



# PRODUCT CATALOG

GLOBAL LEADER IN INDUSTRIAL STORAGE



# ABOUT ADATA

| Founded May 4, 2001

| Founder, Chairman, and CEO: Simon Chen

| TOP 2 Branded SSD Module Manufacturer

| TOP 2 Branded DRAM Module Manufacturer

| More than 500 patents owned

ADATA Industrial, the world's leading brand for industrial-grade embedded storage, upholds the belief of "Infinite Innovation, Intelligent Future" - consistently delivering industry-leading products and solutions, garnering global recognition.

Echoing the infinity "∞" spirit and signature colors Intelligent Green and Energy Orange, the brand embodies reliability, stability, and innovative vitality for the AI era. With professional expertise and technical excellence, ADATA Industrial integrates AI hardware and software to deliver optimal solutions, accelerating industrial intelligence and edge computing - leading industries into a bold new chapter in AI-driven innovation. For more information on our brand and products, visit [industrial.adata.com](https://industrial.adata.com)

## Leading of the Edge



TOP 2 Global Branded SSD Module Manufacturer (TrendForce, 2025)



TOP 2 Global Branded DRAM Module Manufacturer (TrendForce, 2025)



## Worldwide Service and Presence

We offer direct and instant technical support to customers and end users by the solid global FAE and sales teams.



## Quality and Environmental Certifications

It's our commitment to provide the finest quality and service for complete customer satisfaction.



### Quality Management

- ISO 9001
- IATF 16949

### Hazardous Substance Process Management

- IECQ QC 080000
- B2B Green Partner

### Electrostatic Protection Management

- ANSI/ESD S20.20

### Occupational Health & Safety

- ISO 45001
- CNS 45001

### Environmental Management

- ISO 14001
- ISO 14064-1

### Informational Security

- ISO 27001

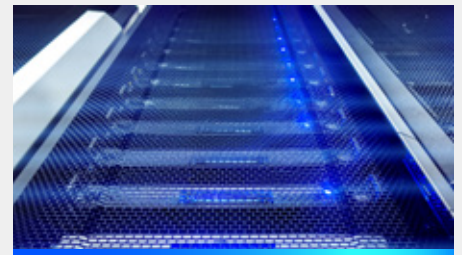
# Target Applications



AUTOMATION



EMBEDDED/ IPC



EDGE AI



HEALTHCARE



NETWORKING



RETAIL (POS/ DIGITAL SIGNAGE/ MFP)



ENTERTAINMENT



SURVEILLANCE



TRANSPORTATION

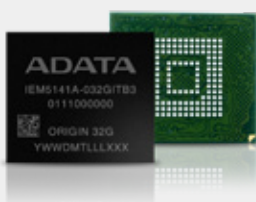
## Product Portfolio



| DRAM Modules



| Solid State Drives



| eMMC



| Memory Cards



| USB Flash Drive

# Product Dimensions Comparison

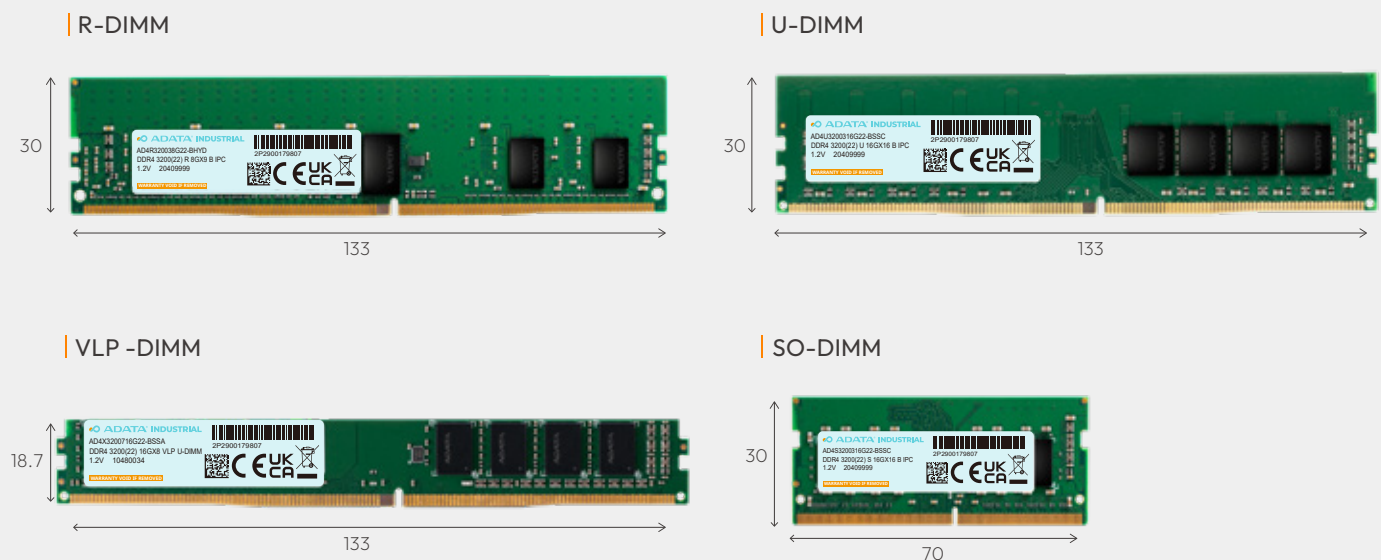
## Flash Storage

Unit: mm



## DRAM Module

Unit: mm



## Featured Technologies

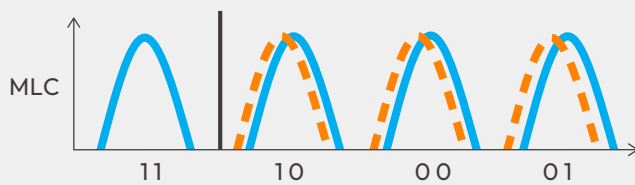


### A+ SLC

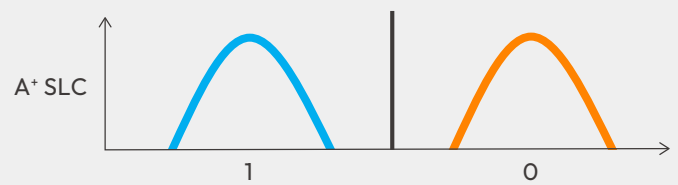
ADATA's proprietary A+ SLC technology combines reliability and cost efficiency. It uses customized NAND Flash firmware to simulate SLC performance on MLC and 3D TLC NAND Flash, effectively improving reliability and extending product life. A+ SLC provides more competitive advantages for MLC and 3D TLC NAND flash storage products and is widely used in various industrial applications.

MLC can store 2 bits of data, represented by 00, 01, 10 or 11 respectively, and TLC can store 3 bits of data, represented by 000, 001, 010, 011, 100, 101, 110, 111, while SLC only stores 1 bit of data, namely 0 or 1. ADATA's A+ SLC simulates the storage of 2 bits of MLC and 3 bits of 3D TLC into a storage method of storing 1 bit of data by customized firmware and algorithm. Compared to SLC NAND Flash, A+ SLC can greatly optimize the product reliability and longevity.

**MLC :**  
Higher risk of data error due to charge drift



**A+ SLC mode :**  
Better performance on error tolerance



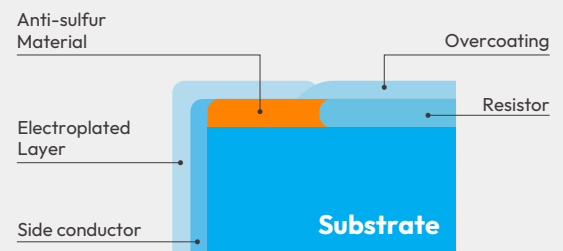
| Type       | P/E Cycle (times) | Features                                               |
|------------|-------------------|--------------------------------------------------------|
| SLC        | 60K               | High cost, Ultra high endurance                        |
| A+ SLC     | 30K-100K          | Better performance, High endurance and error tolerance |
| MLC/3D TLC | 3K                | Moderate cost, Good performance                        |



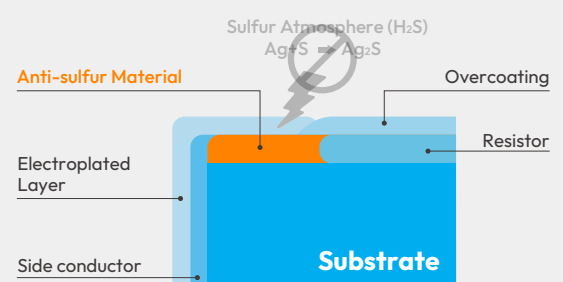
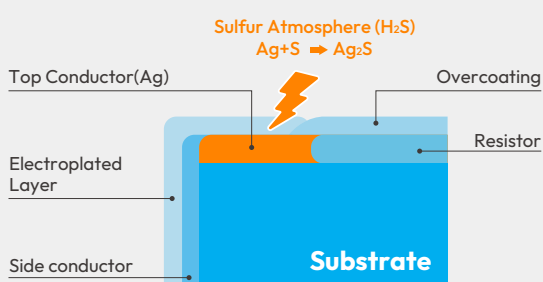
### Anti-Sulfuration

ADATA applies the anti-sulfuration technology to its industrial-grade SSDs and DRAM modules to counter corrosion and enhance the stability and longevity of these products. It can effectively prevent the negative impact of silver sulfide on NAND flash and DRAM products, making them more durable when used in environments with excessive sulfur.

Components with anti-sulfuration technology are screened for reliability and resilience to sulfuration:



When normal resistor is under sulfur atmosphere ( $H_2S$ ), silver sulfide ( $Ag_2S$ ), which is a kind of insulator, will be generated at top conductor ( $Ag$ ), resulting in open circuit fail. By using anti-sulfur material as top conductor, sulfuration is prevented. By using anti-sulfur material as top conductor, sulfuration is prevented.



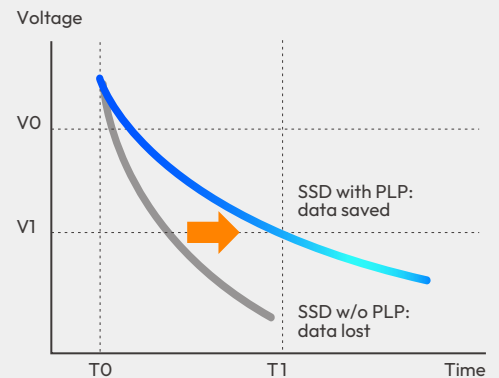
# Featured Technologies



## Power Loss Protection

PLP (Power Loss Protection) is a key technology associated with SSD reliability and is becoming widely adopted for improving overall system reliability. It leverages firmware and hardware to protect important data when encountering abnormal power spikes or outages.

ADATA PLP technology integrates sensitive voltage detectors with banks of power-retaining Tantalum polymer capacitors, supplying SSDs with enough power to continue buffered read-write operations until completion. Should power loss occur, the monitoring circuit detects the power drop and instructs the controller to back up all data in the buffer before power drains from capacitor banks. Through this method, all important data can be saved and free from data corruption.



- V0 : SSD normal voltage
- V1 : Spec. of minimum voltage limit for flash IC
- T0 : Controller detects voltage drop
- T1 : Controller finishes data backup
- T1-T0 : Time to do data backup

### Applications



Edge computing



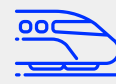
Healthcare



Networking



Surveillance



Transportation



## A+ Security

ADATA's proprietary A+ Security data protection technologies are implemented in ADATA industrial-grade flash storage products, including data erase, data encryption, and write protect. These can be widely used in various industrial applications to elevate data security. With A+ Security, confidential data can be effectively protected from being leaked or tampered with.

1

### Secure Erase

It's effective for erasing data from every corner of an SSD. There are two approaches to erase: a short pin circuit for Secure Erase or giving the ATA/NVMe command to conduct data erasing.

2

### Data Encryption

We offer AES 256-bit encryption technology and meet the TCG Opal 2.0 protocol to enhance the security level of confidential data.

3

### Write Protect

The Write Protect function is enabled by hardware or software settings. It can prevent data from being tampered with and written on the SSD improperly.

### Applications



Edge computing



Gaming



Healthcare



Surveillance

# Proprietary Software



## A+ IntelliManager

ADATA's "A+ IntelliManager" is a cloud management platform for industrial-grade SSDs. Users can install it on private clouds or public clouds and access the platform anytime, anywhere to centrally manage and monitor SSD temperature, usage capacity, lifespan, status, system parameters, etc. on multiple devices.



**Centralized control across multiple devices**

Regularly updates S.M.A.R.T. data across multiple devices to the user end



**Remote management and real-time monitoring**

The user terminal can remotely observe the real-time S.M.A.R.T. data of any device at any time.



**Advanced deployment provides accurate warning**

Set different warning thresholds for each device and receive timely warning notifications



**Multi-dimensional comprehensive analysis**

Not only monitors SSD data, but also checks CPU MEMORY, OS version, and managed device information



**Smart grouping and precise management**

Set up management groups to distinguish between different users and monitor different devices



## A+ Duplicator

ADATA's A+ Duplicator is a software and hardware integration technology designed for enterprises to reduce the risk of data loss and restore data quickly. Users can backup important data in advance with the software to prevent unexpected data loss. It also helps users quickly clone the current system to a new ADATA SSD.

### DATA RECOVERY

Backup and recover unexpected data loss immediately

### FREE & RELIABLE

Supports all ADATA SSDs and customers

### SYSTEM CLONE

Clone the current system to a new ADATA SSD

### EASY ACCESS

Easy to install  
Flexible disk selection



## A+ SSDTOOL

ADATA's A+ SSDTOOL is a powerful tool that help our customers monitor and manage any status of each ADATA SSD inside customers' systems. It facilitates the monitoring and managing of the drives with SSD S.M.A.R.T. and lifespan information.

The A+ SSDTOOL provides various features, including drive information, S.M.A.R.T. attributes, utilities, Alert email and system information.

### Drive Info



Get assigned drive information.

### S.M.A.R.T. Attributes



Analyze usable blocks, remaining lifespan, system temperature, and more.

### System Info



Displays current system information.

### Utilities



Includes secure erase and export log.

### Alert



When abnormal conditions occur, the system will send a pre-alert email.



## A+ OPAL

With ADATA's proprietary A+ OPAL software, users can easily execute TCG OPAL SED (self-encryption drive) for all ADATA's industrial-grade NVMe and SATA III SSDs, which support TCG OPAL. It activates the encrypted features of an SSD's controller. Thanks to intuitive A+ OPAL management, it can be widely used in diverse applications which require high-level data security, such as defense, networking, server, healthcare, surveillance and more.

- Fully compliant with the TCG OPAL 2.0 specification
- Equipped with H/W based AES 256-bit key
- Deletes data immediately when destroying the AES key

1 Initial setup to activate A+ OPAL

2 Set the SID/Admin passwords

3 Pre-boot Authentication (PBA)

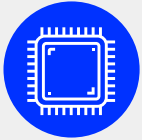
4 Locking Range Setting

5 Reset the disk to factory default status

6 Show the locking information & TCG OPAL support features

7 Unlock USB external TCG OPAL SSD

# Rigorous Manufacturing and Testing



## Strict NAND Flash IC Sorting

ADATA uses proprietary methods to test NAND Flash and sort out the best ICs for industrial-grade SSDs by an automatic testing process. To ensure the consistent high quality and yield rate, all ADATA's industrial-grade SSDs have to pass both electrical and function tests.

### Electrical Tests

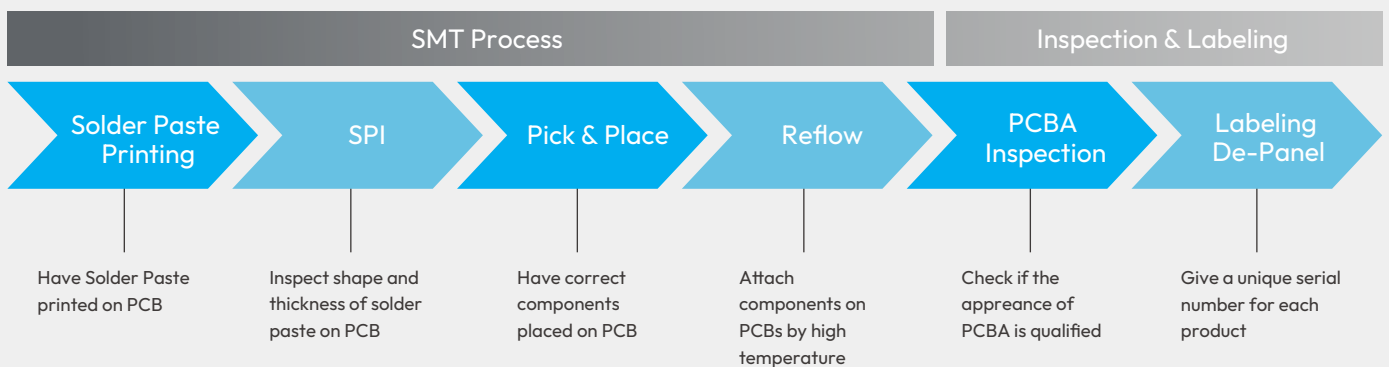
- Open/ Short Circuit
- Leakage / Standby Current
- NAND Flash ID Check

### Function Tests

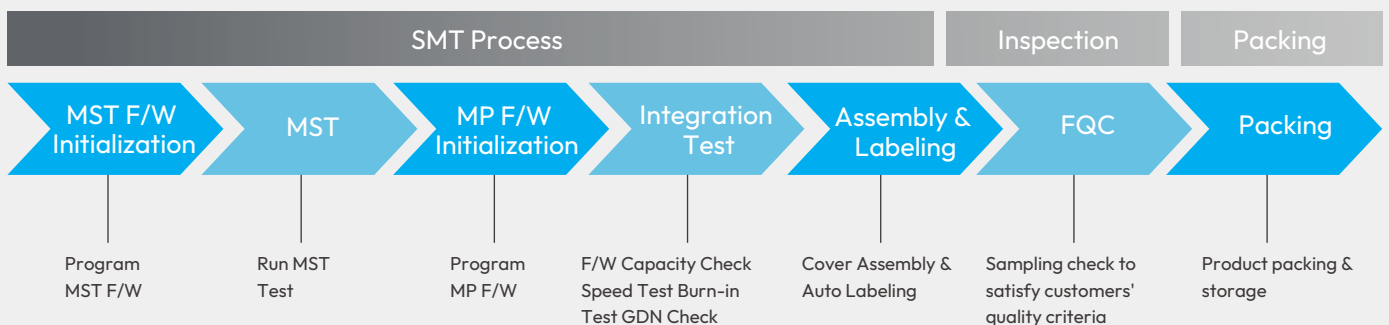
- Async./ sync. Interface check
- ECC 20bit/1KB
- Random Read/ Write
- Bad block numbers
- User capacity > 99.5%
- Validate quality of Block 0-3



## SSD Manufacturing Process



## SSD Testing Process



F/W Initialization



MST Test



Integration Test



Assembly & Labeling



Packing



# NAND FLASH STORAGE PRODUCTS

2.5" SSD

M.2 SSD

mSATA SSD

USB / SATA DOM



# BiCS8

## 218-LAYER 3D TLC SERIES

For increasing demands of big data analysis, machine learning, AI, IoT applications, high-performance storage devices are required to process even more data. ADATA provides a full lineup of 218-layer 3D NAND (BiCS8) solid state drives and memory cards in various form factors, featuring higher capacity up to 8TB, greater reliability, as well as wide temperature support from -40°C to 85°C for stable operation in harsh environment. The BiCS8 series are designed to be energy efficient, feature high capacities, and are well suited for high-load industrial systems relating to industrial computing, embedded devices, automation, networking, transportation, and other fields.

RELIABLE  
DURABILITY

# 3K

P/E CYCLE

ORIGINAL IC  
SANDISK / KIOXIA



WIDE-TEMP.  
(-40°C to 85°C)



HIGH  
CAPACITY



# U.2 SSD



NVMe™ 1.4 Compliant  
3K-100K P/E cycles for high endurance  
S.M.A.R.T. Monitor, Wear Leveling, NCQ and TRIM Command



| Model Name                 | IU2P41BP                                                                                                                                                                                                                                                                             |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                   | <ol style="list-style-type: none"><li>1. Supports LDPC ECC, RAID Engine, and SLC Cache</li><li>2. End-to-End (E2E) Data Path Protection</li><li>3. Host Memory Buffer (HMB)</li><li>4. ESD Support IEC/EN61000-4-2</li><li>5. A+ power protect</li><li>6. H/W PLP Function</li></ol> |
| Interface                  | PCIe Gen4x4                                                                                                                                                                                                                                                                          |
| Flash Type                 | 112L 3D TLC                                                                                                                                                                                                                                                                          |
| Capacity                   | 512GB~4TB                                                                                                                                                                                                                                                                            |
| Max. Seq. R/W Speed (MB/s) | 7000/6500                                                                                                                                                                                                                                                                            |
| Operating Voltage          | 12V                                                                                                                                                                                                                                                                                  |
| Max. Power Consumption     | 10W                                                                                                                                                                                                                                                                                  |
| Operating Temp. (Standard) | 0°C to 70°C                                                                                                                                                                                                                                                                          |
| DRAM Cache                 | Supported                                                                                                                                                                                                                                                                            |
| P/E Cycle (times)          | 3K                                                                                                                                                                                                                                                                                   |
| ECC Engine                 | LDPC ECC                                                                                                                                                                                                                                                                             |
| A+ SLC Mode                | -                                                                                                                                                                                                                                                                                    |
| Environment                | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                                                                                                            |
| Dimensions (L x W x H)     | 100 x 70 x 7mm                                                                                                                                                                                                                                                                       |

# 2.5" SSD



112-layer (BiCS5)/ 3D TLC NAND Flash  
Original IC Implement  
High capacity up to 8TB  
Wide-Temperature Support: -40°C to 85°C  
S.M.A.R.T. Monitor, Wear Leveling, NCQ and TRIM Command



| Model Name                   | ISSS31I(P)                                                                                                                                                                                                                      | ISSS31AP <sup>eTLC</sup>                                                                                                                                                                                                                                                                                                                                         | ISSS31AP                                                                                                                                                                                                                                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. A+ power protect</li> <li>2. Support RAID Engine, SLC Cache and Thermal Throttling</li> <li>3. ESD Support IEC/EN61000-4-2 level 4</li> <li>4. H/W PLP Function (Optional)</li> </ol> | <ol style="list-style-type: none"> <li>1. A+ Power Protect</li> <li>2. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>3. End-to-End (E2E) Data Path Protection</li> <li>4. ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>5. Supports AES 256-bit Data Encryption and TCG OPAL 2.0</li> <li>6. DWPD 1.7</li> <li>7. HW PLP function</li> </ol> | <ol style="list-style-type: none"> <li>1. HW PLP function</li> <li>2. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>3. End-to-End (E2E) Data Path Protection</li> <li>4. ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>5. Supports AES 256-bit Data Encryption and TCG OPAL 2.0</li> </ol> |
| Interface                    | SATA III 6.0Gbps                                                                                                                                                                                                                | SATA III 6.0Gbps                                                                                                                                                                                                                                                                                                                                                 | SATA III 6.0Gbps                                                                                                                                                                                                                                                                                               |
| Flash Type                   | 218L 3D TLC                                                                                                                                                                                                                     | 112L 3D eTLC                                                                                                                                                                                                                                                                                                                                                     | 112L 3D TLC                                                                                                                                                                                                                                                                                                    |
| Capacity                     | 256GB-2TB                                                                                                                                                                                                                       | 3.84TB-7.68TB                                                                                                                                                                                                                                                                                                                                                    | 4TB-8TB                                                                                                                                                                                                                                                                                                        |
| Max. Seq. R/W Speed (MB/s)   | 560/500                                                                                                                                                                                                                         | 560/520                                                                                                                                                                                                                                                                                                                                                          | 550/520                                                                                                                                                                                                                                                                                                        |
| Operating Voltage            | 5V                                                                                                                                                                                                                              | 5V                                                                                                                                                                                                                                                                                                                                                               | 5V                                                                                                                                                                                                                                                                                                             |
| Max. Power Consumption       | 2.5W                                                                                                                                                                                                                            | 3.3W                                                                                                                                                                                                                                                                                                                                                             | 3.3W                                                                                                                                                                                                                                                                                                           |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                                                                     | 0°C to 70°C                                                                                                                                                                                                                                                                                                                                                      | 0°C to 70°C                                                                                                                                                                                                                                                                                                    |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                                                                                                                                                                   | -                                                                                                                                                                                                                                                                                                                                                                | -40°C to 85°C                                                                                                                                                                                                                                                                                                  |
| DRAM Cache                   | -                                                                                                                                                                                                                               | Supported                                                                                                                                                                                                                                                                                                                                                        | Supported                                                                                                                                                                                                                                                                                                      |
| P/E Cycle (times)            | 3K                                                                                                                                                                                                                              | 7K                                                                                                                                                                                                                                                                                                                                                               | 3K                                                                                                                                                                                                                                                                                                             |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                                                        | LDPC ECC                                                                                                                                                                                                                                                                                                                                                         | LDPC ECC                                                                                                                                                                                                                                                                                                       |
| A+ SLC Mode                  | -                                                                                                                                                                                                                               | -                                                                                                                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                                                                              |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                |
| Dimensions (L x W x H)       | 100 x 70 x 7mm                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                |

| Model Name                   | ISSS31CP <sup>eTLC</sup>                                                                                                                                                                                                                                                                                                                                         | ISSS31CP                                                                                                                                                                                                                                                                  |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. A+ Power Protect</li> <li>2. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>3. End-to-End (E2E) Data Path Protection</li> <li>4. ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>5. Supports AES 256-bit Data Encryption and TCG OPAL 2.0</li> <li>6. DWPD 1.6</li> <li>7. HW PLP function</li> </ol> | <ol style="list-style-type: none"> <li>1. A+ Power Protect</li> <li>2. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>3. End-to-End (E2E) Data Path Protection</li> <li>4. ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>5. HW PLP function</li> </ol> |
| Interface                    | SATA III 6.0Gbps                                                                                                                                                                                                                                                                                                                                                 | SATA III 6.0Gbps                                                                                                                                                                                                                                                          |
| Flash Type                   | 112L 3D eTLC                                                                                                                                                                                                                                                                                                                                                     | 112L 3D TLC                                                                                                                                                                                                                                                               |
| Capacity                     | 480GB-1.92TB                                                                                                                                                                                                                                                                                                                                                     | 128GB-2TB                                                                                                                                                                                                                                                                 |
| Max. Seq. R/W Speed (MB/s)   | 550/380                                                                                                                                                                                                                                                                                                                                                          | 560/490                                                                                                                                                                                                                                                                   |
| Operating Voltage            | 5V                                                                                                                                                                                                                                                                                                                                                               | 5V                                                                                                                                                                                                                                                                        |
| Max. Power Consumption       | 2.2W                                                                                                                                                                                                                                                                                                                                                             | 2.5W                                                                                                                                                                                                                                                                      |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                                                                                                                                                                                                      | 0°C to 70°C                                                                                                                                                                                                                                                               |
| Operating Temp. (Industrial) | -                                                                                                                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                                         |
| DRAM Cache                   | Supported                                                                                                                                                                                                                                                                                                                                                        | Supported                                                                                                                                                                                                                                                                 |
| P/E Cycle (times)            | 7K                                                                                                                                                                                                                                                                                                                                                               | 3K                                                                                                                                                                                                                                                                        |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                                                                                                                                                                                         | LDPC ECC                                                                                                                                                                                                                                                                  |
| A+ SLC Mode                  | -                                                                                                                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                                         |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                           |
| Dimensions (L x W x H)       | 100 x 70 x 7mm                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                           |

# 2.5" SSD



112-layer (BiCS5)/ 3D TLC NAND Flash  
Original IC Implement  
High capacity up to 8TB  
Wide-Temperature Support: -40°C to 85°C  
S.M.A.R.T. Monitor, Wear Leveling, NCQ and TRIM Command



| Model Name                   | ISSS31C                                                                                                                                                                                                                                                                                                                                | ISSS316                                                                                                                                                                                                        | ISSS31D                                                                                                                                                                                                        |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>4. Supports Extended Temp. (-20°C to 75°C)</li> <li>5. Supports AES 256-bit Data Encryption and TCG OPAL 2.0</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache, and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Wear Leveling, Bad Block Management</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache, and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Wear Leveling, Bad Block Management</li> </ol> |
| Interface                    | SATA III 6.0Gbps                                                                                                                                                                                                                                                                                                                       | SATA III 6.0Gbps                                                                                                                                                                                               | SATA III 6.0Gbps                                                                                                                                                                                               |
| Flash Type                   | 218L / 112L 3D TLC                                                                                                                                                                                                                                                                                                                     | 112L 3D TLC                                                                                                                                                                                                    | 112L 3D TLC                                                                                                                                                                                                    |
| Capacity                     | 128GB - 4TB                                                                                                                                                                                                                                                                                                                            | 128GB - 2TB                                                                                                                                                                                                    | 128GB - 2TB                                                                                                                                                                                                    |
| Max. Seq. R/W Speed (MB/s)   | 560/490                                                                                                                                                                                                                                                                                                                                | 560/520                                                                                                                                                                                                        | 560/490                                                                                                                                                                                                        |
| Operating Voltage            | 5V                                                                                                                                                                                                                                                                                                                                     | 5V                                                                                                                                                                                                             | 5V                                                                                                                                                                                                             |
| Max. Power Consumption       | 2.6W                                                                                                                                                                                                                                                                                                                                   | 1.55W                                                                                                                                                                                                          | 1.1W                                                                                                                                                                                                           |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                                                                                                                                                                            | 0°C to 70°C                                                                                                                                                                                                    | 0°C to 70°C                                                                                                                                                                                                    |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                                                                                                                                                                                                                                                                          | -40°C to 85°C                                                                                                                                                                                                  | -40°C to 85°C                                                                                                                                                                                                  |
| DRAM Cache                   | Supported                                                                                                                                                                                                                                                                                                                              | -                                                                                                                                                                                                              | -                                                                                                                                                                                                              |
| P/E Cycle (times)            | 3K/100K(A+SLC)                                                                                                                                                                                                                                                                                                                         | 3K/100K(A+SLC)                                                                                                                                                                                                 | 3K                                                                                                                                                                                                             |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                                                                                                                                                               | LDPC ECC                                                                                                                                                                                                       | LDPC ECC                                                                                                                                                                                                       |
| A+ SLC Mode                  | Available by request                                                                                                                                                                                                                                                                                                                   | Available by request                                                                                                                                                                                           | -                                                                                                                                                                                                              |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                                                                                                                                                              |                                                                                                                                                                                                                |                                                                                                                                                                                                                |
| Dimensions (L x W x H)       | 100 x 70 x 7mm                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                |                                                                                                                                                                                                                |

# 2.5" SSD



112-layer (BiCS5)/ 3D TLC NAND Flash  
Original IC Implement  
High capacity up to 8TB  
Wide-Temperature Support: -40°C to 85°C  
S.M.A.R.T. Monitor, Wear Leveling, NCQ and TRIM Command



| Model Name                   | ISSS332                                                                                     |
|------------------------------|---------------------------------------------------------------------------------------------|
| Features                     | 1. Supports S.M.A.R.T. Monitor<br>2. Power Loss Protection(Optional)<br>3. With DRAM Buffer |
| Interface                    | SATA III 6.0Gbps                                                                            |
| Flash Type                   | MLC                                                                                         |
| Capacity                     | 16GB – 1TB                                                                                  |
| Max. Seq. R/W Speed (MB/s)   | 540/450                                                                                     |
| Operating Voltage            | 5V                                                                                          |
| Max. Power Consumption       | 3.2W                                                                                        |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                 |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                               |
| DRAM Cache                   | Supported                                                                                   |
| P/E Cycle (times)            | 3K                                                                                          |
| ECC Engine                   | BCH ECC                                                                                     |
| A+ SLC Mode                  | Available by request                                                                        |
| Environment                  | Vibration: 20G (20 – 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours   |
| Dimensions (L x W x H)       | 100 x 70 x 7mm                                                                              |

# M.2 NVMe SSD

NVMe™ 1.4/ 1.3 Compliant

Original IC Implement

3K-100K P/E cycles for high endurance

S.M.A.R.T. Monitor, Wear Leveling, NCQ, and TRIM Command



| Model Name                   | IM2P41F8                                                                                                                                                                                                              | IM2P41B8 eTLC                                                                                                                                                                                                                                                                                           | IM2P41B8P                                                                                                                                                                                 | IM2P41B8                                                                                                                                                                                                                                                                           |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. Supports LDPC ECC, RAID Engine, and SLC Cache</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Host Memory Buffer(HMB)</li> <li>4. A+ power protect</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Supports AES 256-bit Data Encryption and TCG OPAL 2.0</li> <li>4. ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>5. DWPD 1.8</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. HW PLP function</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Supports AES 256-bit Data Encryption and TCG OPAL 2.0</li> <li>4. ESD Support (IEC/EN 61000-4-2 Level 4)</li> </ol> |
| Interface                    | PCIe Gen4x4 (NVMe 2.0)                                                                                                                                                                                                | PCIe Gen4x4 (NVMe 1.4)                                                                                                                                                                                                                                                                                  | PCIe Gen4x4 (NVMe 1.4)                                                                                                                                                                    | PCIe Gen4x4 (NVMe 1.4)                                                                                                                                                                                                                                                             |
| Form Factor                  | M.2 2280 (M Key)                                                                                                                                                                                                      | M.2 2280 (M Key)                                                                                                                                                                                                                                                                                        | M.2 2280 (M Key)                                                                                                                                                                          | M.2 2280 (M Key)                                                                                                                                                                                                                                                                   |
| Flash Type                   | 218L 3D TLC                                                                                                                                                                                                           | 112L 3D eTLC                                                                                                                                                                                                                                                                                            | 112L 3D TLC                                                                                                                                                                               | 112L 3D TLC                                                                                                                                                                                                                                                                        |
| Capacity                     | 256GB - 2TB                                                                                                                                                                                                           | 480GB - 1.92TB                                                                                                                                                                                                                                                                                          | 256GB - 4TB                                                                                                                                                                               | 256GB - 4TB                                                                                                                                                                                                                                                                        |
| Max. Seq. R/W Speed (MB/s)   | 7100/6500                                                                                                                                                                                                             | 7000/6200                                                                                                                                                                                                                                                                                               | 7400/6800                                                                                                                                                                                 | 7000/6500                                                                                                                                                                                                                                                                          |
| Operating Voltage            | 3.3V                                                                                                                                                                                                                  | 3.3V                                                                                                                                                                                                                                                                                                    | 3.3V                                                                                                                                                                                      | 3.3V                                                                                                                                                                                                                                                                               |
| Max. Power Consumption       | 5.3W                                                                                                                                                                                                                  | 8W                                                                                                                                                                                                                                                                                                      | 8.6W                                                                                                                                                                                      | 6.8W                                                                                                                                                                                                                                                                               |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                                                           | 0°C to 70°C                                                                                                                                                                                                                                                                                             | 0°C to 70°C                                                                                                                                                                               | 0°C to 70°C                                                                                                                                                                                                                                                                        |
| Operating Temp. (Industrial) | -                                                                                                                                                                                                                     | -                                                                                                                                                                                                                                                                                                       | -                                                                                                                                                                                         | -40°C to 85°C                                                                                                                                                                                                                                                                      |
| DRAM Cache                   | -                                                                                                                                                                                                                     | Supported                                                                                                                                                                                                                                                                                               | Supported                                                                                                                                                                                 | Supported                                                                                                                                                                                                                                                                          |
| P/E Cycle (times)            | 3K                                                                                                                                                                                                                    | 7K                                                                                                                                                                                                                                                                                                      | 3K                                                                                                                                                                                        | 3K                                                                                                                                                                                                                                                                                 |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                                              | LDPC ECC                                                                                                                                                                                                                                                                                                | LDPC ECC                                                                                                                                                                                  | LDPC ECC                                                                                                                                                                                                                                                                           |
| A+ SLC Mode                  | -                                                                                                                                                                                                                     | -                                                                                                                                                                                                                                                                                                       | -                                                                                                                                                                                         | Available by request                                                                                                                                                                                                                                                               |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                                             |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                    |
| Dimensions (L x W x H)       | 80 x 22 x 2.25mm                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                    |

| Model Name                   | IM2P41E8                                                                                                                                                                                                         | IM2P32A8                                                                                                                                                                                                                                              | IM2P33F8                                                                                                                                                                                           |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. ESD Support (IEC/EN 61000-4-2 level 4)</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>4. Host Memory Buffer (HMB)</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Host Memory Buffer (HMB)</li> </ol> |
| Interface                    | PCIe Gen4x4 (NVMe 1.4)                                                                                                                                                                                           | PCIe Gen3x4 (NVMe 1.4)                                                                                                                                                                                                                                | PCIe Gen3x4 (NVMe 1.3)                                                                                                                                                                             |
| Form Factor                  | M.2 2280 (M Key)                                                                                                                                                                                                 | M.2 2280 (M Key)                                                                                                                                                                                                                                      | M.2 2280 (M Key)                                                                                                                                                                                   |
| Flash Type                   | 112L 3D TLC                                                                                                                                                                                                      | 112L 3D TLC                                                                                                                                                                                                                                           | 112L 3D TLC                                                                                                                                                                                        |
| Capacity                     | 128GB - 2TB                                                                                                                                                                                                      | 128GB - 2TB                                                                                                                                                                                                                                           | 128GB - 1TB                                                                                                                                                                                        |
| Max. Seq. R/W Speed (MB/s)   | 4900/4200                                                                                                                                                                                                        | 3300/2900                                                                                                                                                                                                                                             | 2100/1600                                                                                                                                                                                          |
| Operating Voltage            | 3.3V                                                                                                                                                                                                             | 3.3V                                                                                                                                                                                                                                                  | 3.3V                                                                                                                                                                                               |
| Max. Power Consumption       | 6.3W                                                                                                                                                                                                             | 3.76W                                                                                                                                                                                                                                                 | 3.8W                                                                                                                                                                                               |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                                                      | 0°C to 70°C                                                                                                                                                                                                                                           | 0°C to 70°C                                                                                                                                                                                        |
| Operating Temp. (Industrial) | -                                                                                                                                                                                                                | -40°C to 85°C                                                                                                                                                                                                                                         | -                                                                                                                                                                                                  |
| P/E Cycle (times)            | 3K                                                                                                                                                                                                               | 3K                                                                                                                                                                                                                                                    | 3K                                                                                                                                                                                                 |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                                         | LDPC ECC                                                                                                                                                                                                                                              | LDPC ECC                                                                                                                                                                                           |
| A+ SLC Mode                  | -                                                                                                                                                                                                                | Available by request                                                                                                                                                                                                                                  | -                                                                                                                                                                                                  |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                                        |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                    |
| Dimensions (L x W x H)       | 80 x 22 x 2.25mm                                                                                                                                                                                                 |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                    |

Product specifications are subject to change without prior notice

# M.2 NVMe SSD

NVMe™ 2.0/1.4 Compliance

Original IC Implement

3K-100K P/E cycles for high endurance

S.M.A.R.T. Monitor, Wear Leveling, NCQ, and TRIM Command



| Model Name                   | IM2P51G8                                                                                                                                                                                                                                                             | IM2P42B8(P)                                                                                                                                                                                          |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Supports AES 256-bit Data Encryption and TCG OPAL 2.0</li> <li>4. Host Memory Buffer (HMB)</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. HW PLP function (optional)</li> </ol> |
| Interface                    | PCIe Gen5x4 (NVMe 2.0)                                                                                                                                                                                                                                               | PCIe Gen4x4 (NVMe 1.4)                                                                                                                                                                               |
| Form Factor                  | M.2 2280 (M Key)                                                                                                                                                                                                                                                     | M.2 2280 (M Key)                                                                                                                                                                                     |
| Flash Type                   | 218L 3D TLC                                                                                                                                                                                                                                                          | 218L / 112 3D TLC                                                                                                                                                                                    |
| Capacity                     | 1TB - 4TB                                                                                                                                                                                                                                                            | 256GB - 4TB                                                                                                                                                                                          |
| Max. Seq. R/W Speed (MB/s)   | 14000/12000                                                                                                                                                                                                                                                          | 7000/6500                                                                                                                                                                                            |
| Operating Voltage            | 3.3V                                                                                                                                                                                                                                                                 | 3.3V                                                                                                                                                                                                 |
| Max. Power Consumption       | 8.5W                                                                                                                                                                                                                                                                 | 4.8W                                                                                                                                                                                                 |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                                                                                                          | 0°C to 70°C                                                                                                                                                                                          |
| Operating Temp. (Industrial) | -                                                                                                                                                                                                                                                                    | -40°C to 85°C                                                                                                                                                                                        |
| DRAM Cache                   | Supported                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                    |
| P/E Cycle (times)            | 3K                                                                                                                                                                                                                                                                   | 3K                                                                                                                                                                                                   |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                                                                                             | LDPC ECC                                                                                                                                                                                             |
| A+ SLC Mode                  | -                                                                                                                                                                                                                                                                    | -                                                                                                                                                                                                    |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                                                                                            |                                                                                                                                                                                                      |
| Dimensions (L x W x H)       | 80 x 22 x 2.25mm                                                                                                                                                                                                                                                     |                                                                                                                                                                                                      |

| Model Name                   | IM2P41F3                                                                                                                                                                                  |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. Supports LDPC ECC, RAID Engine, and SLC Cache</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Host Memory Buffer (HMB)</li> </ol> |
| Interface                    | PCIe Gen4x4 (NVMe 2.0)                                                                                                                                                                    |
| Form Factor                  | M.2 2230 (M Key)                                                                                                                                                                          |
| Flash Type                   | 218L 3D eTLC                                                                                                                                                                              |
| Capacity                     | 256GB - 1TB                                                                                                                                                                               |
| Max. Seq. R/W Speed (MB/s)   | 7000/6500                                                                                                                                                                                 |
| Operating Voltage            | 3.3V                                                                                                                                                                                      |
| Max. Power Consumption       | 6.3W                                                                                                                                                                                      |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                               |
| Operating Temp. (Industrial) | -                                                                                                                                                                                         |
| DRAM Cache                   | -                                                                                                                                                                                         |
| P/E Cycle (times)            | 3K                                                                                                                                                                                        |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                  |
| A+ SLC Mode                  | Available by request                                                                                                                                                                      |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                 |
| Dimensions (L x W x H)       | 30 x 22 x 3.6mm                                                                                                                                                                           |

Product specifications are subject to change without prior notice

# M.2 NVMe SSD

NVMe™ 1.4/ 1.3 Compliant

Original IC Implement

3K-100K P/E cycles for high endurance

S.M.A.R.T. Monitor, Wear Leveling, NCQ, and TRIM Command



| Model Name                   | IM2P41F4                                                                                                                                                                                                              | IM2P41E4                                                                                                                                                                                           | IM2P32A4                                                                                                                                                                                                                                                                                                                |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. Supports LDPC ECC, RAID Engine, and SLC Cache</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Host Memory Buffer(HMB)</li> <li>4. A+ power protect</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Host Memory Buffer (HMB)</li> </ol> | <ol style="list-style-type: none"> <li>1. Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>2. End-to-End (E2E) Data Path Protection</li> <li>3. Supports AES 256-bit Data Encryption and TCG OPAL 2.0</li> <li>4. ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>5. Host Memory Buffer (HMB)</li> </ol> |
| Interface                    | PCIe Gen4x4 (NVMe 2.0)                                                                                                                                                                                                | PCIe Gen4x4 (NVMe 1.4)                                                                                                                                                                             | PCIe Gen3x4 (NVMe 1.4)                                                                                                                                                                                                                                                                                                  |
| Form Factor                  | M.2 2280 (B+M Key)                                                                                                                                                                                                    | M.2 2242 (M Key)                                                                                                                                                                                   | M.2 2242 (M Key)                                                                                                                                                                                                                                                                                                        |
| Flash Type                   | 218L 3D TLC                                                                                                                                                                                                           | 112L 3D TLC                                                                                                                                                                                        | 112L 3D TLC                                                                                                                                                                                                                                                                                                             |
| Capacity                     | 256GB - 2TB                                                                                                                                                                                                           | 128GB - 2TB                                                                                                                                                                                        | 128GB - 1TB                                                                                                                                                                                                                                                                                                             |
| Max. Seq. R/W Speed (MB/s)   | 7100/ 6500                                                                                                                                                                                                            | 5000/ 4200                                                                                                                                                                                         | 3000/ 2000                                                                                                                                                                                                                                                                                                              |
| Operating Voltage            | 3.3V                                                                                                                                                                                                                  | 3.3V                                                                                                                                                                                               | 3.3V                                                                                                                                                                                                                                                                                                                    |
| Max. Power Consumption       | 6W                                                                                                                                                                                                                    | 6.3W                                                                                                                                                                                               | 3.03W                                                                                                                                                                                                                                                                                                                   |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                                                           | 0°C to 70°C                                                                                                                                                                                        | 0°C to 70°C                                                                                                                                                                                                                                                                                                             |
| Operating Temp. (Industrial) | -                                                                                                                                                                                                                     | -                                                                                                                                                                                                  | -40°C to 85°C                                                                                                                                                                                                                                                                                                           |
| DRAM Cache                   | -                                                                                                                                                                                                                     | -                                                                                                                                                                                                  | -                                                                                                                                                                                                                                                                                                                       |
| P/E Cycle (times)            | 3K                                                                                                                                                                                                                    | 3K/100K(A+SLC)                                                                                                                                                                                     | 3K/100K(A+SLC)                                                                                                                                                                                                                                                                                                          |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                                              | LDPC ECC                                                                                                                                                                                           | LDPC ECC                                                                                                                                                                                                                                                                                                                |
| A+ SLC Mode                  | -                                                                                                                                                                                                                     | Available by request                                                                                                                                                                               | Available by request                                                                                                                                                                                                                                                                                                    |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                                             |                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                         |
| Dimensions (L x W x H)       | 42 x 22 x 2.25mm                                                                                                                                                                                                      |                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                         |

Product specifications are subject to change without prior notice

# M.2 SATA SSD

Original IC Implement

3K-100K P/E cycles for high endurance

S.M.A.R.T. Monitor, Wear Leveling, NCQ and TRIM Command



BiCS5



BiCS5

| Model Name                   | IM2S31I8(P)                                                                                                                                                                                                                                 | IM2S31C8(P)                                                                                                                                                                                                                                                                                  | IM2S31D8                                                                                                                                                                                              | IM2S3168                                                                                                                                        |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>End-to-End (E2E) Data Path Protection</li> <li>ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>HW PLP function (Optional)</li> </ol> | <ol style="list-style-type: none"> <li>Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>End-to-End (E2E) Data Path Protection</li> <li>ESD Support (IEC/EN 61000-4-2 Level 4)</li> <li>Supports Extended Temp. (-20°C to 75°C)</li> <li>HW PLP function (Optional)</li> </ol> | <ol style="list-style-type: none"> <li>Supports RAID Engine, SLC Cache, and Thermal Throttling</li> <li>End-to-End (E2E) Data Path Protection</li> <li>Wear Leveling, Bad Block Management</li> </ol> | <ol style="list-style-type: none"> <li>112L (BiCS5) 3D TLC Implement</li> <li>Supports RAID Engine, SLC Cache and Thermal Throttling</li> </ol> |
| Interface                    | SATA III 6.0Gbps                                                                                                                                                                                                                            | SATA III 6.0Gbps                                                                                                                                                                                                                                                                             | SATA III 6.0Gbps                                                                                                                                                                                      | SATA III 6.0Gbps                                                                                                                                |
| Form Factor                  | M.2 2280 (B+M Key)                                                                                                                                                                                                                          | M.2 2280 (B+M Key)                                                                                                                                                                                                                                                                           | M.2 2280 (B+M Key)                                                                                                                                                                                    | M.2 2280 (B+M Key)                                                                                                                              |
| Flash Type                   | 218L 3D TLC                                                                                                                                                                                                                                 | 112L 3D TLC                                                                                                                                                                                                                                                                                  | 112L 3D TLC                                                                                                                                                                                           | 112L 3D TLC                                                                                                                                     |
| Capacity                     | 256GB - 2TB                                                                                                                                                                                                                                 | 128GB - 4TB                                                                                                                                                                                                                                                                                  | 128GB - 2TB                                                                                                                                                                                           | 128GB - 2TB                                                                                                                                     |
| Max. Seq. R/W Speed (MB/s)   | 560/500                                                                                                                                                                                                                                     | 560/500                                                                                                                                                                                                                                                                                      | 560/480                                                                                                                                                                                               | 560/520                                                                                                                                         |
| Operating Voltage            | 3.3V                                                                                                                                                                                                                                        | 3.3V                                                                                                                                                                                                                                                                                         | 3.3V                                                                                                                                                                                                  | 3.3V                                                                                                                                            |
| Max. Power Consumption       | 1.5W                                                                                                                                                                                                                                        | 2.4W                                                                                                                                                                                                                                                                                         | 1.5W                                                                                                                                                                                                  | 1.49W                                                                                                                                           |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                                                                                 | 0°C to 70°C                                                                                                                                                                                                                                                                                  | 0°C to 70°C                                                                                                                                                                                           | 0°C to 70°C                                                                                                                                     |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                                                                                                                                                                               | -40°C to 85°C                                                                                                                                                                                                                                                                                | -40°C to 85°C                                                                                                                                                                                         | -40°C to 85°C                                                                                                                                   |
| DRAM Cache                   | -                                                                                                                                                                                                                                           | Supported                                                                                                                                                                                                                                                                                    | -                                                                                                                                                                                                     | -                                                                                                                                               |
| P/E Cycle (times)            | 3K                                                                                                                                                                                                                                          | 3K/100K(A+SLC)                                                                                                                                                                                                                                                                               | 3K                                                                                                                                                                                                    | 3K/100K(A+SLC)                                                                                                                                  |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                                                                    | LDPC ECC                                                                                                                                                                                                                                                                                     | LDPC ECC                                                                                                                                                                                              | LDPC ECC                                                                                                                                        |
| A+ SLC Mode                  | -                                                                                                                                                                                                                                           | Available by request                                                                                                                                                                                                                                                                         | -                                                                                                                                                                                                     | Available by request                                                                                                                            |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                                                                   |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                       |                                                                                                                                                 |
| Dimensions (L x W x H)       | 80 x 22 x 2.25mm                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                       |                                                                                                                                                 |

| Model Name                   | IM2S31C4                                                                                                                                                                                       | IM2S31D4                                                                                                                                                                                              | IM2S3164                                                                                                                                                                                       |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>112L (BiCS5) 3D TLC Implement</li> <li>Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>End-to-End (E2E) Data Path Protection</li> </ol> | <ol style="list-style-type: none"> <li>Supports RAID Engine, SLC Cache, and Thermal Throttling</li> <li>End-to-End (E2E) Data Path Protection</li> <li>Wear Leveling, Bad Block Management</li> </ol> | <ol style="list-style-type: none"> <li>112L (BiCS5) 3D TLC Implement</li> <li>Supports RAID Engine, SLC Cache and Thermal Throttling</li> <li>End-to-End (E2E) Data Path Protection</li> </ol> |
| Interface                    | SATA III 6.0Gbps                                                                                                                                                                               | SATA III 6.0Gbps                                                                                                                                                                                      | SATA III 6.0Gbps                                                                                                                                                                               |
| Form Factor                  | M.2 2242 (B+M Key)                                                                                                                                                                             | M.2 2242 (B+M Key)                                                                                                                                                                                    | M.2 2242 (B+M Key)                                                                                                                                                                             |
| Flash Type                   | 112L 3D TLC                                                                                                                                                                                    | 112L 3D TLC                                                                                                                                                                                           | 112L 3D TLC                                                                                                                                                                                    |
| Capacity                     | 128GB - 1TB                                                                                                                                                                                    | 128GB - 1TB                                                                                                                                                                                           | 128GB - 1TB                                                                                                                                                                                    |
| Max. Seq. R/W Speed (MB/s)   | 560/490                                                                                                                                                                                        | 560/480                                                                                                                                                                                               | 560/480                                                                                                                                                                                        |
| Operating Voltage            | 3.3V                                                                                                                                                                                           | 3.3V                                                                                                                                                                                                  | 3.3V                                                                                                                                                                                           |
| Max. Power Consumption       | 2.2W                                                                                                                                                                                           | 1.6W                                                                                                                                                                                                  | 1.37W                                                                                                                                                                                          |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                                    | 0°C to 70°C                                                                                                                                                                                           | 0°C to 70°C                                                                                                                                                                                    |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                                                                                                                                  | -40°C to 85°C                                                                                                                                                                                         | -40°C to 85°C                                                                                                                                                                                  |
| DRAM Cache                   | Supported                                                                                                                                                                                      | -                                                                                                                                                                                                     | -                                                                                                                                                                                              |
| P/E Cycle (times)            | 3K/100K(A+SLC)                                                                                                                                                                                 | 3K                                                                                                                                                                                                    | 3K/100K(A+SLC)                                                                                                                                                                                 |
| ECC Engine                   | LDPC ECC                                                                                                                                                                                       | LDPC ECC                                                                                                                                                                                              | LDPC ECC                                                                                                                                                                                       |
| A+ SLC Mode                  | Available by request                                                                                                                                                                           | -                                                                                                                                                                                                     | Available by request                                                                                                                                                                           |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                                                      |                                                                                                                                                                                                       |                                                                                                                                                                                                |
| Dimensions (L x W x H)       | 42 x 22 x 3.6mm                                                                                                                                                                                |                                                                                                                                                                                                       |                                                                                                                                                                                                |

Product specifications are subject to change without prior notice

# M.2 SATA SSD

Original IC Implement

3K-30K P/E cycles for high endurance

S.M.A.R.T. Monitor, Wear Leveling, NCQ and TRIM Command



| Model Name                   | IM2S3328E                                                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. Supports S.M.A.R.T. Monitor</li> <li>2. Power Loss Protection(Optional)</li> <li>3. With DRAM Buffer</li> </ol> |
| Interface                    | SATA III 6.0Gbps                                                                                                                                          |
| Form Factor                  | M.2 2280 (B+M Key)                                                                                                                                        |
| Flash Type                   | MLC                                                                                                                                                       |
| Capacity                     | 32GB-256GB                                                                                                                                                |
| Max. Seq. R/W Speed (MB/s)   | 550/450                                                                                                                                                   |
| Operating Voltage            | 3.3V                                                                                                                                                      |
| Max. Power Consumption       | 3.5W                                                                                                                                                      |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                               |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                                                                                             |
| DRAM Cache                   | Supported                                                                                                                                                 |
| P/E Cycle (times)            | 3K                                                                                                                                                        |
| ECC Engine                   | BCH ECC                                                                                                                                                   |
| A+ SLC Mode                  | Available by request                                                                                                                                      |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours                                                                 |
| Dimensions (L x W x H)       | 80 x 22 x 3.6mm                                                                                                                                           |

| Model Name                   | IM2S3134N                                                                                                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | <ol style="list-style-type: none"> <li>1. Supports S.M.A.R.T. Monitor</li> <li>2. Wear Leveling, Bad Block Management, Garbage Collection</li> <li>3. BCH ECC Engine</li> </ol> |
| Interface                    | SATA III 6.0Gbps                                                                                                                                                                |
| Form Factor                  | M.2 2242 (B+M Key)                                                                                                                                                              |
| Flash Type                   | MLC                                                                                                                                                                             |
| Capacity                     | 64GB - 128GB                                                                                                                                                                    |
| Max. Seq. R/W Speed (MB/s)   | 500/320                                                                                                                                                                         |
| Operating Voltage            | 3.3V                                                                                                                                                                            |
| Max. Power Consumption       | 2.5W                                                                                                                                                                            |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                                                                                                                     |
| Operating Temp. (Industrial) | -                                                                                                                                                                               |
| DRAM Cache                   | Supported                                                                                                                                                                       |
| P/E Cycle (times)            | 3K                                                                                                                                                                              |
| ECC Engine                   | BCH ECC                                                                                                                                                                         |
| A+ SLC Mode                  | -                                                                                                                                                                               |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 2 million hours                                                                                       |
| Dimensions (L x W x H)       | 42 x 22 x 3.5mm                                                                                                                                                                 |

# mSATA SSD

## Original IC Implement

3K-100K P/E cycles for high endurance

Wide-Temp. Support (-40°C to 85°C)

S.M.A.R.T. Monitor, Wear Leveling, NCQ and TRIM Command



| Model Name                   | IMSS31C                                                                                   | IMSS31D                                                    | IMSS316                                                    | IMSS332                                                                 |
|------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------|
| Features                     | 1. Supports SLC Cache, RAID Engine, and Thermal Throttling                                | 1. Supports SLC Cache, RAID Engine, and Thermal Throttling | 1. Supports SLC Cache, RAID Engine, and Thermal Throttling | 1. Supports Wear Leveling, TRIM and NCQ Command, and S.M.A.R.T. Monitor |
| Interface                    | SATA III 6.0Gbps                                                                          | SATA III 6.0Gbps                                           | SATA III 6.0Gbps                                           | SATA III 6.0Gbps                                                        |
| Form Factor                  | mSATA (MO-300A)                                                                           | mSATA (MO-300A)                                            | mSATA (MO-300A)                                            | mSATA (MO-300A)                                                         |
| Flash Type                   | 112L 3D TLC                                                                               | 112L 3D TLC                                                | 112L 3D TLC                                                | MLC                                                                     |
| Capacity                     | 128GB - 2TB                                                                               | 128GB - 2TB                                                | 128GB - 2TB                                                | 16GB - 256GB                                                            |
| Max. Seq. R/W Speed (MB/s)   | 560/490                                                                                   | 560/490                                                    | 560/510                                                    | 550/450                                                                 |
| Operating Voltage            | 3.3V                                                                                      | 3.3V                                                       | 3.3V                                                       | 3.3V                                                                    |
| Max. Power Consumption       | 2.6W                                                                                      | 1.1W                                                       | 1.46W                                                      | 3.4W                                                                    |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                               | 0°C to 70°C                                                | 0°C to 70°C                                                | 0°C to 70°C                                                             |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                             | -                                                          | -40°C to 85°C                                              | -40°C to 85°C                                                           |
| DRAM Cache                   | Supported                                                                                 | -                                                          | -                                                          | Supported                                                               |
| P/E Cycle (times)            | 3K                                                                                        | 3K                                                         | 3K                                                         | 3K                                                                      |
| ECC Engine                   | LDPC ECC                                                                                  | LDPC ECC                                                   | LDPC ECC                                                   | BCH ECC                                                                 |
| H/W PLP Function             | Available by request                                                                      | -                                                          | -                                                          | Available by request                                                    |
| A+ SLC Mode                  | Available by request                                                                      | -                                                          | Available by request                                       | Available by request                                                    |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours |                                                            |                                                            |                                                                         |
| Dimensions (L x W x H)       | 50.80 x 29.85 x 4.5mm                                                                     |                                                            |                                                            |                                                                         |

Product specifications are subject to change without prior notice

# DOM (Disk-On-Module)

Error Correcting Code

H/W Write Protect

Wear Leveling



| Model Name                   | IUMU211                                                                                   |                                                                      | ISMS331                                                                                                 |                                                                                                                                                                                    |
|------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Features                     | 1. BCH ECC Engine<br>2. Wear Leveling, Bad Block Management, Garbage Collection           |                                                                      | 1. BCH ECC Engine<br>2. H/W Write Protect<br>3. Wear Leveling, Bad Block Management, Garbage Collection |                                                                                                                                                                                    |
| Interface                    | USB 2.0                                                                                   |                                                                      | SATA III 6.0Gbps                                                                                        |                                                                                                                                                                                    |
| Form Factor                  | USB 10 Pin                                                                                |                                                                      | SATA DOM                                                                                                |                                                                                                                                                                                    |
| Flash Type                   | MLC                                                                                       |                                                                      | MLC                                                                                                     |                                                                                                                                                                                    |
| Capacity                     | 8GB - 32GB                                                                                |                                                                      | 8GB - 128GB                                                                                             |                                                                                                                                                                                    |
| Max. Seq. R/W Speed (MB/s)   | 43/32                                                                                     |                                                                      | 340/200                                                                                                 |                                                                                                                                                                                    |
| Operating Voltage            | 5V                                                                                        |                                                                      | 5V                                                                                                      |                                                                                                                                                                                    |
| Max. Power Consumption       | 0.5W                                                                                      |                                                                      | 1.6W                                                                                                    |                                                                                                                                                                                    |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                               |                                                                      | 0°C to 70°C                                                                                             |                                                                                                                                                                                    |
| Operating Temp. (Industrial) | -                                                                                         |                                                                      | -40°C to 85°C                                                                                           |                                                                                                                                                                                    |
| P/E Cycle (times)            | 3K                                                                                        |                                                                      | 3K                                                                                                      |                                                                                                                                                                                    |
| ECC Engine                   | BCH ECC                                                                                   |                                                                      | BCH ECC                                                                                                 |                                                                                                                                                                                    |
| A+ SLC Mode                  | -                                                                                         |                                                                      | Available by request                                                                                    |                                                                                                                                                                                    |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours |                                                                      |                                                                                                         |                                                                                                                                                                                    |
| Dimensions (L x W x H)       | (2.54mm):<br>36.9 x 26.6 x 8.5mm<br>(2.0mm):<br>36.9 x 26.6 x 5.75mm                      | (2.54mm):<br>36.9 x 26.6 x 8.5mm<br>(2.0mm):<br>36.9 x 26.6 x 5.75mm | (Vertical) w/o Housing:<br>38.4 x 23.4 x 8.45mm                                                         | (Horizontal)<br>w/ Housing: 34.63 x 24.94 x 18.51mm<br>w/o Housing: 32.56 x 23.4 x 17.33mm<br>(Vertical)<br>w/ Housing: 40.47 x 24.94 x 6.8mm<br>w/o Housing: 38.4 x 23.4 x 8.45mm |

Product specifications are subject to change without prior notice



# INDUSTRIAL-GRADE MEMORY CARDS and EMBEDDED MEMORY

CFAST  
COMPACT FLASH  
SD / microSD  
EMMC  
UFS



# CFast Card

Error Correcting Code

Wide-Temp. Support (-40°C to 85°C)

S.M.A.R.T., Wear Leveling, NCQ and TRIM Command



| Model Name                   | ISC3E                                                                                     | ICFS31C          |
|------------------------------|-------------------------------------------------------------------------------------------|------------------|
| Interface                    | SATA III 6.0Gbps                                                                          | SATA III 6.0Gbps |
| Form Factor                  | CFast 2.0                                                                                 | CFast 2.0        |
| Flash Type                   | MLC                                                                                       | 112L 3D TLC      |
| Capacity                     | 8GB - 256GB                                                                               | 80GB - 1TB       |
| Max. Seq. R/W Speed (MB/s)   | 540/400                                                                                   | 560/490          |
| Operating Voltage            | 3.3V                                                                                      | 3.3V             |
| Max. Power Consumption       | 2W                                                                                        | 2W               |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                               | 0°C to 70°C      |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                             | -40°C to 85°C    |
| P/E Cycle (times)            | 3K - 60K                                                                                  | 3K - 100K(A+SLC) |
| ECC Engine                   | BCH ECC                                                                                   | LDPC ECC         |
| A+ SLC Mode                  | Ready                                                                                     | Ready            |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours |                  |
| Dimensions (L x W x H)       | 36.55x42.9x3.6mm                                                                          | 36.55x42.9x4.0mm |

# CF Card

Error Correcting Code

Wide-Temp. Support (-40°C to 85°C)

Wear Leveling, Bad Block Management



| Model Name                   | IPC39                                                                                     |
|------------------------------|-------------------------------------------------------------------------------------------|
| Interface                    | PATA                                                                                      |
| Form Factor                  | CF50 pin type 1                                                                           |
| Flash Type                   | MLC                                                                                       |
| Capacity                     | 8GB-128GB                                                                                 |
| Max. Seq. R/W Speed (MB/s)   | 125/125                                                                                   |
| Operating Voltage            | 3.3V                                                                                      |
| Max. Power Consumption       | 1W                                                                                        |
| Operating Temp. (Standard)   | 0°C to 70°C                                                                               |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                             |
| P/E Cycle (times)            | 3K - 60K                                                                                  |
| ECC Engine                   | BCH ECC                                                                                   |
| A+ SLC Mode                  | available by request (For MLC Model)                                                      |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours |
| Dimensions (L x W x H)       | 36.4 x 42.8 x 3.3mm                                                                       |

Product specifications are subject to change without prior notice

# SD Card

Error Correcting Code

Wide-Temp. Support (-40°C to 85°C)

Wear Leveling, S.M.A.R.T. Monitor



| Model Name                   | ISDD33K                                                                                   | IDC3B                |
|------------------------------|-------------------------------------------------------------------------------------------|----------------------|
| Interface                    | SD 6.1                                                                                    | SD 3.0               |
| Flash Type                   | 3D TLC                                                                                    | MLC                  |
| Capacity                     | 64GB - 512GB                                                                              | 8GB - 256GB          |
| Max. Seq. R/W Speed (MB/s)   | 93/84                                                                                     | 95/69                |
| Operating Voltage            | 2.7V~3.6V                                                                                 | 2.7V~3.6V            |
| Max. Power Consumption       | 1.12W                                                                                     | 0.72W                |
| Operating Temp. (Standard)   | -25°C to 85°C                                                                             | -25°C to 85°C        |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                             | -40°C to 85°C        |
| P/E Cycle (times)            | 3K                                                                                        | 3K                   |
| ECC Engine                   | LDPC ECC                                                                                  | BCH ECC              |
| A+ SLC Mode                  | Ready                                                                                     | available by request |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours |                      |
| Dimensions (L x W x H)       | 32 x 24 x 2.1mm                                                                           |                      |

# microSD Card

Error Correcting Code

Wide-Temp. Support (-40°C to 85°C)

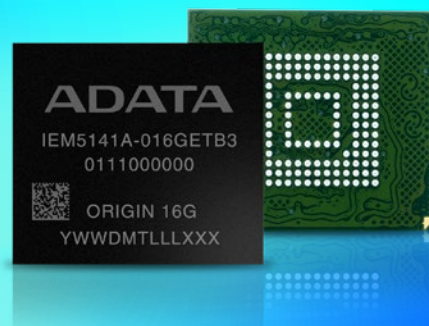
Wear Leveling, Bad Block Management



| Model Name                   | IUDD33K                                                                                   | IDU3A                |
|------------------------------|-------------------------------------------------------------------------------------------|----------------------|
| Interface                    | SD 6.1                                                                                    | SD 3.0               |
| Flash Type                   | 218L / 112L 3D TLC                                                                        | MLC                  |
| Capacity                     | 16GB - 512GB                                                                              | 8GB - 64GB           |
| Max. Seq. R/W Speed (MB/s)   | 97/80                                                                                     | 96/67                |
| Operating Voltage            | 2.7V~3.6V                                                                                 | 2.7V~3.6V            |
| Max. Power Consumption       | 0.71W                                                                                     | 0.63W                |
| Operating Temp. (Standard)   | -25°C to 85°C                                                                             | -25°C to 85°C        |
| Operating Temp. (Industrial) | -40°C to 85°C                                                                             | -40°C to 85°C        |
| P/E Cycle (times)            | 3K - 100K                                                                                 | 3K                   |
| ECC Engine                   | LDPC ECC                                                                                  | BCH ECC              |
| A+ SLC Mode                  | Ready                                                                                     | Available by request |
| Environment                  | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours |                      |
| Dimensions (L x W x H)       | 11 x 15 x 1mm                                                                             |                      |

# eMMC

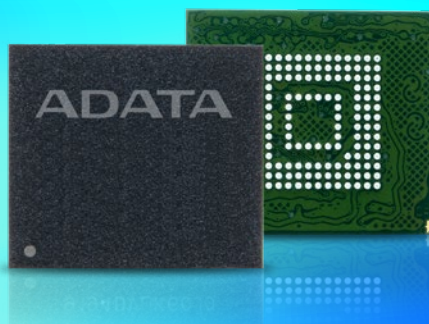
3K P/E Cycle Rating  
Auto Sleep on/off Mode  
Partitioning Management  
Wide-Temp. Support (-40°C to 85°C)



| Model Name                    | EMMC51C (3D TLC)                     |
|-------------------------------|--------------------------------------|
| Interface                     | eMMC 5.1                             |
| Flash Type                    | 3D TLC                               |
| Capacity                      | 64GB - 128GB                         |
| Max. Seq. R/W Speed (MB/s)    | 300/260                              |
| Core Voltage                  | 2.7V - 3.6V                          |
| Support three data bus widths | 1.7V - 1.95V                         |
| Operating Temp. (Standard)    | -25°C to 85°C                        |
| Operating Temp. (Industrial)  | -                                    |
| P/E Cycle (times)             | 3K                                   |
| Data Retention                | 10 years (at +40°C for fresh device) |
| ECC Engine                    | LDPC ECC                             |
| Thermal Throttling            | X                                    |
| TBW (Max.)                    | 40TB                                 |
| Dimensions (L x W x H)        | 11.5 x 13 x 0.8mm (153 balls)        |

# UFS

Fit for a wide variety of portable devices  
Dynamic power management  
multiple NAND technology transitions



| Model Name                | UFS100                   |
|---------------------------|--------------------------|
| Interface                 | UFS3.1                   |
| Flash Type                | 112L 3D TLC              |
| Capacity                  | 128GB-256GB              |
| Max. Seq. R/W Speed(MB/s) | 2000/900                 |
| Max. Voltage VCC          | 2.70 ~ 3.6V              |
| Operating Temp.           | -25°C ~ 85°C             |
| P/E Cycles                | 3K                       |
| ECC Engine                | LDPC ECC                 |
| Signaling Mode            | PWM G1-G4<br>HS-G1-G4    |
| Dimensions(LxWxH)         | 11.5x13.0x1.0mm(153ball) |

# USB Flash Drive



3K P/E Cycle Rating  
USB 3.2 Interface  
Metallic Enclosure  
Wear Leveling  
Error Correcting Code



| Model Name                    | UV131                                                                                     | IUFU315C          |
|-------------------------------|-------------------------------------------------------------------------------------------|-------------------|
| Interface                     | USB 3.2 Gen 1                                                                             | USB 3.2 Gen 1     |
| Flash Type                    | MLC                                                                                       | TLC               |
| Capacity                      | 8GB - 64GB                                                                                | 64GB - 512GB      |
| Max. Seq. R/W Speed (MB/s)    | 116/79                                                                                    | 400/185           |
| Operating Voltage             | 5V                                                                                        | 5V                |
| Max. Power Consumption        | 1.02W                                                                                     | 1.02W             |
| Dimensions (L x W x H)        | 44.2 x 16.8 x 8.0mm                                                                       | 59.3 x 16.9 x 7mm |
| Weight                        | 8g                                                                                        | 7.6g              |
| Operating Temp. (Standard)    | 0°C to 70°C                                                                               | 0°C to 70°C       |
| P/E Cycle (times)             | 3K                                                                                        | 3K                |
| ECC Engine                    | BCH ECC                                                                                   | BCH ECC           |
| Environment                   | Vibration: 20G (20 - 2000Hz), Shock: 1500G/0.5ms, Half Sine Wave, MTBF: > 3 million hours |                   |
| Operating System Requirements | Windows XP or later, Mac OS X 10.6 or later, Linux Kernel 2.6 or later                    |                   |

Product specifications are subject to change without prior notice

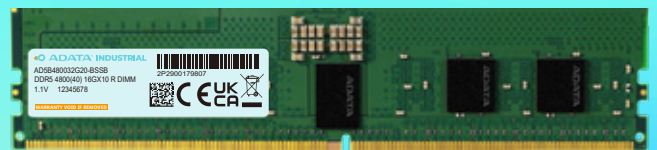
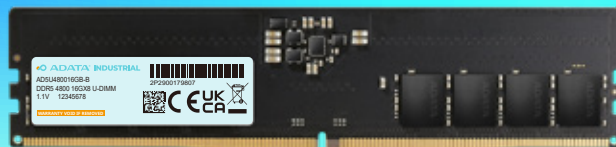


# DRAM MODULES

EMBEDDED SERIES

SERVER SERIES

WIDE-TEMPERATURE SERIES



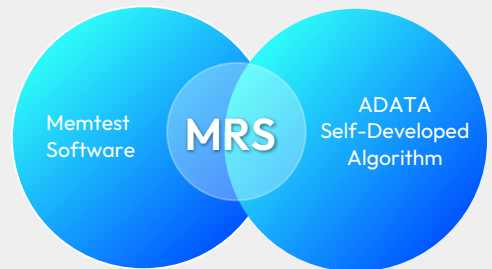
# Stringent Validation and Tests



## ADATA's Proprietary MRS Test

### What is MRS?

ADATA has developed proprietary software to test DRAM modules – MRS. MRS integrates the advantages of a self-developed algorithm and Memtest software, simulating system behaviors, including heavy loading, random read/write operation, and multi-cores operation.



### The Advantages of MRS

With MRS we can:

- Collect data on motherboards and DRAM modules for management control during manufacturing
- Record the speed, capacity, timing, and voltage of modules
- Easily identify defective DRAM module components via a graphic interface



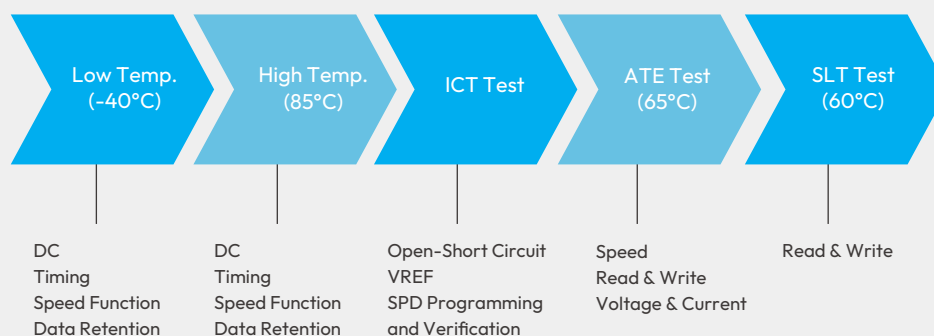
## Multiple Reliability Tests

With large chambers, we are able to conduct various reliability tests, including dynamic environment tests by batches and systems and ensure the consistent quality of our products. Meanwhile we can also conduct MTBF, HTOL, LTOL tests per customers' requests or by different products.



## Wide-Temperature Testing

### Testing Process of Wide-Temperature Modules



Wide-Temp. IC Sorting  
via Automatic Test Equipment (ATE)



# Stringent Validation and Tests

## Fully Automated Production



SMT Line



Chip Mounter



AOI  
(Automated Optical Inspection)



Auto Labeling

## ATE (Automatic Test Equipment)

ATE (Automatic Test Equipment) is used for DRAM specification testing. Testing capability equals that of semiconductor industry-level machinery. This guarantees ADATA's modules meet DRAM specifications, including function, DC, AC, timing, and frequency. ADATA has industry-leading ATE test equipment and has achieved digital and networked control for test programs, data collection, and analysis.

Open, short, and continuous tests

DC Test (leakage, IDD, VREF)

Speed Test (timing parameter check, data BGR check)

Function Test (H/L CDD, Refresh, Self-refresh, Read/Write Operation, Data Mask, OTF)



## Product Features

|             |       |                | <br>30p<br>Gold Finger | <br>Wide Temperature<br>Support | <br>Temperature<br>Sensor | <br>Conformal<br>Coating | <br>Anti-sulfuration |
|-------------|-------|----------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Embedded    | DDR3L | U-DIMM         | ▲                                                                                                         | ▲                                                                                                                  | ▲                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | SO-DIMM        | ▲                                                                                                         | ▲                                                                                                                  | ▲                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             | DDR4  | U-DIMM         | ▲                                                                                                         | ▲                                                                                                                  | ▲                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | VLP U-DIMM     | ▲                                                                                                         | ▲                                                                                                                  | ▲                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | SO-DIMM        | ▲                                                                                                         | ▲                                                                                                                  | ▲                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             | DDR5  | U-DIMM         | ▲                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
| SO-DIMM     |       | ▲              | ▲                                                                                                         | ●                                                                                                                  | ▲                                                                                                             | ▲                                                                                                             |                                                                                                           |
| Server      | DDR3L | R-DIMM         | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | ECC U-DIMM     | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | ECC SO-DIMM    | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             | DDR4  | R-DIMM         | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | ECC U-DIMM     | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | ECC SO-DIMM    | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | VLP ECC U-DIMM | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | VLP R-DIMM     | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             | DDR5  | R-DIMM         | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
|             |       | ECC U-DIMM     | ●                                                                                                         | ▲                                                                                                                  | ●                                                                                                             | ▲                                                                                                             | ▲                                                                                                         |
| ECC SO-DIMM |       | ●              | ▲                                                                                                         | ●                                                                                                                  | ▲                                                                                                             | ▲                                                                                                             |                                                                                                           |

▲ By Request ● Supported

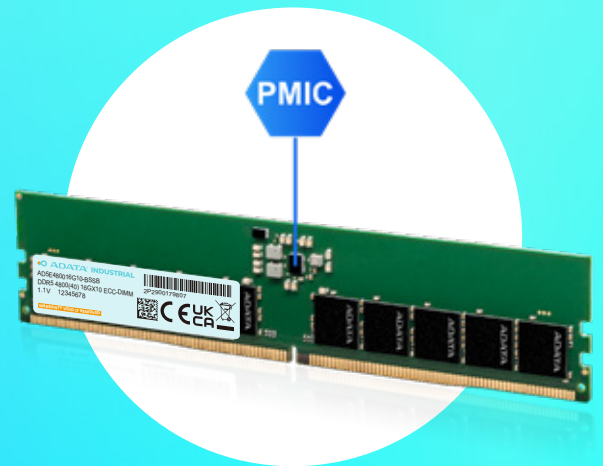
# DDR5 MEMORY MODULES

## EMPOWERING HIGH SPEED COMPUTING AND 5G

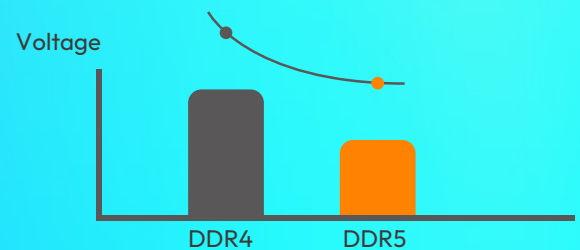
To meet the emerging demands of 5G, AIoT, Edge Computing, HPC, and more, ADATA has unveiled new industrial-grade DDR5 memory modules. They are capable of reaching speeds of up to 5600 MT/s and yet only operates on 1.1V. In addition, they are equipped with a Power Management IC (PMIC) to enhance power supply stability.

### Why DDR5

ADATA's industrial-grade DDR5 memory modules feature the advantages below, making them ideal for automation, networking, surveillance, IPCs, embedded systems, servers. At present, ADATA DDR5 series are being widely implemented for automation and servers.



|      |           |           |
|------|-----------|-----------|
| DDR5 | 44.8 GBps | 5600 MT/s |
| DDR4 | 25.6 GBps | 3200 MT/s |
| DDR3 | 12.8 GBps | 1600 MT/s |



5600 MT/s

1.5X Faster transfer rate  
compared to DDR4



1.1V

Consumes 9% less power  
compared to DDR4



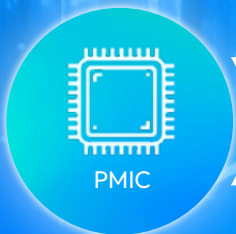
OG IC

Original IC  
for great reliability



On-die ECC

For more reliable  
data transmissions



PMIC

Power Management IC  
for improved power  
supply stability

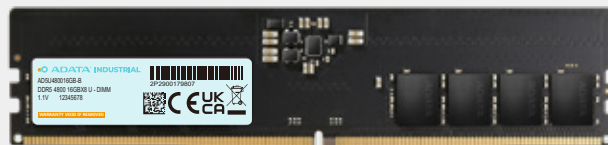


48GB

Ample storage capacity  
up to 48GB

# Embedded

## Unbuffered DIMM



DDR5

|                                |                                                                    |                             |                      |                 |
|--------------------------------|--------------------------------------------------------------------|-----------------------------|----------------------|-----------------|
| Interface                      | DDR5                                                               | DDR5                        | DDR4                 | DDR3L           |
| Module Type                    | CU-DIMM                                                            | U-DIMM                      | U-DIMM               | U-DIMM          |
| Frequency (MT/s)               | 6400                                                               | 4800/5600                   | 2400 / 2666 / 3200   | 1600            |
| Capacity                       | 8GB, 16GB, 32GB                                                    | 8GB, 16GB, 24GB, 32GB, 48GB | 4GB, 8GB, 16GB, 32GB | 2GB, 4GB, 8GB   |
| Pin Count                      | 288 Pin                                                            | 288 Pin                     | 288 Pin              | 240 Pin         |
| PCB Height (inch/ mm)          | 1.23 inches/3.12cm                                                 | 1.23 inches/3.12cm          | 1.23 inches/3.12cm   | 1.18 inches/3cm |
| Operating Voltage              | 1.1V                                                               | 1.1V                        | 1.2V                 | 1.35V           |
| Operating Temp.                | 0°C to 95°C (Tc)                                                   | 0°C to 95°C (Tc)            | 0°C to 85°C          | 0°C to 85°C     |
| Customized Services (Optional) | Anti-Sulfuration Protection, Conformal Coating, Wide-Temp. Support |                             |                      |                 |

## SO-DIMM



DDR5

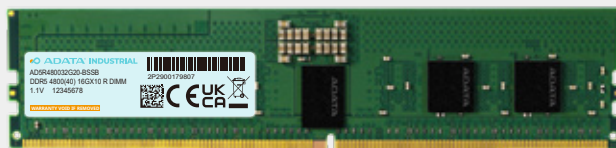
|                                |                                                                    |                             |                      |                    |
|--------------------------------|--------------------------------------------------------------------|-----------------------------|----------------------|--------------------|
| Interface                      | DDR5                                                               | DDR5                        | DDR4                 | DDR3L              |
| Module Type                    | CSO-DIMM                                                           | SO-DIMM                     | SO-DIMM              | SO-DIMM            |
| Frequency (MT/s)               | 6400                                                               | 4800 / 5600                 | 2400 / 2666 / 3200   | 1600               |
| Capacity                       | 8GB, 16GB, 32GB                                                    | 8GB, 16GB, 24GB, 32GB, 48GB | 4GB, 8GB, 16GB, 32GB | 1GB, 2GB, 4GB, 8GB |
| Pin Count                      | 262 Pin                                                            | 262 Pin                     | 260 Pin              | 204 Pin            |
| PCB Height (inch/ mm)          | 1.23 inches/3.12cm                                                 | 1.23 inches/ 3.12cm         | 1.23 inches/ 3.12cm  | 1.18 inches/3cm    |
| Operating Voltage              | 1.1V                                                               | 1.1V                        | 1.2V                 | 1.35V              |
| Operating Temp.                | 0°C to 95°C (Tc)                                                   | 0°C to 85°C                 | 0°C to 85°C          | 0°C to 85°C        |
| Customized Services (Optional) | Anti-Sulfuration Protection, Conformal Coating, Wide-Temp. Support |                             |                      |                    |

## Embedded VLP U-DIMM



|                                |                                                                                       |
|--------------------------------|---------------------------------------------------------------------------------------|
| Interface                      | DDR4                                                                                  |
| Module Type                    | VLP U-DIMM                                                                            |
| Frequency (MT/s)               | 2400 / 2666                                                                           |
| Capacity                       | 2400MT/s: 2GB, 4GB, 8GB, 16GB<br>2666MT/s: 2GB, 4GB, 8GB, 16GB<br>3200MT/s: 8GB, 16GB |
| Pin Count                      | 288 Pin                                                                               |
| PCB Height (inch/ mm)          | 0.73 inches/ 1.85cm                                                                   |
| Operating Voltage              | 1.2V                                                                                  |
| Operating Temp.                | 0°C to 85°C                                                                           |
| Customized Services (Optional) | Anti-Sulfuration Protection, Conformal Coating, Wide-Temp. Support                    |

## Registered DIMM



DDR5

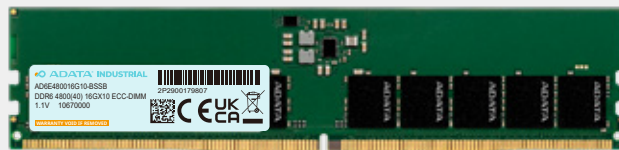
|                                |                                                                    |                                                             |                 |
|--------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------|-----------------|
| Interface                      | DDR5                                                               | DDR4                                                        | DDR3L           |
| Module Type                    | R-DIMM                                                             | R-DIMM                                                      | R-DIMM          |
| Frequency (MT/s)               | 4800 / 5600                                                        | 2666 / 3200                                                 | 1600            |
| Capacity                       | 16GB, 32GB                                                         | 2666MT/s: 4GB, 8GB, 16GB, 32GB<br>3200MT/s: 8GB, 16GB, 32GB | 8GB             |
| Pin Count                      | 288 Pin                                                            | 288 Pin                                                     | 240 Pin         |
| PCB Height (inch/ mm)          | 1.23 inches/ 3.12cm                                                | 1.23 inches/ 3.12cm                                         | 1.18 inches/3cm |
| Operating Voltage              | 1.1V                                                               | 1.2V                                                        | 1.35V           |
| Operating Temp.                | 0°C to 95°C (Tc)                                                   | 0°C to 85°C                                                 | 0°C to 85°C     |
| 30μ PCB Gold Plating           | V                                                                  | V                                                           | V               |
| Customized Services (Optional) | Anti-Sulfuration Protection, Conformal Coating, Wide-Temp. Support |                                                             |                 |

## VLP ECC U-DIMM



|                                |                                                                             |                     |
|--------------------------------|-----------------------------------------------------------------------------|---------------------|
| Interface                      | DDR4                                                                        | DDR3L               |
| Module Type                    | VLP ECC U-DIMM                                                              | VLP ECC U-DIMM      |
| Frequency (MT/s)               | 2400 / 2666 / 3200                                                          | 1600                |
| Capacity                       | 2400MT/s: 4GB, 8GB, 16GB<br>2666MT/s: 4GB, 8GB, 16GB<br>3200MT/s: 8GB, 16GB | 2GB, 4GB, 8GB       |
| Pin Count                      | 288 Pin                                                                     | 240 Pin             |
| PCB Height (inch/ mm)          | 0.73 inches/ 1.85cm                                                         | 0.73 inches/ 1.85cm |
| Operating Voltage              | 1.2V                                                                        | 1.35V               |
| Operating Temp.                | 0°C to 85°C                                                                 | 0°C to 85°C         |
| 30μ PCB Gold Plating           | V                                                                           | V                   |
| Customized Services (Optional) | Anti-Sulfuration Protection, Conformal Coating, Wide-Temp. Support          |                     |

## ECC U-DIMM



DDR5

| Interface                      | DDR5                                                               | DDR5                | DDR4                                                                               | DDR3L           |
|--------------------------------|--------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------|-----------------|
| Module Type                    | ECC CU-DIMM                                                        | ECC U-DIMM          | ECC U-DIMM                                                                         | ECC U-DIMM      |
| Frequency (MT/s)               | 6400                                                               | 4800 / 5600         | 2400 / 2666 / 3200                                                                 | 1600            |
| Capacity                       | 16GB, 32GB, 64GB                                                   | 16GB, 32GB          | 2400MT/s: 4GB, 8GB, 16GB<br>2666MT/s: 4GB, 8GB, 16GB, 32GB<br>3200MT/s: 8GB - 32GB | 2GB, 4GB, 8GB   |
| Pin Count                      | 288 Pin                                                            | 288 Pin             | 288 Pin                                                                            | 204 Pin         |
| PCB Height (inch/ mm)          | 1.23 inches/ 3.12cm                                                | 1.23 inches/ 3.12cm | 1.23 inches/ 3.12cm                                                                | 1.18 inches/3cm |
| Operating Voltage              | 1.1V                                                               | 1.1V                | 1.2V                                                                               | 1.35V           |
| Operating Temp.                | 0°C to 95°C (Tc)                                                   | 0°C to 95°C (Tc)    | 0°C to 85°C                                                                        | 0°C to 85°C     |
| 30μ PCB Gold Plating           | V                                                                  | V                   | V                                                                                  | V               |
| Customized Services (Optional) | Anti-Sulfuration Protection, Conformal Coating, Wide-Temp. Support |                     |                                                                                    |                 |

## ECC SO-DIMM



DDR5

| Interface                      | DDR5                                                               | DDR5                | DDR4                                                                                               | DDR3L           |
|--------------------------------|--------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------|-----------------|
| Module Type                    | ECC CSO-DIMM                                                       | ECC SO-DIMM         | ECC SO-DIMM                                                                                        | ECC SO-DIMM     |
| Frequency (MT/s)               | 6400                                                               | 4800 / 5600         | 2400 / 2666 / 3200                                                                                 | 1600            |
| Capacity                       | 16GB, 32GB, 64GB                                                   | 16GB, 32GB          | 2400MT/s: 2GB, 4GB, 8GB, 16GB, 32GB<br>2666MT/s: 4GB, 8GB, 16GB, 32GB<br>3200MT/s: 8GB, 16GB, 32GB | 2GB, 4GB, 8GB   |
| Pin Count                      | 262 Pin                                                            | 262 Pin             | 260 Pin                                                                                            | 204 Pin         |
| PCB Height (inch/ mm)          | 1.23 inches/ 3.12cm                                                | 1.23 inches/ 3.12cm | 1.23 inches/ 3.12cm                                                                                | 1.18 inches/3cm |
| Operating Voltage              | 1.1V                                                               | 1.1V                | 1.2V                                                                                               | 1.35V           |
| Operating Temp.                | 0°C to 95°C (Tc)                                                   | 0°C to 95°C (Tc)    | 0°C to 85°C                                                                                        | 0°C to 85°C     |
| 30μ PCB Gold Plating           | V                                                                  | V                   | V                                                                                                  | V               |
| Customized Services (Optional) | Anti-Sulfuration Protection, Conformal Coating, Wide-Temp. Support |                     |                                                                                                    |                 |



# Product Catalog



# Enterprise-grade DRAM & SSD Solutions

TRUSTA delivers enterprise-grade DRAM and SSD solutions —trusted for stability, designed for flexibility, empowering global businesses with tailored support and a future-ready mindset.

## ADVANTAGE



### Trusted Quality

Enterprise-grade reliability you can trust



### AI-Ready

Optimized for AI & enterprise workloads



### Power Efficiency

Save energy, cut operating costs



### Form Factor Variety

Multi-size form factor support



### Scalable Design

Easy integration, flexible deployment



### Optional Features

FDP, SR-IOV & more



### Global Agility

Flexible services with global reach



### Strategic Alliance

Deep partnerships, seamless supply



### Global Production

Flexible delivery, global coverage

## TARGET APPLICATIONS

### Server & Data center



### AI & Data Science



### Virtualization Environment



### Object Storage ( Hybrid Cloud )



### Database & Real-Time Transactions



### Boot Drives in Data Centers

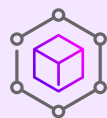


# AI Scaler Extended Memory Solution



TRUSTA introduces the AI Scaler Extended Memory Solution to address the high cost and limited availability of GPUs and HBM.

## Supported Models



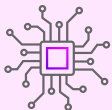
- Llama-3, Qwen3, Qwen3.5
- Mistral, Mixtral, GPT-OSS
- DeepSeek, Phi, Gemma3, Gemma4
- Continuously expanding model support

## Supported AL Agent Applications



- OpenClaw, NemoClaw, Hermes Agentic
- Compatible with OpenAI endpoint
- Continuously expanding application support

## Key Features



### Smarter AI Deployment

- Extends AI model computation to DRAM and SSD.
- Builds a scalable memory configuration across GPU, DRAM, and SSD.



### Greater Efficiency

- Dynamically allocates resources for inference and fine-tuning.
- Improves utilization of available DRAM and SSD resources for AI model computation.



### Flexible Scaling

- Helps overcome GPU memory limitations.
- Enables practical on-premises AI adoption with lower infrastructure costs.



### Free & Open Source

- Free to download, open-source ready, and hardware-flexible.
- Enables developers and enterprises to flexibly test AI configurations based on their computing needs.

# AI SCALER TOOLKIT FOR LOWER AI DEPLOYMENT COSTS

## Inference

Enviroment



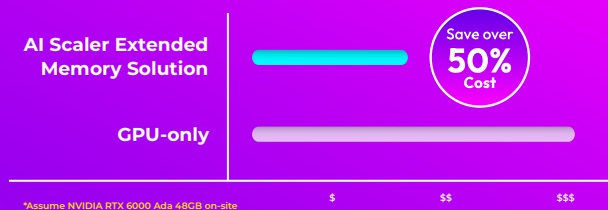
## Fine-Tuning

Enviroment



### TRUSTA AI Scaler Extended Memory Solution **WIN**

#### Cost Comparison

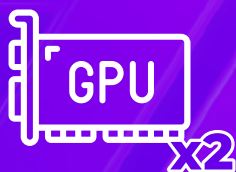


#### AI Scaler Extended Memory Solution



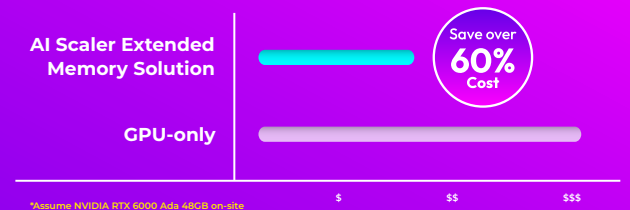
**VS**

#### GPU-only

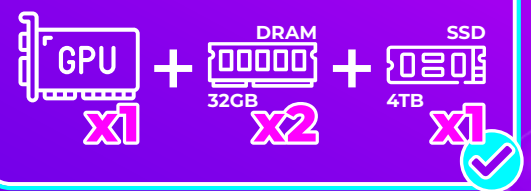


### TRUSTA AI Scaler Extended Memory Solution **WIN**

#### Cost Comparison

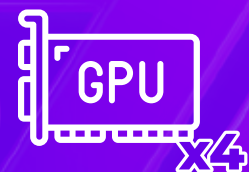


#### AI Scaler Extended Memory Solution



**VS**

#### GPU-only



# The Pinnacle of Performance and Efficiency T7P5 PCIe 5.0 SSD Solution



## High Performance

- 13.5GB/s Sequential Read
- 10.3GB/s Sequential Write
- 3.2M IOPS Random Read
- 470K IOPS Random Write



## Power Efficiency

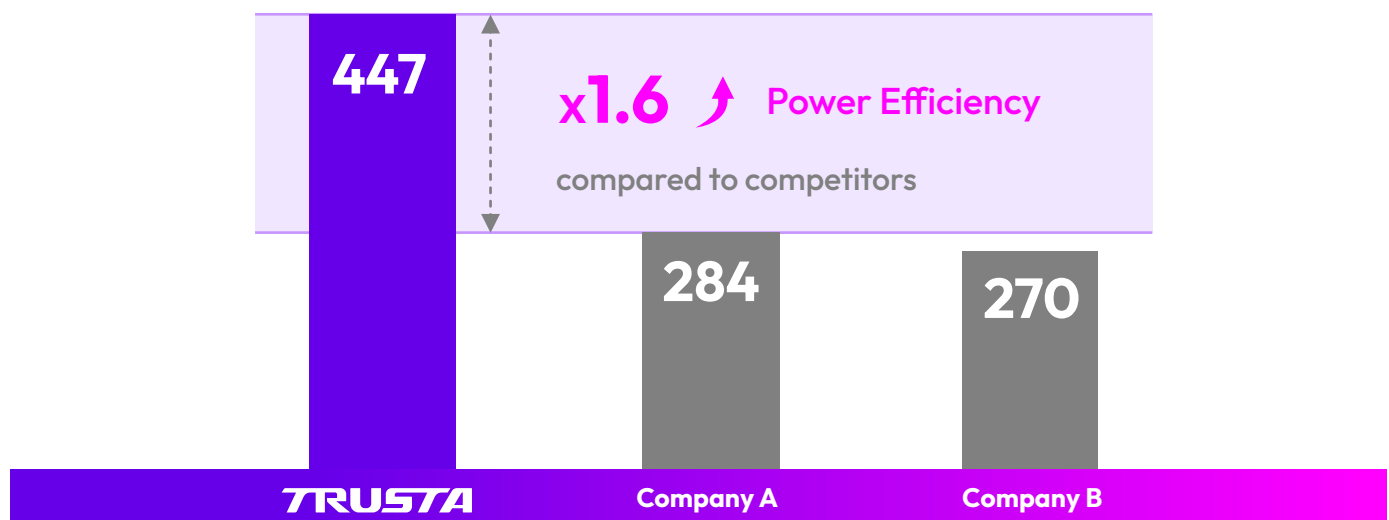
< 7W Controller at full performance



## Global Service Coverage

|                           |             |
|---------------------------|-------------|
| Sequential Read           | 13,500 MB/s |
| Sequential Write          | 10,300 MB/s |
| Random Read               | 3,200K IOPS |
| Random Write 7% OP        | 470K IOPS   |
| 28% OP                    | 870K IOPS   |
| Active Power (Controller) | < 7 Watt    |
| Active Power (SSD)        | < 23 Watt   |

Sequential Write Performance  
per Power (MB/s per W)



## TD7P51 ECO

## Next-Gen Power Efficient SSD



**U.2 E3.S**



**E1.S**

| Interface    | Form Factor                   | NAND    | Sequential (MB/s) |        | 4K Random (KIOPS) |       | Capacity         |
|--------------|-------------------------------|---------|-------------------|--------|-------------------|-------|------------------|
|              |                               |         | Read              | Write  | Read              | Write |                  |
| PCIe Gen5 x4 | U.2                           | 3D eTLC | 13,500            | 10,300 | 3,200             | 470   | 1.6TB to 15.36TB |
| PCIe Gen5 x4 | E1.S<br>(9.5mm / 15mm / 25mm) | 3D eTLC | 13,500            | 10,300 | 3,200             | 470   | 1.6TB to 15.36TB |
| PCIe Gen5 x4 | E3.S                          | 3D eTLC | 13,500            | 10,300 | 3,200             | 470   | 1.6TB to 15.36TB |

## T7P5 SSD

## High power Efficiency Gen5 SSD



**U.2 E3.S**



**E1.S**

| Interface    | Form Factor                   | NAND    | Sequential (MB/s) |        | 4K Random (KIOPS) |       | Capacity        |
|--------------|-------------------------------|---------|-------------------|--------|-------------------|-------|-----------------|
|              |                               |         | Read              | Write  | Read              | Write |                 |
| PCIe Gen5 x4 | U.2                           | 3D eTLC | 13,500            | 10,300 | 3,200             | 470   | 1.6TB to 7.68TB |
| PCIe Gen5 x4 | E1.S<br>(9.5mm / 15mm / 25mm) | 3D eTLC | 13,500            | 10,300 | 3,200             | 470   | 1.6TB to 7.68TB |
| PCIe Gen5 x4 | E3.S                          | 3D eTLC | 13,500            | 10,300 | 3,200             | 470   | 1.6TB to 7.68TB |

## TD7P40 SSD

## Enterprise Gen4 Performance



| Interface    | Form Factor | NAND    | Sequential(MB/s) |       | 4K Random(KIOPS) |       | Capacity         |
|--------------|-------------|---------|------------------|-------|------------------|-------|------------------|
|              |             |         | Read             | Write | Read             | Write |                  |
| PCIe Gen4 x4 | U.2         | 3D eTLC | 7,400            | 5,050 | 1,300            | 200   | 3.84TB to 7.68TB |

## TD5S30 SSD

## Reliable SATA Workloads



| Interface | Form Factor | NAND    | Sequential(MB/s) |       | 4K Random(KIOPS) |       | Capacity        |
|-----------|-------------|---------|------------------|-------|------------------|-------|-----------------|
|           |             |         | Read             | Write | Read             | Write |                 |
| SATA III  | 2.5"        | 3D eTLC | 530              | 510   | 80               | 50    | 480GB to 7.68TB |

## DDR5 R-DIMM

## Stable High-Load Performance



| Performance Stability | Speed                   | Pin Count | PCB Height             | Voltage | Operating Temp.       | Capacity      |
|-----------------------|-------------------------|-----------|------------------------|---------|-----------------------|---------------|
| Register Clock Driver | 5,600MT/s,<br>6,400MT/s | 288-Pin   | 1.23inches<br>/ 3.12cm | 1.1V    | Standard<br>(0°~95°C) | 16GB to 128GB |

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