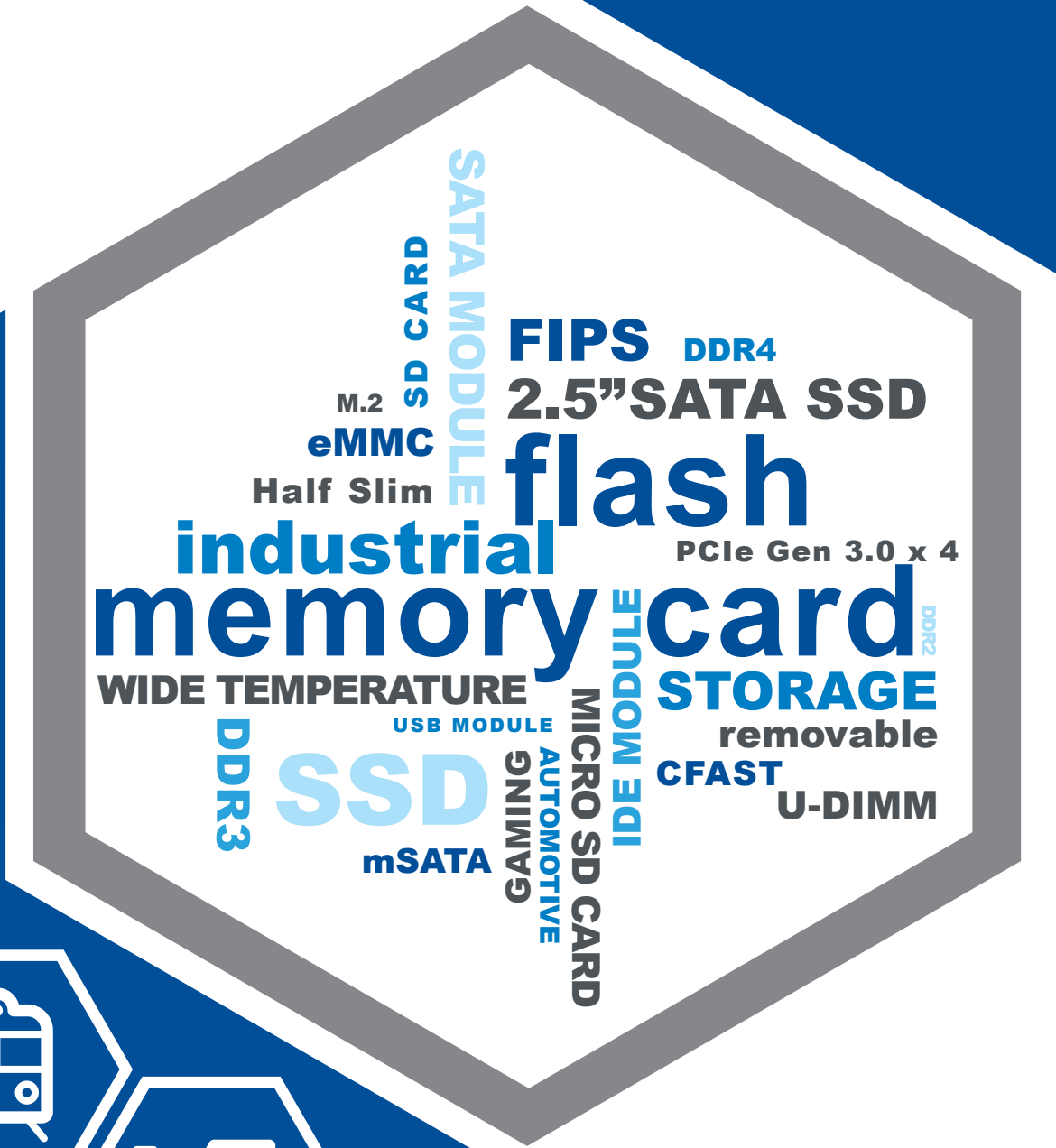


# UD info

## 宇達資訊



## FIPS 140-2



- Applied on 2.5" SATA SSD, M.2 SATA 2280 & PCIe M.2 2280 products.
- Security Label & Conformal Coating are implemented

## Pseudo SLC(pSLC)

### pSLC

- An ideal alternative solution provides reliability and cost efficiency.
- Base on MLC or 3DTLC flash to simulate SLC performance.

## Power Loss Protection ( PLP )



Extra power to protect ALL data during power loss at write

## Automotive



AEC-Q100 & TS16949 are qualified for high reliability in car application

## Write-Protect or Read only



- Read Only
- Hardware Switch or Software GPIO Control

## SMART (Self Monitoring and Analysis Reporting Technology)

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

- All CF, IDE, SATA, USB and SD have SMART function
- Setting criteria for warning message

## 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.

## Quick Erase



- Erase all data, tables and hidden area
- Hardware push button or Software GPIO control
- Erase All or Erase Data can be chosen

## Conformal coating



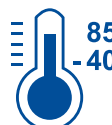
A layer of plastic protection is applied on all PCBA products in order to protect from dirt, dust, moisture, corrosion, electrical conduction and thermal conduction

## 30μ Gold plating



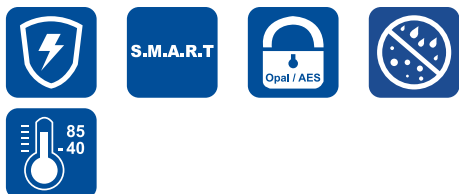
USB drive and 2.5" SATA SSD provide 30μ gold-plating connections

## Wide-Temperature products



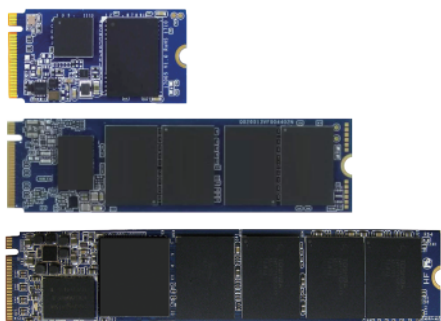
All the components are designed and tested under -40~85°C

**PCIe Gen 3 x 4  
2.5" (U.2)**



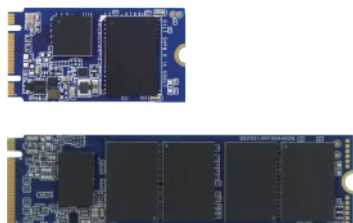
Model No.	Performance (Read/Write)MB/S	Capacity
		3D TLC
PFD-25UB	3400/3000	480GB - 8TB
PFD-25DC	3200/1000	480GB - 7680GB

**PCIe Gen 3 x 4  
M.2 2242/2280/22110**



Model No.	Performance (Read/Write)MB/S	Capacity
		3D TLC
M2P-42DE	2500/2100	128GB - 2TB
M2P-80UB	3400/3000	240GB - 2TB
M2P-80DC	3000/1000	240GB - 1920GB
M2P-80DE	2500/2100	128GB - 2TB
M2P-10DC	3200/850	3840GB

**PCIe Gen 3 x 2  
M.2 2242/2280**



Model No.	Performance (Read/Write)MB/S	Capacity
		3D TLC
M2P-42UF	1550/950	32GB - 512GB
M2P-80UF	1600/1000	32GB - 512GB

## PCIe Gen 3 x 2 CF Express



Model No.	Performance (Read/Write)MB/S	Capacity	
		3D TLC	
CFX-21DE	1700/1400	120GB - 1TB	

## 1.8" SATA SSD



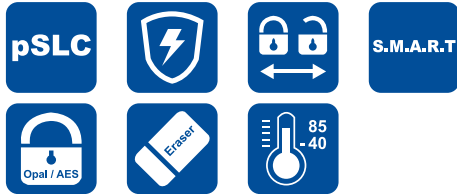
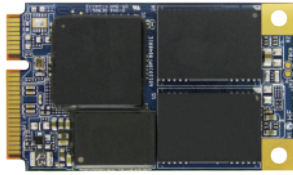
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
M18-16UK	550/470	8GB   128GB	32GB   512GB	16GB   256GB	64GB   1TB	16GB   256GB

## 2.5" SATA SSD



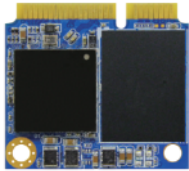
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
HF3-25US	530/450	32GB   256GB	32GB   1TB	16GB   512GB	-	-
HF3-25UB	550/500	8GB   128GB	4GB   512GB	2GB   256GB	32GB   1TB	8GB   256GB
HF3-25AC	550/490	-	-	-	60GB   2TB	16GB   512GB
HF3-25DC	550/520	-	-	-	120GB   7680GB	32GB   2TB

## mSATA (MO-300)



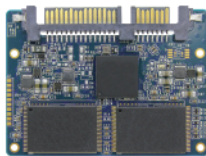
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
MHD-52UB	550/490	8GB   128GB	4GB   1TB	2GB   256GB	32GB   1TB	8GB   256GB
MHD-52US	520/430	4GB   64GB	8GB   512GB	32GB   256GB	-	-
MHD-52AC	550/490	-	-	-	60GB   1TB	16GB   256GB

## mSATA mini (MO-300B)



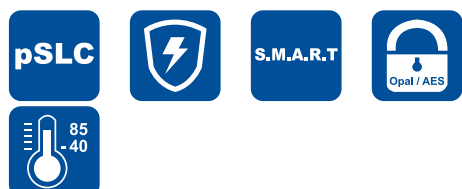
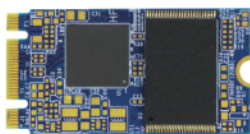
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
HMH-52UB	550/490	-	4GB   32GB	2GB   16GB	32GB   256GB	8GB   16GB
HMH-52UK	550/480	8GB   64GB	32GB   256GB	16GB   32GB	64GB   1TB	16GB   128GB

## Half Slim (MO-297)



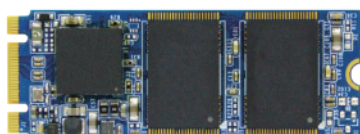
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
SHD-22UB	550/490	-	4GB   64GB	2GB   32GB	32GB   512GB	-

## M.2 2242



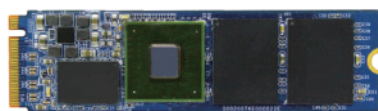
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
M2S-42UB	550/490	8GB   64GB	4GB   512GB	2GB   256GB	32GB   1TB	8GB   128GB
M2S-42DC	550/340	-	-	-	120GB   240GB	-

## M.2 2260



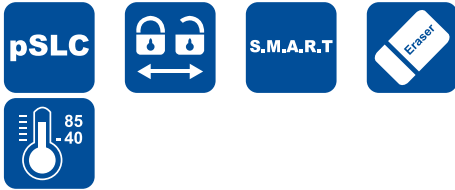
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
M2S-60UB	550/490	-	32GB   512GB	-	128GB   512GB	-

## M.2 2280



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
M2S-80UB	550/500	8GB   128GB	4GB   512GB	2GB   256GB	32GB   1TB	8GB   256GB
M2S-80UF	550/530	-	-	-	120GB   2TB	-
M2S-80DC	550/520	-	-	-	120GB   1920GB	-
M2S-80AC	550/490	-	-	-	60GB   2TB	16GB   512GB

## SATA Module



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
MDS-7UUB	330/220	-	4GB   16GB	-	16GB   128GB	-
MDS-7XUK	550/460	8GB   32GB	32GB   256GB	16GB   128GB	64GB   256GB	16GB   64GB
MDS-7XUH	140/50	4GB   16GB	8GB   32GB	-	-	-

## CFast



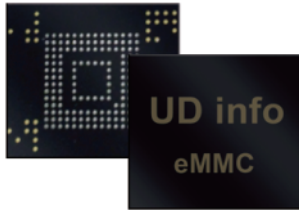
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
CFS-24UB	550/480	8GB   64GB	32GB   256GB	16GB   128GB	64GB   512GB	16GB   128GB
CFS-24AC	550/490	-	-	-	60GB   512GB	16GB   128GB

## uSSD (MO-276)



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
MSC-F6UB	550/480	-	4GB   128GB	2GB   64GB	32GB   256GB	-

## eMMC



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
EMC-F3UD EMC-A1UD	250/150	4GB   64GB	2GB   32GB	-	-	-
EMC-F3UF	280/140	-	-	4GB   32GB	16GB   128GB	8GB   64GB

## SD card



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
SDC-09UD-P	95/90	128MB   32GB	4GB   512GB	2GB   256GB	16GB   256GB	8GB   64GB
SDC-09UD-I	90/70	4GB   32GB	8GB   256GB	4GB   128GB	-	-
SDC-09UF	90/70	-	-	-	32GB   256GB	8GB   64GB

## Micro SD Card



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
uSD-08UD-P	95/90	128MB   4GB	4GB   128GB	2GB   64GB	16GB   256GB	8GB   64GB
uSD-08UD-I	90/70	4GB   8GB	8GB   128GB	4GB   64GB	-	-
uSD-08UF	90/70	-	-	-	32GB   256GB	8GB   64GB



## USB DOM



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
MDU-0LUD	30/25	1GB   32GB	4GB   64GB	2GB   32GB	-	-
MDU-0VUA	35/35	1GB   8GB	8GB   64GB	-	-	-

## USB 2.0



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
UF2-V2UD	30/20	128MB   32GB	4GB   128GB	2GB   64GB	-	-

## USB 3.0



Model No.	Performance (Read/Write)MB/S	Capacity	
		3D TLC	3D pSLC
UF3-V2UH	240/160	16GB   512GB	4GB   128GB

## PCMCIA



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
ATA-68SI	43/35	128MB   32GB	-	-	-	-

## CF Card



Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
CFC-50SI	43/35	128MB   32GB	-	-	-	-
HCF-50UC	141/135	256MB   64GB	4GB   256GB	-	-	-

## 2.5" PATA SSD



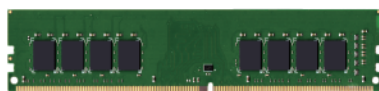
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
IFD-25UD	80/80	4GB   256GB	4GB   256GB	2GB   128GB	-	-

## IDE DOM



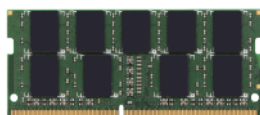
Model No.	Performance (Read/Write)MB/S	Capacity				
		SLC	MLC	pSLC	3D TLC	3D pSLC
MDM-0VSI MDM-4XSI	50/34	128MB   8GB	-	-	-	-

## DDR4 UDIMM



Form Factor	DDR4 UDIMM
Model name	UD4U
Capacity	4GB to 32GB
Speed	3200/2666/2400 (MT/s)
Number of Pin	288

## DDR4 SODIMM



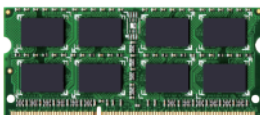
Form Factor	DDR4 SODIMM
Model name	UD4S
Capacity	2GB to 32GB
Speed	3200/2666/2400(MT/s)
Number of Pin	260

## DDR3 UDIMM



Form Factor	DDR3 UDIMM
Model name	UD3U
Capacity	2GB to 8GB
Speed	1866/1600/1333(MT/s)
Number of Pin	240

## DDR3 SODIMM

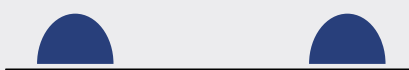






Form Factor	DDR3 SODIMM
Model name	UD3S
Capacity	1GB to 8GB
Speed	1866/1600/1333(MT/s)
Number of Pin	204

## pSLC

## Pseudo SLC (pSLC) of 3D TLC

Perfect solution for heavy-write applications

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

- 3D pSLC has applied on major SATA products.
- Capacity is 1/4 of 3DTLC
- P/E cycle reaches 30K which is 10 times of 3DTLC

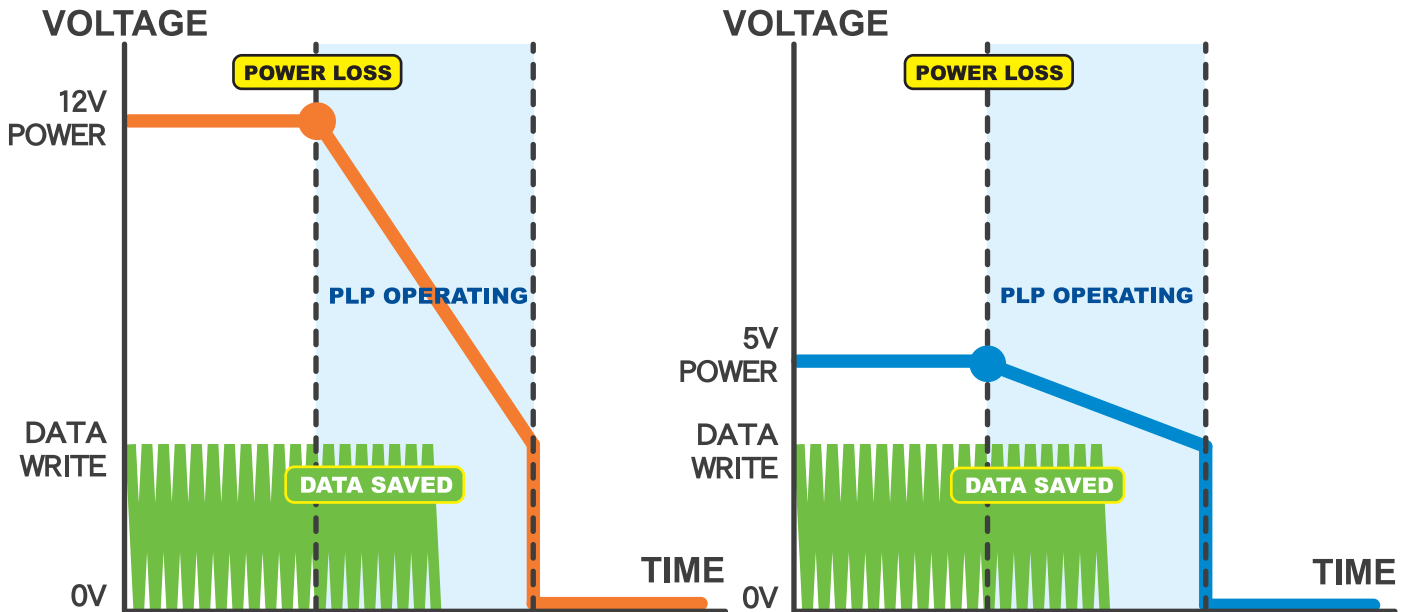


## FIPS 140-2

UDinfo Flash memory products which can correspond FIPS (Federal Information Process Standard) US government standard.

- The **Only** SSD provider in Taiwan with FIPS Level 2
- Applied on **2.5" SATA SSD**、**M.2 SATA 2280** & **NVMe M.2 2280** products.
- **Security Label** is applied on 2.5" SATA SSD.
- **Conformal Coating** is implement on M.2 SATA 2280 & NVMe M.2 2280.

# Power Loss Protection (PLP)



## Power Loss Protection

## Valued Power Loss Protection

Able to protect system and data	<b>Basic Concept</b>	Able to protect system and data
Yes	<b>External DRAM</b>	No (internal RAM)
<ul style="list-style-type: none"> <li>● Need to pump up voltage to 12V or higher</li> <li>● Use high-voltage capacitors to backup to NAND</li> </ul>	<b>Design</b>	<ul style="list-style-type: none"> <li>● No need to pump up to high voltage</li> <li>● Use low-voltage capacitors to backup to NAND</li> </ul>
High	<b>Cost</b>	Lower
<ul style="list-style-type: none"> <li>● 2.5" SATA</li> <li>● M.2 SATA 2280</li> <li>● mSATA</li> </ul>	<b>UDinfo Solutions</b>	<ul style="list-style-type: none"> <li>● 2.5" SATA</li> <li>● M.2 SATA 2280</li> <li>● mSATA</li> <li>● CFast</li> </ul>

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