UD info

Industrial Storage Solution Provider

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Background

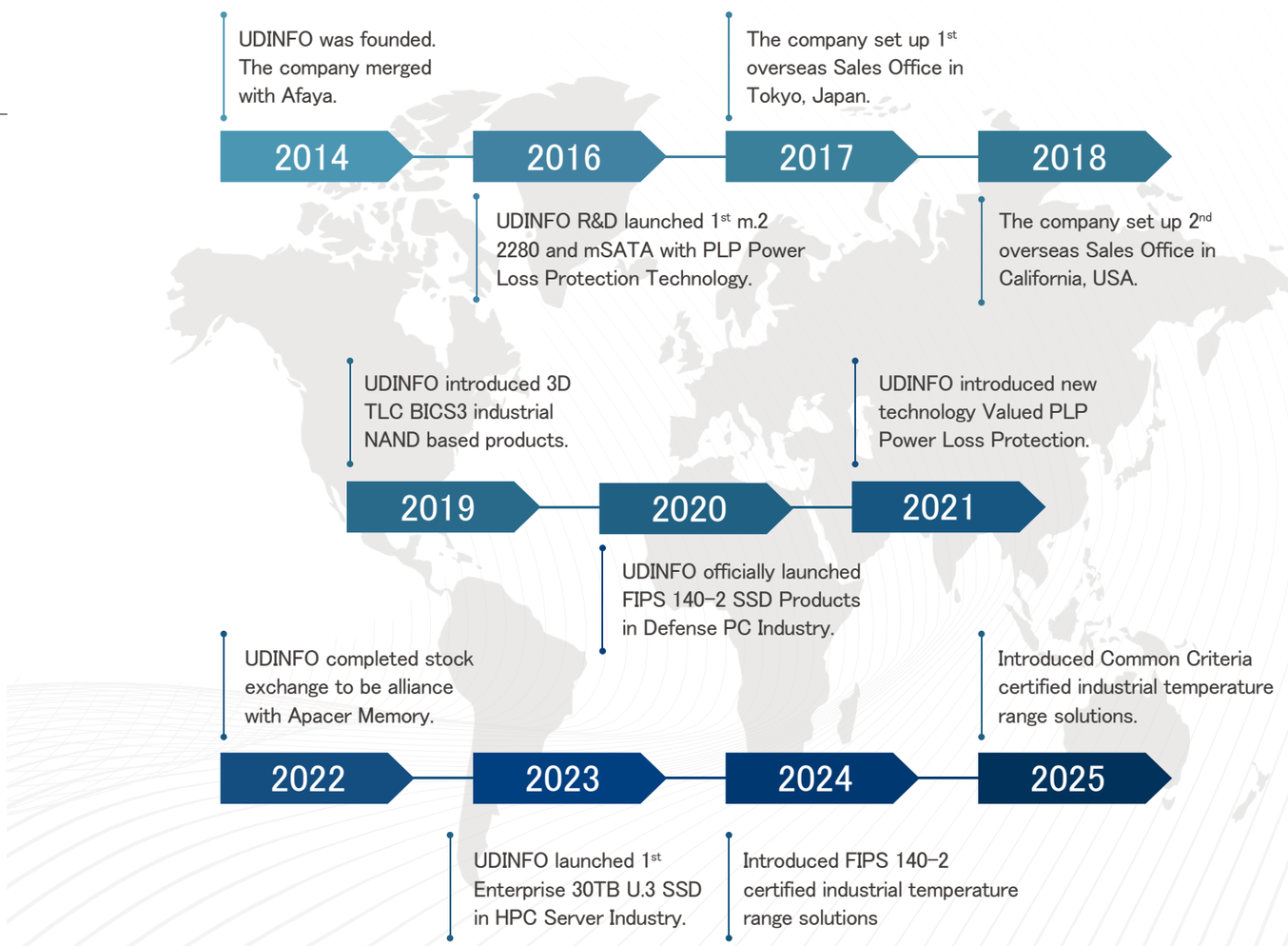
Founded in 2014, UDINFO is a professional engineering team that provides comprehensive NAND storage and DRAM solutions.

Acquiring Afaya Corporation, a pioneer in the CompactFlash market, UDINFO specializes in NAND firmware modification for industrial PCs and military rugged computing. In 2022, UDINFO formed an alliance with Apacer Technology Inc., enhancing its capabilities.

UDINFO's team excels in NAND firmware customization, SSD system integration, and NAND Flash manufacturing. Serving sectors like defense PC, HPC server, surveillance system, and navigation, UDINFO is a total-memory-solution provider, focusing on high-performance computing and rugged PC applications.

UDINFO's customization, flexibility, and specialization have earned it an excellent reputation in meeting the defense industry's demanding storage applications.

Milestones



FIPS

- Ensures secure and reliable data processing with strong encryption.
- FIPS 140 -2 : Applied on 2.5″ SATA SSD, M.2 SATA & PCIe M.2 2280
- FIPS 140-3 : Applied on PCIe M.2 2280, U.2, U.3 & E1.S

Power Loss Protection (PLP)

- Extra power to protect all data during power loss at write

Data Erase

- Erase all data, tables and hidden area
- Hardware push button or Software GPIO control
- Follow different military standards

Opal / AES (Security Encryption)

- Protect the confidentiality of stored user data aganist unauthorized access once it leaves the owner's control
- Hadware Encyptions are applied on SATA interface & PCIe interface SSD

MIL-STD

- Comply with US military specification that guarantees a level of durability for unit

Wide Temperature

- All the components are designed and tested under -40~85 ℃

Conformal Coating

- A layer of plastic protection is applied on all PCBA products in order to protect from dirt, dust, moisture, corrosion, electrical conduction and thermal conduction

Physical Destory (PD)

- Inputing a high voltage current through the module, damage the flash IC and ensure all data are completely destroyed

Write-Protect or Read only

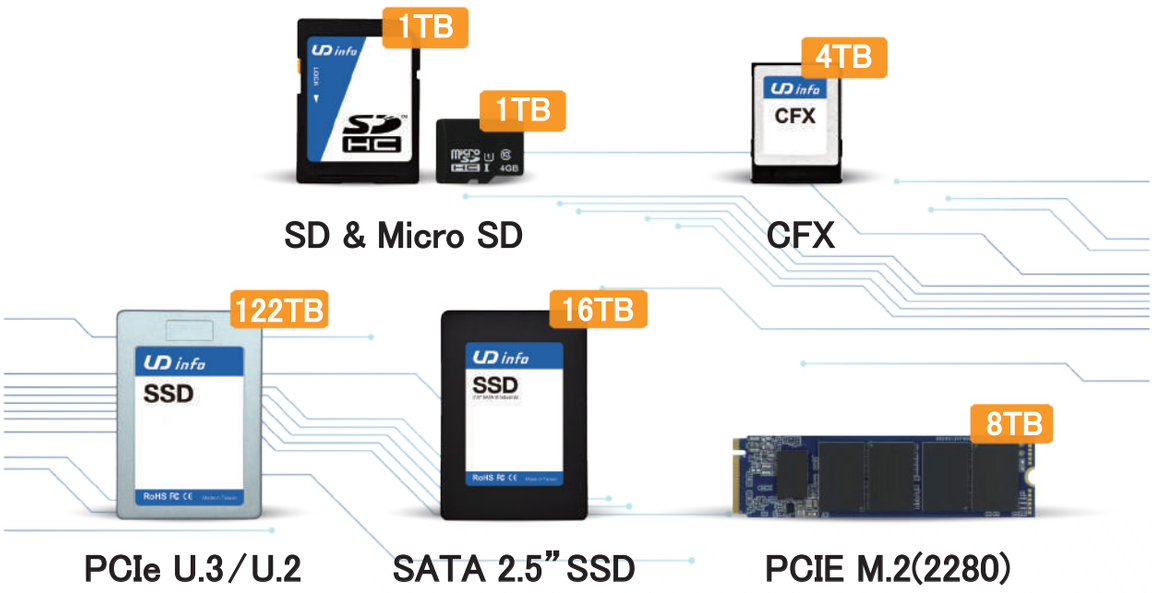
- Read Only
- Hardware Switch or Software GPIO control

S.M.A.R.T. (Self Monitoring Analysis Reporting Technology)

- Setting criteria for wearing message

High Capacity Solutions

Release the power of storage / Built for Performance / Reliable & Durable



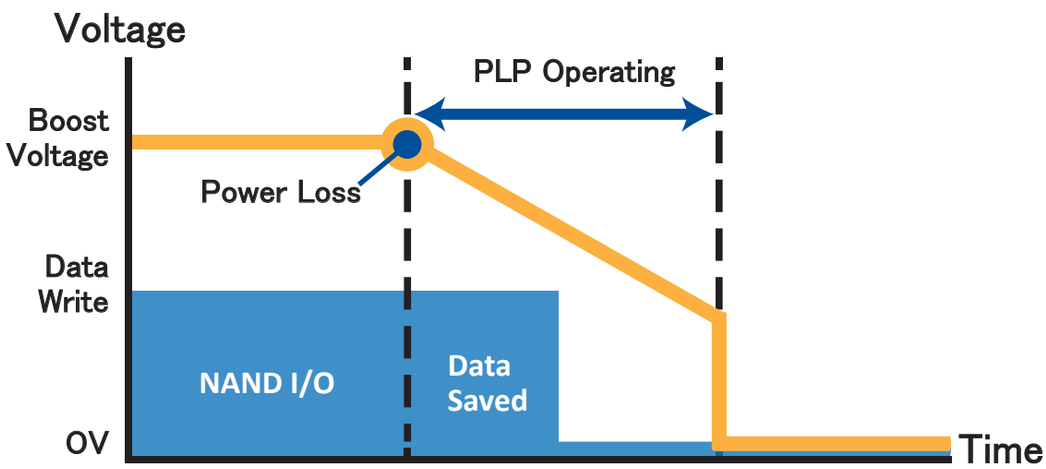
DRAM Modules

A full range of industrial grade DRAM Modules solution for from the legacy DDR to the latest DDR5 DRAM modules, that support a variety of applications and enable a perfect digital experience.

Form Factors	DDR5	DDR4	DDR3
SODIMM	8GB~64GB Up to 5600MT/s ECC & Non-ECC	2GB~32GB Up to 3200MT/s ECC & Non-ECC	2GB~8GB Up to 1866MT/s ECC & Non-ECC
UDIMM	8GB~64GB Up to 5600MT/s ECC & Non-ECC	2GB~32GB Up to 3200MT/s ECC & Non-ECC	2GB~8GB Up to 1866MT/s ECC & Non-ECC
RDIMM	16GB~128GB Up to 6400MT/s	4GB~64GB Up to 3200MT/s	-
CSODIMM	8GB~64GB Up to 6400MT/s ECC & Non-ECC	-	-
CUDIMM	8GB~64GB Up to 6400MT/s ECC & Non-ECC	-	-

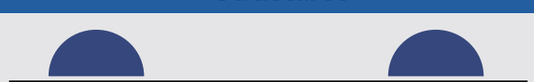
Power Loss Protection (PLP)

PLP helps secure the integrity of data from losing during power sudden off by adding Extra Power in the circuitry.



- Able to protect system and data
- Applied on PCIe U.2, PCIe M.2 2280, 2.5" SATA SSD, mSATA, M.2 SATA
- Available for SLC, MLC, 2D & 3D pSLC & 3D TLC Flash

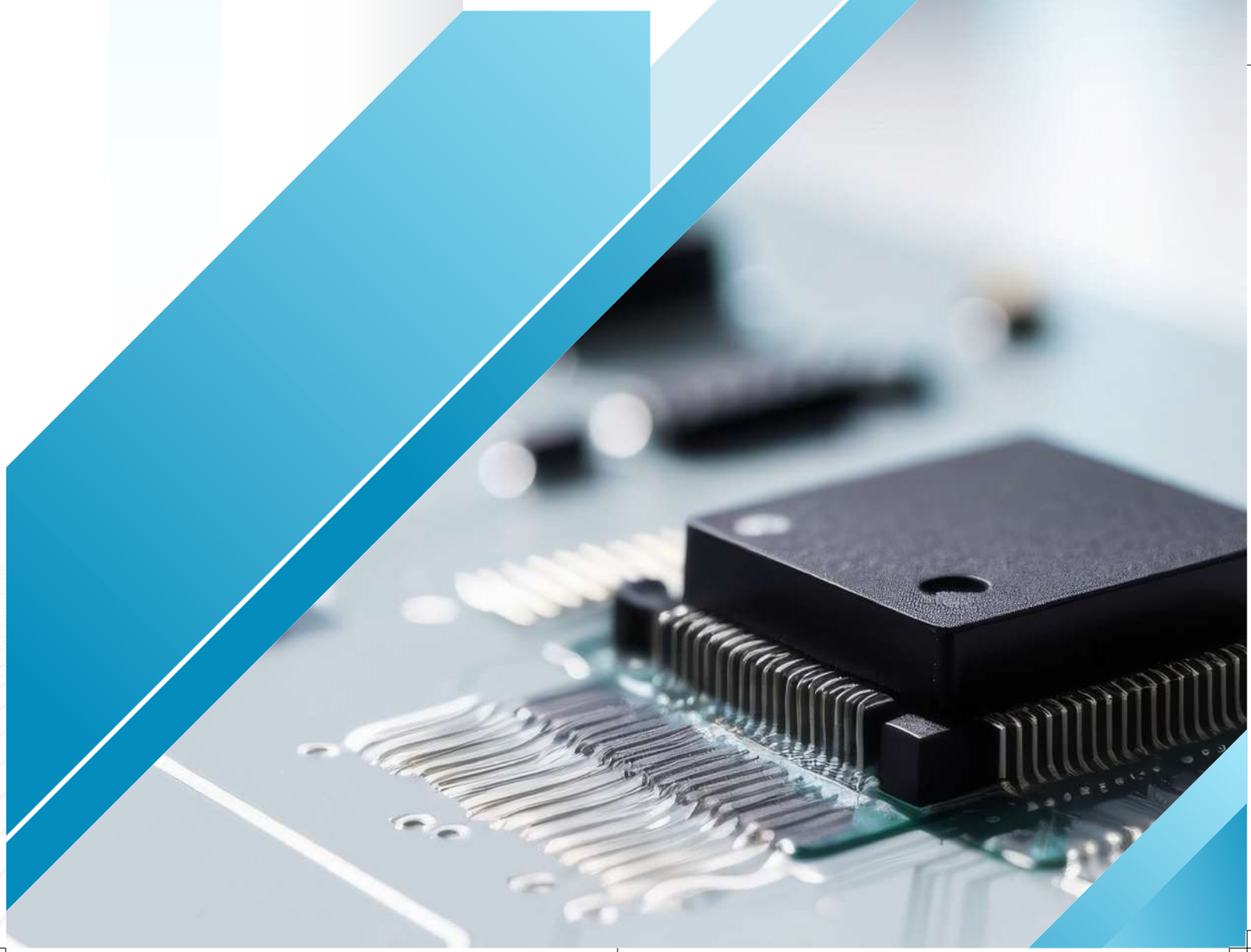
Pseudo SLC (pSLC)

NAND Types		Structures	Reliability (P/E Cycle)
2D	SLC		60K
	MLC		3K
	pSLC (Pseudo SLC)		30K
3D	TLC		3K
	pSLC (Pseudo SLC)		100K+

- pSLC is an Ideal Alternative Solution provides Reliability & Cost Efficiency, perfect for Heavy Write Application with Great Performance.
- Base on MLC or 3D TLC Flash to simulate SLC Performance.

Solutions

Solutions



PCIe

*TLC *pSLC

- PCIe Gen 3x4 / 4x4 / 5x4
  2.5”(U.3/U.2)

– Capacity: Up to 30720GB
  Up to 122880GB (QLC)

PCIe

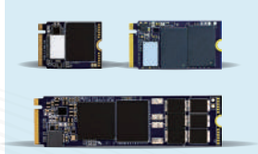
*TLC *pSLC

- PCIe Gen4x4 / 5x4
- E1.S / E3.S

– Capacity: Up to 7680GB
  E3.S: Up to 61440GB (QLC)

PCIe

*TLC *pSLC



- PCIe Gen 3x4 / 4x4 / 5x4
- M.2 2230 / 2242 / 2280 /
  mini PCIe module

– Capacity: Up to 7680GB

PCIe

*TLC *pSLC

- PCIe Gen 3x2 / Gen 4x2
- CFexpress

– Capacity: Up to 4TB

PCIe

*TLC *pSLC

- PCIe Gen 3x4 / Gen 4x4
- uSSD (BGA SSD)
- 1113 (11.5x13.0mm) / 1620 (16.0x20.0mm)

– Capacity: Up to 1TB

SATA

*SLC *MLC *TLC *pSLC

- 1.8” SATA SSD
- 2.5” SATA SSD

– Capacity: Up to 15360GB

SATA

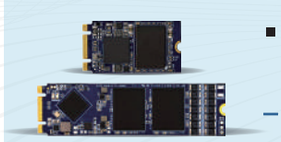
*SLC *MLC *TLC *pSLC

- mSATA
- mSATA mini

– Capacity: Up to 2TB

SATA

*SLC *MLC *TLC *pSLC



- M.2 2242 / 2280

– Capacity: Up to 2TB

SATA

*SLC *MLC *TLC *pSLC

- Half Slim (MO-297)

– Capacity: Up to 2TB

SATA

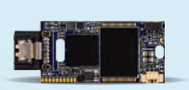
*SLC *MLC *TLC *pSLC

- CFast

– Capacity: Up to 1TB

SATA

*SLC *MLC *TLC *pSLC



- SATA Module

– Capacity: Up to 1TB

SATA

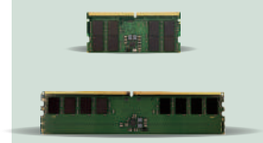
*TLC *pSLC

- uSSD (MO-276)
- 1620 (16.0x20.0mm)

– Capacity: Up to 512GB

DRAM

*DDR3 *DDR4 *DDR5



- ECC UDIMM / ECC SODIMM
  UDIMM / SODIMM
- RDIMM

– Capacity: Up to 64GB/128GB(RIDMM)

CARD

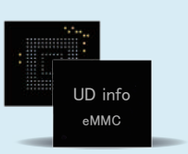
*SLC *MLC *TLC *pSLC

- SD Card
- Micro SD Card
- SD express

– Capacity: Up to 1TB

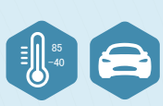
EMMC

*MLC *TLC *pSLC



- EMMC

– Capacity: Up to 256GB



USB (TypeA/C)

*SLC *MLC *TLC *pSLC

- USB 2.0
- USB 3.0
- USB 3.2 Gen2x1

– Capacity: Up to 2TB

PATA

*SLC

- PCMCIA

– Capacity: Up to 32 GB

PATA

*SLC *MLC *pSLC

- 2.5” PATA SSD

– Capacity: Up to 256 GB

PATA

*SLC *MLC *pSLC

- CF Card

– Capacity: Up to 256 GB

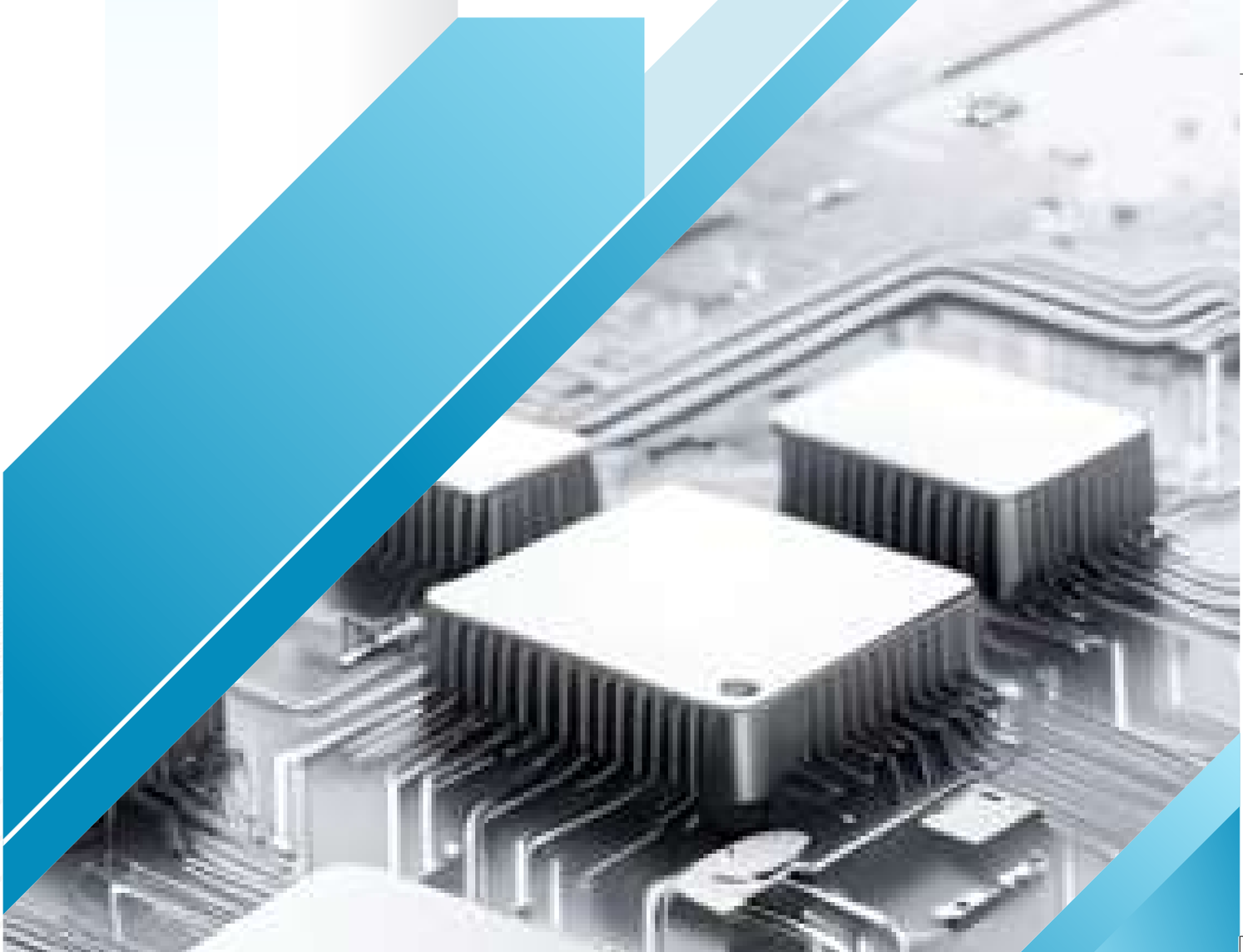
PATA

*SLC

- IDE DOM

– Capacity: Up to 8 GB

Rugged Applications



FIPS 140-2

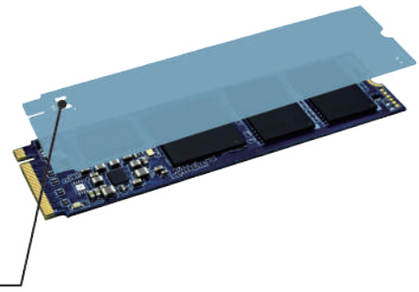
This U.S. government standard ensures strong data encryption, keeping sensitive information safe and secure during use.

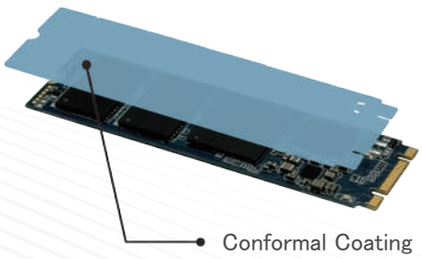
2.5" SATA SSD

- Industrial Temp Range (-40~85℃)
- Up to 4TB

PCIe M.2 2280

- Industrial Temp Range (-40~85℃)
- Up to 2TB





M.2 SATA 2280

- Industrial Temp Range (-40~85℃)
- Up to 2TB

FIPS 140-2
NIST Link

Common Criteria
NIAP Link

FIPS 140-3

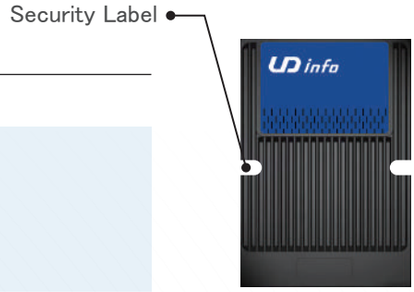
An upgraded version of FIPS 140-2, this standard provides advanced protections against modern cyberthreats, offering even greater peace of mind.

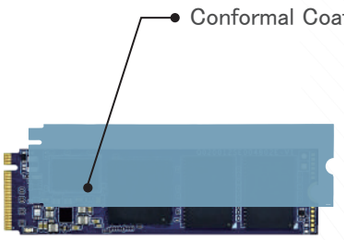
PCIe U.2

- Industrial Temp Range (-40~85℃)
- Up to 8TB

PCIe U.2

- Standard Temp Range (0~70℃)
- Up to 30.72TB



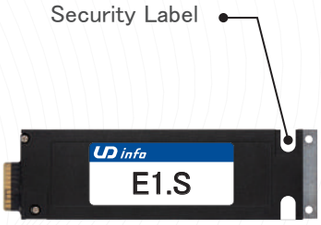


PCIe M.2 2280

- Industrial Temp Range (-40~85℃)
- Up to 8TB

PCIe E1.S

- Industrial Temp Range (-40~85℃)
- Up to 8TB



PCIe E3.S

- Standard Temp Range (0~70℃)
- Up to 16TB

Low power consumption solutions

- Providing a range of SSD options with low power consumption by modifying the firmware and parameters.
- Effectively reduce the SSD's surface temperature and power consumption, improving energy efficiency and reliability.

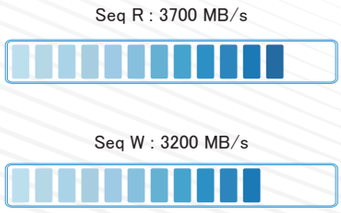
Solutions	Active Read (W)	Active Write (W)	Idle (W)	Performance Read (MB/s)	Performance Write (MB/s)
Standard	9.3 (3A)	11 (3.3A)	2.6	6300	2300
Low power consumption solution 01	6.3 (1.9A)	9.3 (2.8A)	2.3	3340	2320
Low power consumption solution 02	6 (1.8A)	7.4 (2.2A)	2.1	1761	1720
Solution with lowest power consumption	3.6 (1A)	3.8 (1.1A	1.9	450	450

 # tested by using UDinfo M2P 80-DH 4TB solution

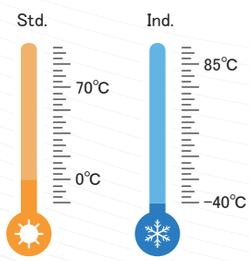
High Capacity CFexpress (Type B)

- Capacity: Up to 4TB
- PCIe Gen4x2 interface
- Support 3D pSLC mode, Write Protect feature, OPAL security encryption.

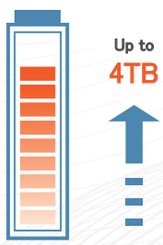
- Performance :



- Temperature Range :



- Capacity :

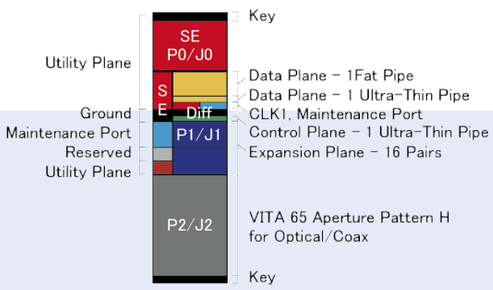


VPX Storage Module

- 3U OpenVPX, 1″ slot pitch
- SOSA™ - aligned
- IPMI 2.0 compliant
- PCIe Gen4x4
- Total Capacity up to 30TB
- Optional FIPS 140-2, CC/CSfC
- Optional TCG OPAL, Write Protect, Secure Erase
- Conduction - cooled or Air - cooled
- Operation Temperature:

  Standard: 0℃ ~ 70℃

  Wide: -40℃ ~ 85℃



(SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11)

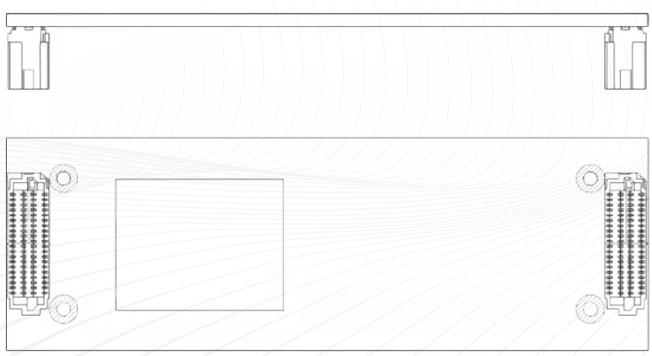
SOSA Sensor Open Systems Architecture

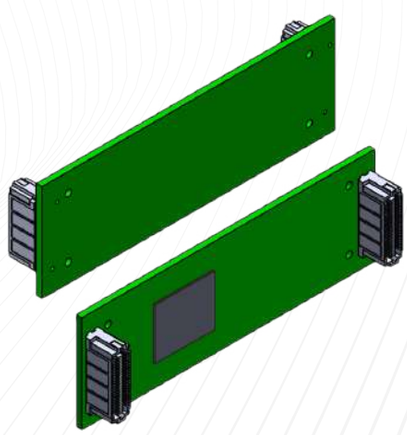
OpenVPX™

QMC Storage Module

Next generation small form factor mezzanine (VITA 93):

- Compact size: Fit in VNX+
- Single-Width (78.25mm x 26.00mm)
- High speed: PCIe Gen 4x4
- IPMI ready
- Capacity: 64GB~1TB
- Industrial Grade: -40℃ ~85℃
- Design for Rugged Environment





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