



Industrial Storage Solution Provider

www.udinfo-tech.com

■ Background

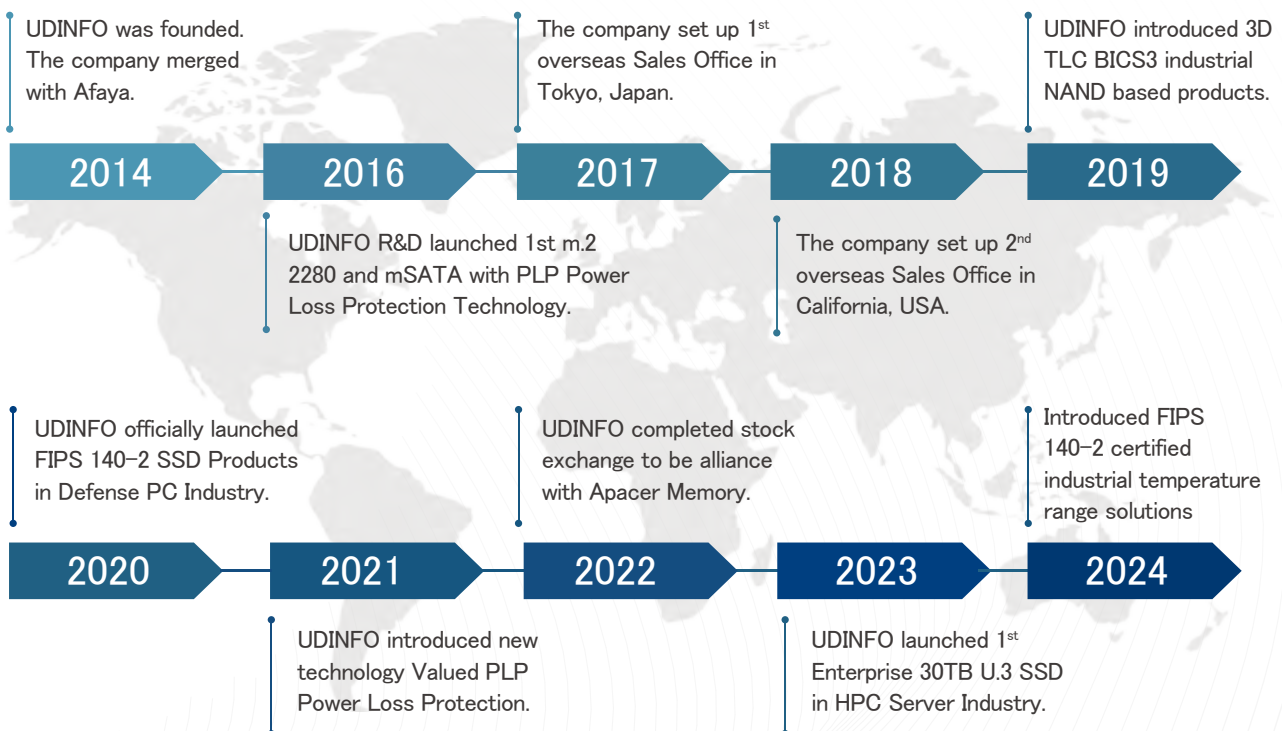
Founded in 2014, UDINFO is a professional engineering team that provides comprehensive NAND storage and DRAM solutions.

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

Data Erase



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

MIL-STD



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

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

Write-Protect or Read only



- Read Only
- Hardware Switch or Software GPIO control

Power Loss Protection (PLP)



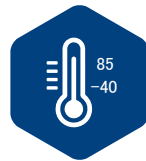
- Extra power to protect all data during power loss at write

Opal / AES (Security Encryption)



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

Wide Temperature



- All the components are designed and tested under –40~85 °C

Physical Destory (PD)



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

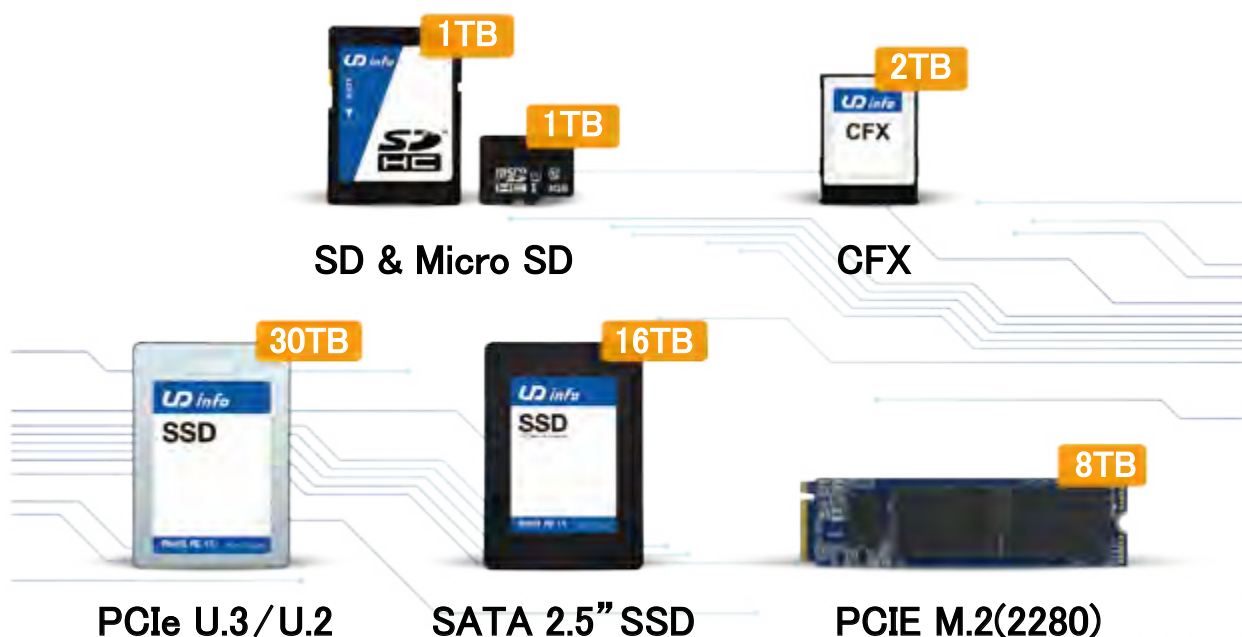
S.M.A.R.T. (Self Monitoring Analysis Reporting Technology)



- Setting criteria for warning message

■ High Capacity Solutions

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



■ DRAM Modules

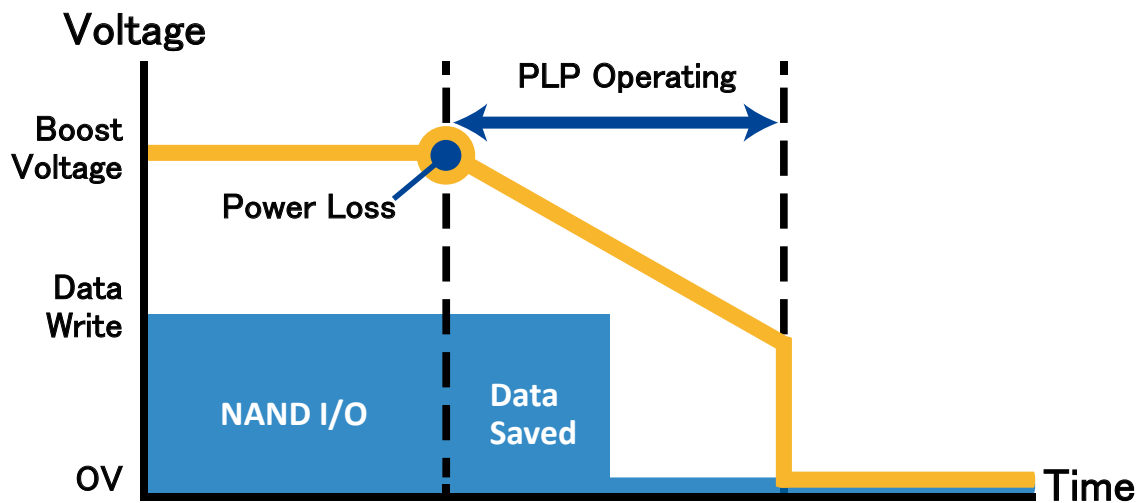
A full range of industrial grade DRAM Modules solution for from the legacy DDR to the latest DDR5 DRAM modules, that support a variety of applications and enable a perfect digital experience.

Form Factors	DDR5	DDR4	DDR3	DDR2	DDR
SODIMM	8GB~32GB 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	1GB~2GB Up to 800MT/s	512MB~1GB Up to 400MT/s
UDIMM	8GB~32GB 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	1GB~2GB Up to 800MT/s	512MB~1GB Up to 400MT/s



■ 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

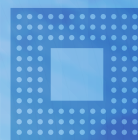
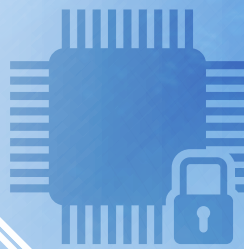
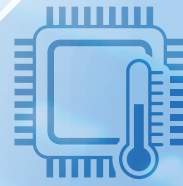
■ Pseudo SLC (pSLC)

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 *eTLC *pSLC



- PCIe Gen 3x4 / 4x4 / 5x4
- 2.5"(U.3/U.2)
- Capacity: Up to 30720GB



PCIe

*TLC *eTLC *pSLC



- PCIe Gen 3x4 / 4x4 / 5x4
- M.2 2230 / 2242 / 2280 / E1.S / mini PCIe module
- Capacity: Up to 7680 GB



PCIe

*TLC *pSLC

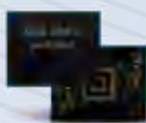


- PCIe Gen 3x2 / Gen 4x2
- CFexpress
- Capacity: Up to 2TB



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 15360 GB



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

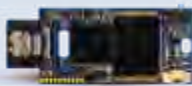


- CFast
- Capacity: Up to 1TB



SATA

*SLC *MLC *TLC *pSLC



- SATA Module
- Capacity: Up to 512 GB



SATA

*TLC *pSLC

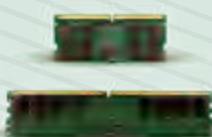


- uSSD (MO-276)
- 1620 (16.0x20.0mm)
- Capacity: Up to 512 GB



DRAM

*DDR *DDR2 *DDR3 *DDR4 *DDR5



- ECC UDIMM / ECC SODIMM
- UDIMM / SODIMM
- RDIMM
- Capacity: Up to 48 GB



CARD

*SLC *MLC *TLC *pSLC



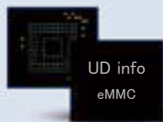
- SD Card
- Micro SD Card
- SD express

– Capacity: Up to 1TB



EMMC

*MLC *TLC *pSLC



- EMMC

– Capacity: Up to 256 GB



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



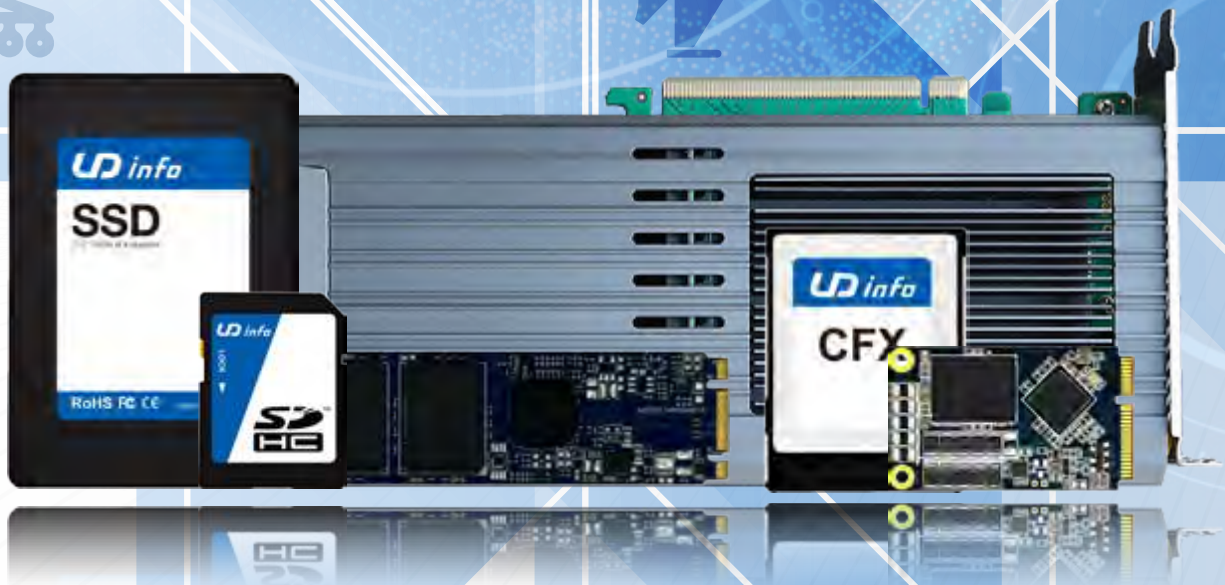
PATA *SLC



- IDE DOM
- Capacity: Up to 8 GB



Rugged Applications

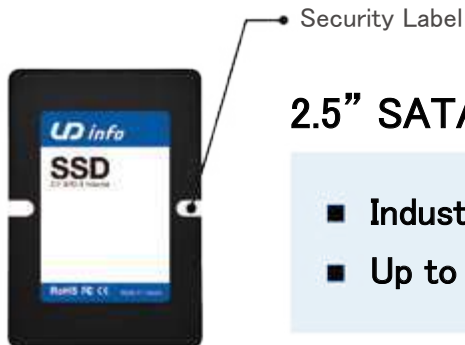


■ FIPS 140-2

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



NIST Link

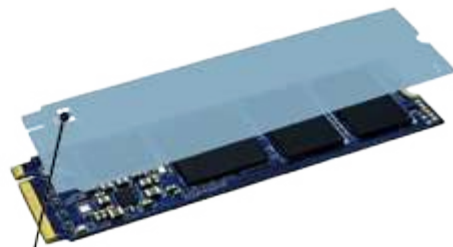


2.5" SATA SSD

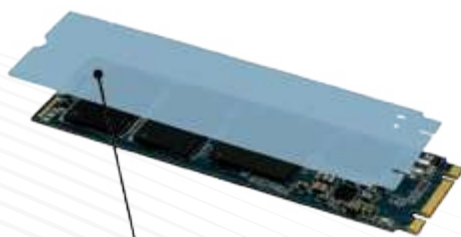
- Industrial Temp Range (-40~85°C)
- Up to 4TB

PCIe M.2 2280

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



Conformal Coating



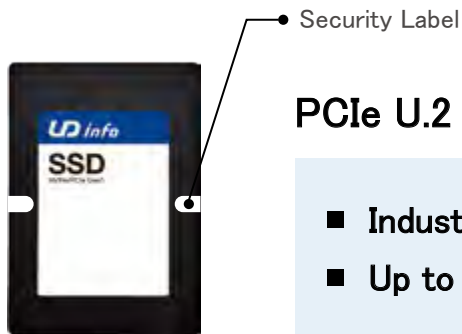
Conformal Coating

M.2 SATA 2280

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

■ FIPS 140-3

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



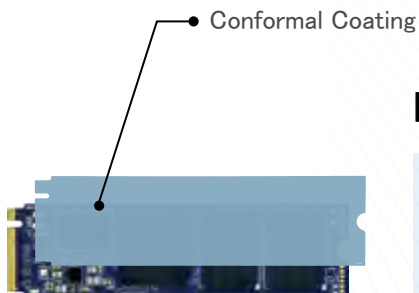
PCIe U.2

- Industrial Temp Range (-40°C ~ 85°C)
- Up to **8TB**

PCIe U.3

- Industrial Temp Range (0°C ~ 70°C)
- Up to **30.72TB**

Security Label



PCIe M.2 2280

- Industrial Temp Range (-40°C ~ 85°C)
- Up to **8TB**

PCIe E1.S

- Industrial Temp Range (-40°C ~ 85°C)
- Up to **8TB**

Security Label



■ 128TB NVMeGen4 x16 RAID Add-In Card

- Impressive capacity of up to 128TB.
- Exceptional Speed with performance of up to 28GB/s.
- Available with PCIe M.2 2280 x 16 for optimal performance.
- Suitable for versatile application including Edge Servers, defense systems, and transportation systems, providing reliable and efficient data storage solutions.

Ultra Capacity

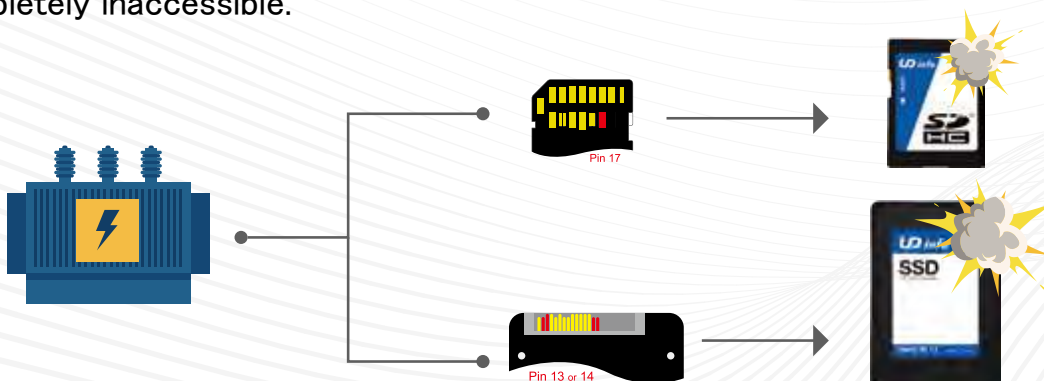
Superior performance



- Available with PCIe M.2 2280 x 16
- Capacity : Up to **128TB**
- Performance : Read Up to **28GB/s**

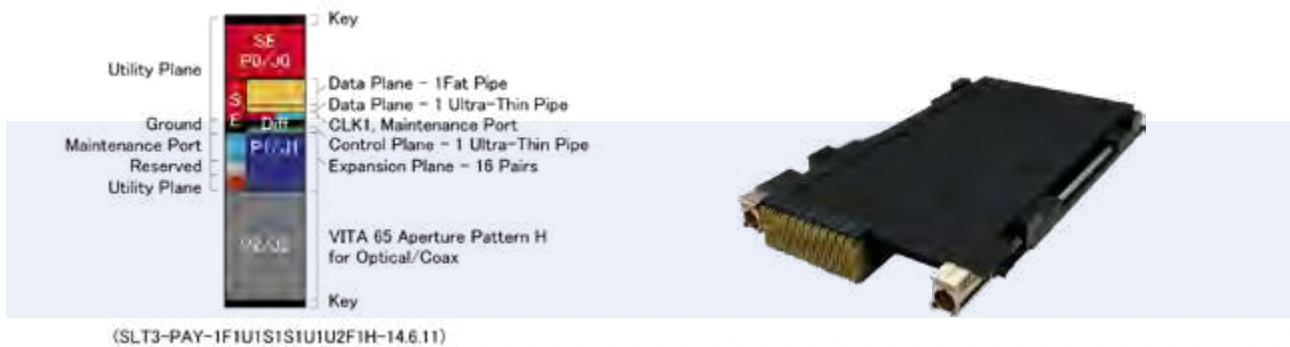
■ Physical Destory

The protection of data is a key issue in industrial applications. It is essential that storage devices protect confidential data by data protection mechanism. Physical destruction performs a complete and total data erase of the SSD and SD Card. Using a high voltage input, physical destruction completely burns out the flash IC in a short period of time, causing irreversible damage and rendering the SSD completely inaccessible.



■ VPX

- 3U OpenVPX, 1" slot pitch
- SOSA™ – aligned
- IPMI 2.0 compliant
- PCIe Gen4x4
- Total Capacity up to 30TB
- Compatible with SOSA slot profile
- Optional FIPS 140–2, CC/CSfC
- Optional TCG OPAL, Write Protect, Secure Erase
- Conduction – cooled or Air – cooled
- Operation Temperature:
Standard: 0° C ~ 70° C
Wide: –40° C ~ 85° C



■ 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 UInfo M2P 80-DH 4TB solution

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UD INFO CORPORATION 2025

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