentially



## FIPS Series

### Features

- **AES 256-bit Hardware Encryption and Signed Firmware Technology Support** - Ensure data security.
- **TCG Opal 2.0 Support** - Safeguard your data with built-in encryption.
- **Smart Read Refresh™** - Avoid read disturb errors from occurring.
- **S.M.A.R.T. Support** - Self-monitoring system to monitor SSD status.
- **FIPS 140-2 Validated** - Ensure data security.

### Specification



2.5"



M.2 2280

mSATA  
(MO-300)HalfSlim  
(MO-297)

- **Form Factor** : 2.5"/M.2 2280/mSATA (MO-300)/HalfSlim (MO-297)
- **Capacity** :  
2.5" : 3D TLC 240-1920GB; **M.2 2280** : 3D TLC 240-1920GB;  
mSATA : 3D TLC 240GB-1920GB; **HalfSlim** : 3D TLC 240GB-960GB
- **Interface** : SATA 3.2 (6Gb/s) interface

## Rugged Series

### Features

- **MIL Erase Support** - Ensure data is deeply and thoroughly scrubbed from the drive for greater protection.
- **TCG Opal 2.0 Support** - Safeguard your data with built-in encryption.
- **Thermal Throttling (Optional)** - Ensure performance under heat.
- **Instant Keychange™ Support** - Provide advanced data protection.
- **R-SATA for 2.5" Support (Optional)** - Ruggedized design for SATA connector.

### Specification



2.5"



M.2 2280

mSATA  
(MO-300)

- **Form Factor** : 2.5"/M.2 2280/mSATA (MO-300)
- **Capacity** :  
2.5" : 3D TLC 120-1920GB; **PCIe M.2 2280** : 3D TLC Single-sided M key 120GB/  
Double-sided M key 240/480/960/1920GB; **SATA M.2 2280** : 3D TLC 120GB-  
1920GB; mSATA : 3D TLC 240GB-1920GB
- **Interface** : PCIe Gen3 x4/SATA 3.2 (6Gb/s) interface
- **Others** :
  - Conformal Coating, Sidefill, and 30μ Gold Finger support
  - Physical Destruction support (Optional)



## CoreSnapshot Series

### Features

- **CoreSnapshot Technology Support** - Instant recovery, minimal downtime
- **Global Wear-leveling and Block Management** - Ensure having lower erase counts to extend SSD lifespan.
- **Built-in ATA Secure Erase and S.M.A.R.T. Functions** - Restore and manage the drives
- **TRIM Support** - Improves compatibility, endurance and performance.
- **Smart Read Refresh™** - Avoid read disturb errors from occurring.

### Specification



2.5"



M.2 2280



M.2 2242

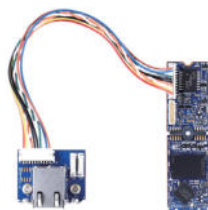
- **Form Factor** : PCIe M.2 2280/M.2 2242; SATA 2.5"/M.2 2280/M.2 2242
- **Capacity** : **2.5"** : 3D TLC 60GB-960GB; **M.2 2280** : 3D TLC 60GB-960GB; **M.2 2242** : 3D TLC 60GB-480GB
- **Interface** : PCIe Gen4 x4/SATA 3.2 (6GB/s) interface
- **Others** :
  - Low-Density Parity-Check (LDPC) Code support
  - DEVSLP, DataDefender™ and Hyper Cache Technology support
  - Flash Translation Layer : Page Mapping
  - Over-provisioning

## Transformed Series

### Features

- **Out-of-Band Management (OOB)** - Manage systems anytime, anywhere.
- **CoreSnapshot Technology Support (Optional)** - Instant recovery, minimal downtime.
- **Global Wear-leveling and Block Management** - Ensure having lower erase counts to extend SSD lifespan.
- **Built-in ATA Secure Erase and S.M.A.R.T. Functions** - Restore and manage the drives.
- **TRIM Support** - Improves compatibility, endurance and performance.
- **Smart Read Refresh™** - Avoid read disturb errors from occurring.

### Specification



SV25T-M280 with OOB Module

- **Form Factor** : M.2 2280
- **Capacity** : 60GB-960GB
- **Interface** : SATA 3.2 (6Gb/s) interface
- **Others** :
  - Low-Density Parity-Check (LDPC) Code support
  - DEVSLP, DataDefender™ and Hyper Cache Technology support
  - Flash Translation Layer: Page Mapping
  - Over-provisioning



## Embedded

### Features

- **JEDEC-Compliant Design** - Ensures seamless compatibility with a wide range of systems.
- **Original High-Quality DDR5 DRAM ICs** - Provides enhanced and stable performance.
- **Equipped with Power Management IC (PMIC) on DIMM** - Efficiently regulates system power load, ensuring stable and reliable power delivery.



**DDR5 CUDIMM**



**DDR5 UDIMM**



**DDR5 CSODIMM**



**DDR5 SODIMM**

### Specification

- **DDR5 : CUDIMM/UDIMM/CSODIMM/SODIMM**
  - Speed : 4800/5600/6400
  - Capacity : 8GB / 16GB / 32GB / 48GB / 64GB
  - Voltage : 1.1V
  - Pin count : **CUDIMM/UDIMM** 288-Pin; **CSODIMM/SODIMM** 262-Pin
  - Width : 64-Bit
  - PCB height : **CUDIMM/UDIMM** 1.23"; **CSODIMM/SODIMM** 1.18"
  - Operation/Wide-temperature (°C): TC=0°C ~ 85°C/-40°C ~ 85°C
  - Others : 30μ Gold Finger, Underfill, Conformal Coating, and Anti-sulfuration support (Optional)
- **DDR4 : UDIMM / SODIMM**
  - Speed : 2133/2400/2666/2933/3200
  - Capacity : 2GB/4GB/8GB/16GB/32GB
  - Voltage : 1.2V
  - Pin count : **UDIMM** 288-Pin; **SODIMM** 260-Pin
  - Width : 64-Bit
  - PCB height : **UDIMM** 1.23"; **SODIMM** 1.18"
  - Operation / Wide-temperature (°C): TC=0°C ~ 85°C/-40°C ~ 85°C
- **Others :**
  - Wide-temperature support
  - Underfill, Conformal Coating, and Anti-sulfuration support (Optional)
  - Notes : DDR / DDR2 / DDR3 are available



## Server / Workstation

### Features

- **JEDEC-Compliant Design** Ensures seamless compatibility with a wide range of systems.
- **Original High-Quality DRAM ICs** Provides enhanced and stable performance.
- **On-Die ECC Error Correction Mechanism** Detects and corrects memory errors in real-time, significantly improving system stability and reliability.



DDR5 ECC UDIMM



DDR5 ECC SODIMM



DDR5 RDIMM

### Specification

- **DDR5 : ECC UDIMM/ECC SODIMM**
  - Speed : 4800/5600
  - Capacity : 16GB/32GB
  - Voltage : 1.1V
  - Pin count : **ECC UDIMM / CUDIMM** 288-Pin; **ECC SODIMM / CSODIMM** 262-Pin
  - Width : 72-Bit
  - PCB height : **ECC UDIMM** 1.23"; **ECC SODIMM** 1.18"
  - Operation/Wide-temperature (°C): TC=0°C ~ 85°C/-40°C ~ 85°C
  - Others :
    - 30μ Gold Finger and Thermal Sensor support
    - Underfill, Conformal Coating and Anti-sulfuration support (optional)
- **DDR5 : RDIMM**
  - Speed : 4800/5600/6400
  - Capacity : 16GB/32GB/64GB/128GB
  - Voltage : 1.1V
  - Pin count : 288-Pin
  - Width : 80-Bit
  - PCB height : 1.23"
  - Operation/Wide-temperature (°C): TC=0°C ~ 85°C/-40°C ~ 85°C
  - Others :
    - 30μ Gold Finger, Thermal Sensor, Underfill and Conformal Coating support
- **Notes** : Very Low Profile (VLP) is available
- **DDR4 : ECC UDIMM/ECC SODIMM**

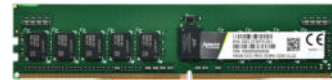




DDR4 ECC UDIMM



DDR4 ECC SODIMM



DDR4 RDIMM

## Specification

- Speed : 2133/2400/2666/2933/3200
- Capacity : 4GB/8GB/16GB/32GB
- Voltage : 1.2V
- Pin count : **ECC UDIMM** 288-Pin; **ECC SODIMM** 260-Pin
- Width : 72-Bit
- PCB height : **ECC UDIMM** 1.23"; **ECC SODIMM** 1.18"
- Operation/Wide-temperature (°C): TC=0°C ~ 85°C/-40°C ~ 85°C
- Others :
  - 30μ Gold Finger, Thermal Sensor and Wide-temperature support
  - Underfill, Conformal Coating and Anti-sulfuration support (optional)
- **Notes** : DDR3 is available
- **DDR4 : RDIMM**
  - Speed : 2133/2400/2666/2933/3200
  - Capacity : 4GB/8GB/16GB/32GB/64GB
  - Voltage : 1.2V
  - Pin count : 288-Pin
  - Width : 72-Bit
  - PCB height : 1.23"
  - Operation/Wide-temperature (°C) : TC=0°C ~ 85°C/-40°C ~ 85°C
  - Others :
    - 30μ Gold Finger, Thermal Sensor, Underfill and Conformal Coating support
    - Notes: Very Low Profile (VLP) is available

