Maximus Technology

Company Profile

Company Introduction

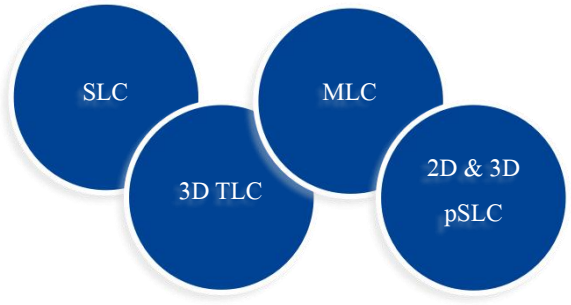
Maximus Technology. is a total-memory-solution provider on NAND Flash products and DRAM modules, focusing on industrial, medical, automotive and other applications, which inquire high reliability and longevity in supply.

- Innovative Technology
- Secured Quality
- Thoughtful Service

- Headquarter : Huizhou City
- Branches : HongKong, USA, Taiwan
- Established : Year 2011

Strength

Variety Flash Options



Warranty & Quality

3+ Years Warranty

ISO9001

CE / FCC / RoHs / UKCA

Fixed BOM & Traceability

Fixed BOM & Completed Production Reports are recorded & traceable for at least 5 years

Multiple Choice & MOQ

More Than One Suggested Solutions can Support Customers' Demands

No MOQ for Major Products

Trusty Strategic Partners

SAMSUNG

SiliconMotion

Micron

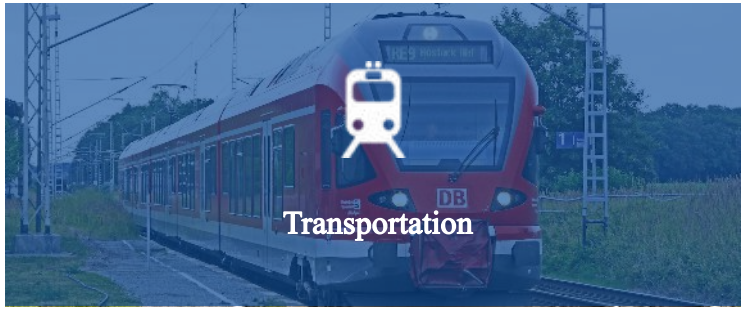
maxiotek

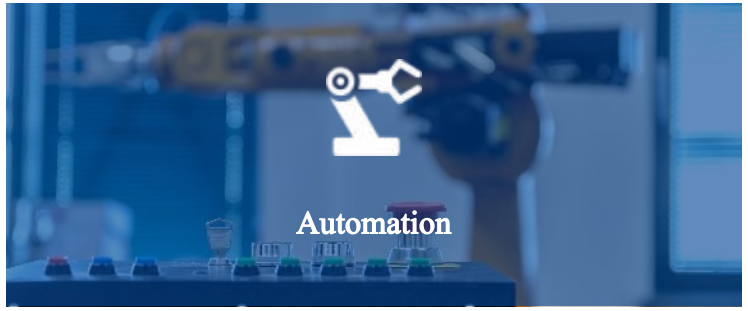
New Product Development

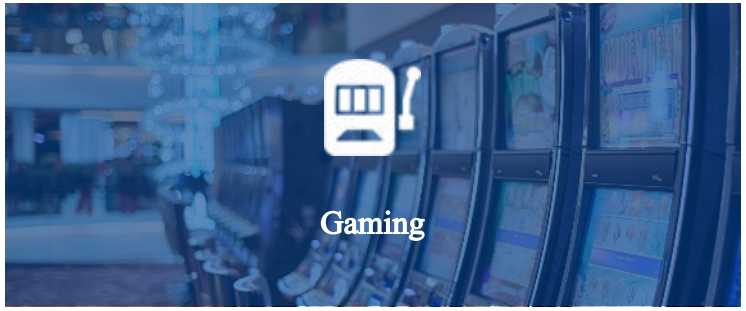
Aggressive in

New Product Development

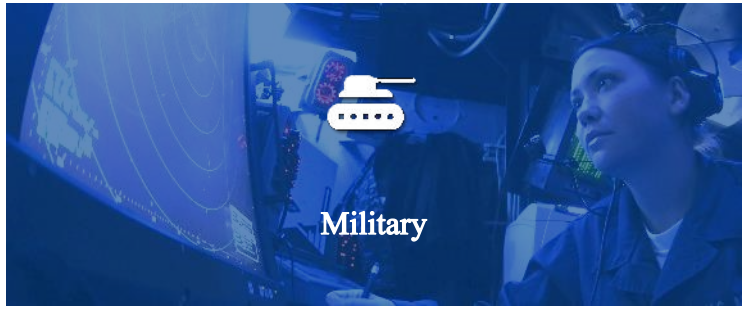
Market

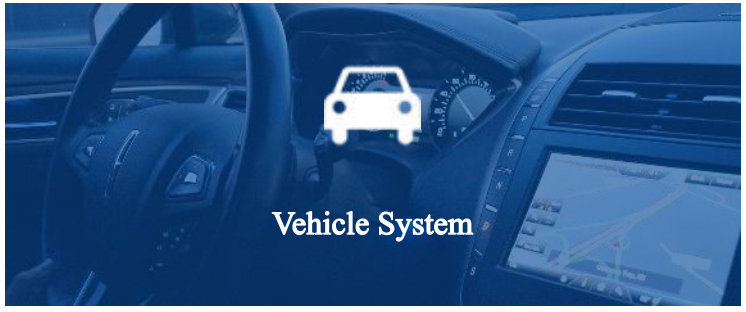

Transportation


Automation

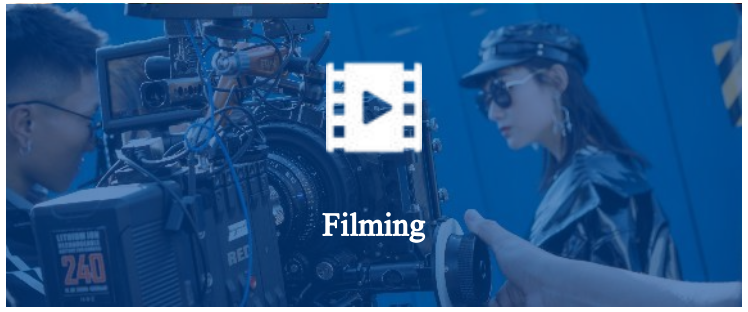

Gaming

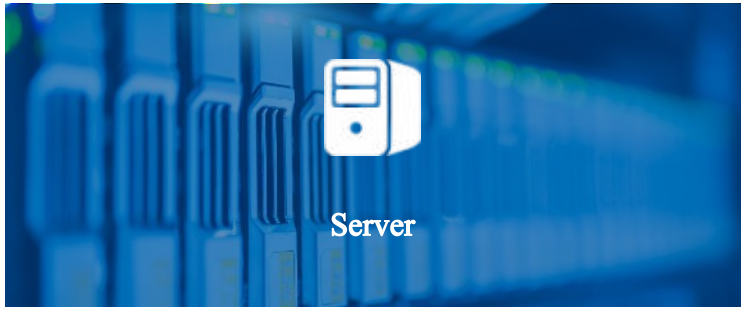

Medical


Military


Vehicle System

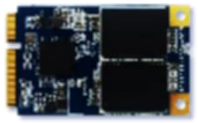

Security

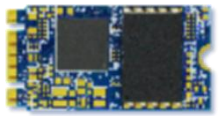

Filming


Server

Solution

SATA Series

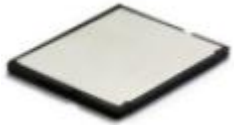

mSATA


M.2


2.5” SATA SSD

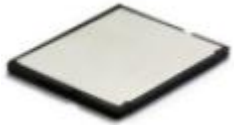

uSSD


Half Slim


CFast


SATA DOM

PATA Series


CF CARD

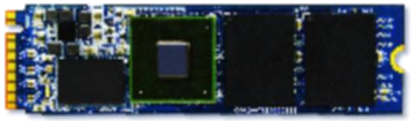

2.5” PATA SSD

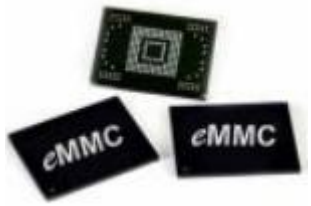

IDE DOM


PCMCIA

PCIe Series


CF Express


M.2 PCIe 2230 / 2242 / 2280

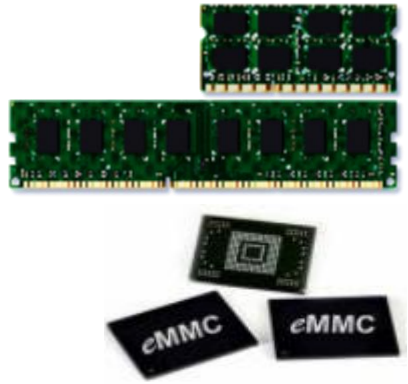


uSSD

SD, USB, DRAM, eMMC

SD / Micro SD


USB

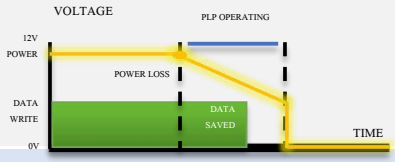
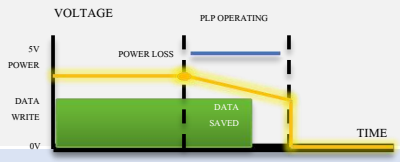


eMMC

Technologies

Power Loss Protection (PLP)

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

	PLP	Valued PLP	PLP Lite
Capability	Extra power to protect ALL data during power loss at write	Extra power to protect ALL data during power loss at write	Extra power to protect SSD from losing FW, Tables or Partition due to unstable low-power disturbance or spikes.
Curve			
External DRAM	YES	NO	NO
Design	• Need to Pump Up voltage to 12v or higher • Use High-Voltage Capacitors to Backup to NAND	• No need to Pump Up to High Voltage • Use Low-Voltage Capacitors to Backup to NAND	Add extra capacitors to enhance system reliability and integrity during sudden power loss or power instability.
Protection Ability	Great	Better	Good
Cost	High	Lower	Lowest
Maximus Solutions	U.2 / PCIe M.2 2280 / 2.5” SATA / mSATA / SATA M.2 2280 / CFast	2.5” SATA / M.2 SATA 2280 / mSATA / CFast	CF card / 2.5” SATA / mSATA / CFast

Technologies

pSLC

An Ideal Alternative Solution provides Reliability & Cost Efficiency, is perfect for Heavy Write Application with Great Performance

Based on 2D MLC or 3D TLC Flash to simulate SLC performance

NAND Type		Structure	Reliability (P/E Cycles)	Cost
2D	SLC		60000	$ $ $ $ $
	MLC		3000	$ $
	2D pSLC		30000	$ $ $ $
3D	TLC		3000	$
	3D pSLC		+ 30000	$ $ $

- The capacity of 2D pSLC is ½ of 2D MLC ; 3D pSLC is ¼ of 3D TLC
- Reliability of 3D pSLC reaches 30K & more P/E cycles

Technologies

S.M.A.R.T.

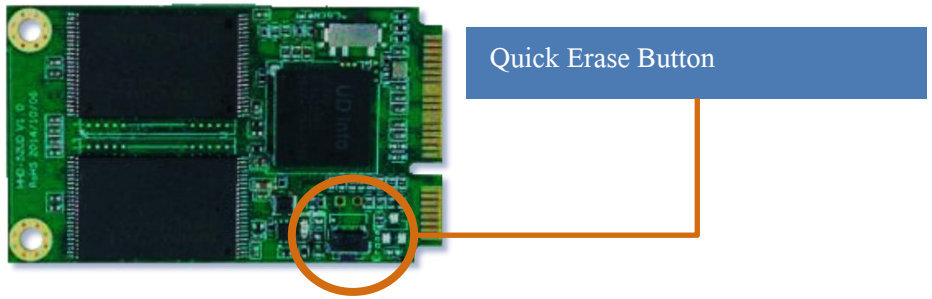
Self Monitoring and Analysis Report Technology to detect Health Status of the storage

Product Info.	Health Info.		Supported Solutions
Controller Version	• Endurance Life Ratio • Good Block Ratio		• PCIe Solutions • SATA Solutions • SD & Micro SD Cards • USB sticks
Flash Type	• Max. Bad Block Replacement • ECC Bit Setting		
FW Version	• Total Reflash Count • Abnormal Power On Count • Max. Avg. Erase Count	• Power Up Count • Bad Block Scan	

Technologies

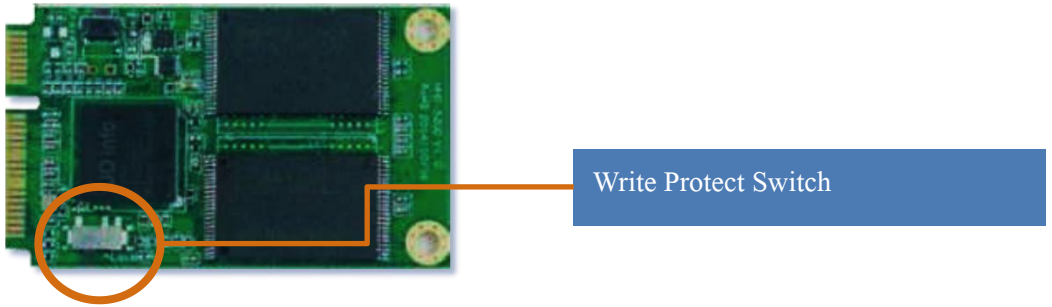
Data Erase

- Hardware Push Button or Software GPIO Control
- Choose from Erase All or Erase Data to protect data.



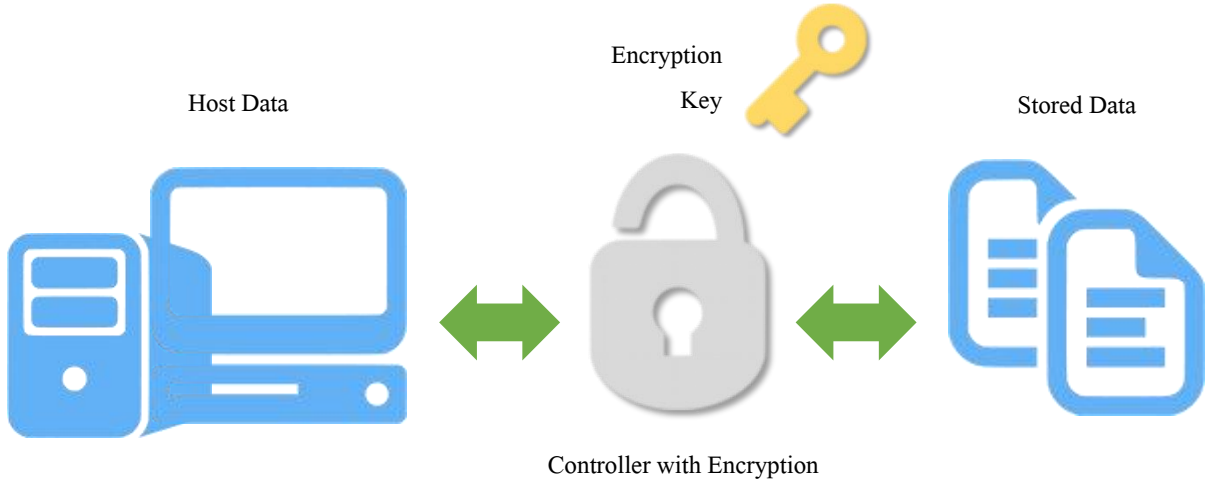
Write Protect

- Read Only.
- Hardware switch or Software GPIO Control..



Opal / AES (Security Encryption)

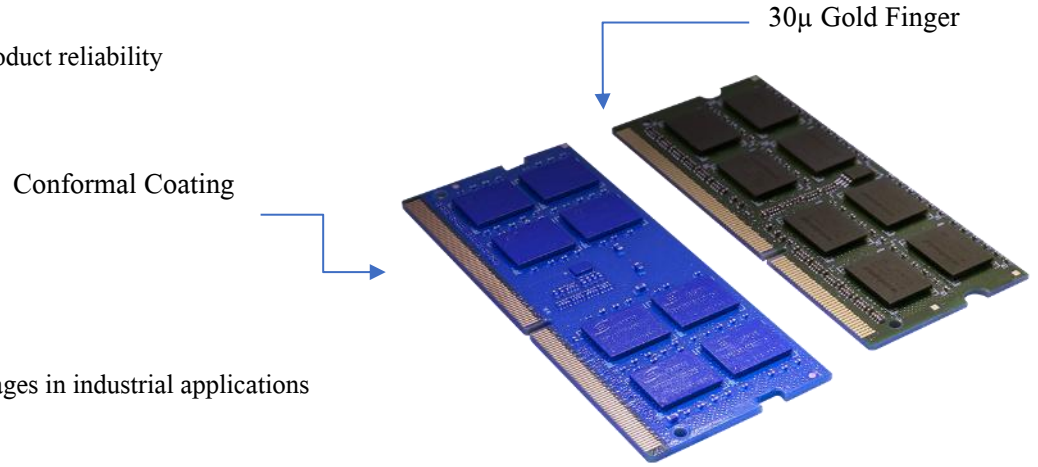
- OPAL / AES Hardware Encryptions are applied on SATA interface & PCIe interface SSD
- Encryption protects the confidentiality of stored user data against unauthorized access once it leaves the owner's control



Technologies

Conformal Coating

- The protective film can safeguard devices from dust ingression and liquid immersion, also improves product reliability

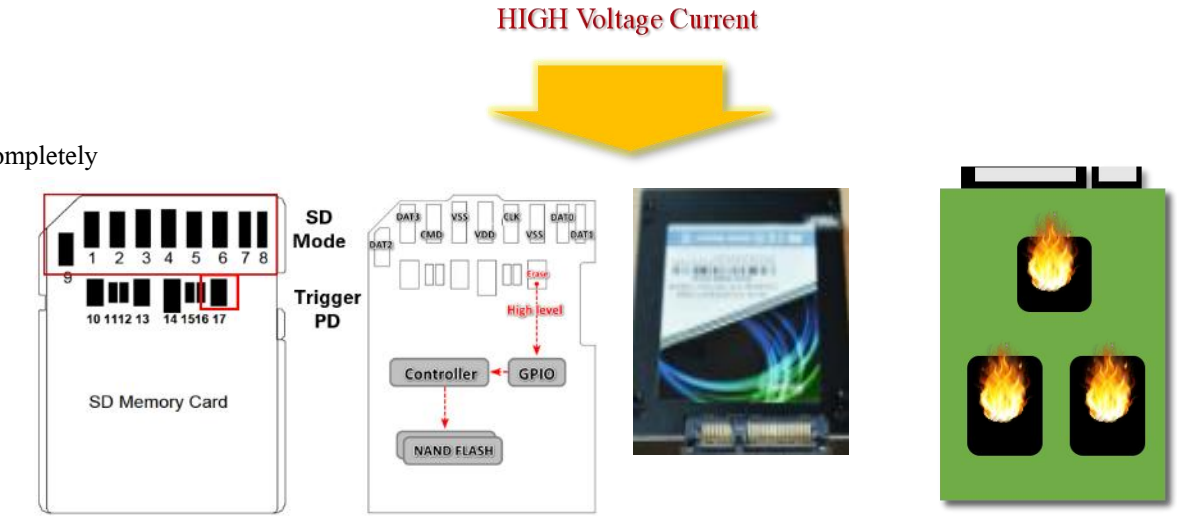


30µ Gold Finger

- With the 30µ gold plating, the connector interface is more reliable and can withstand the potential damages in industrial applications

Physically Destroy

- By running a high voltage current through the module, damage the flash IC and ensure all data are completely destroyed
- Only applied on 2.5” SATA & SD Card



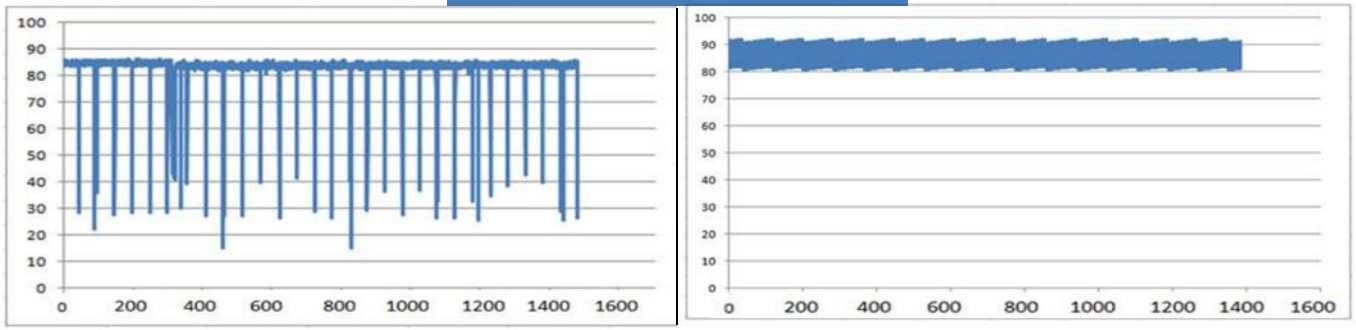
Technologies

Firmware for Stable Write

- Customized FW for SD / MicroSD card user
- Deal with Big Data & Small Data writing
- Customized FW for Big Data is good for video recording
- Customized FW for Small Data is good for stable small file write (IOPS)

Big Data

Test Size : 5MB



Standard FW

write instability due to Garbage Collection (GC)

Customized FW

stable write with minimizing GC effect

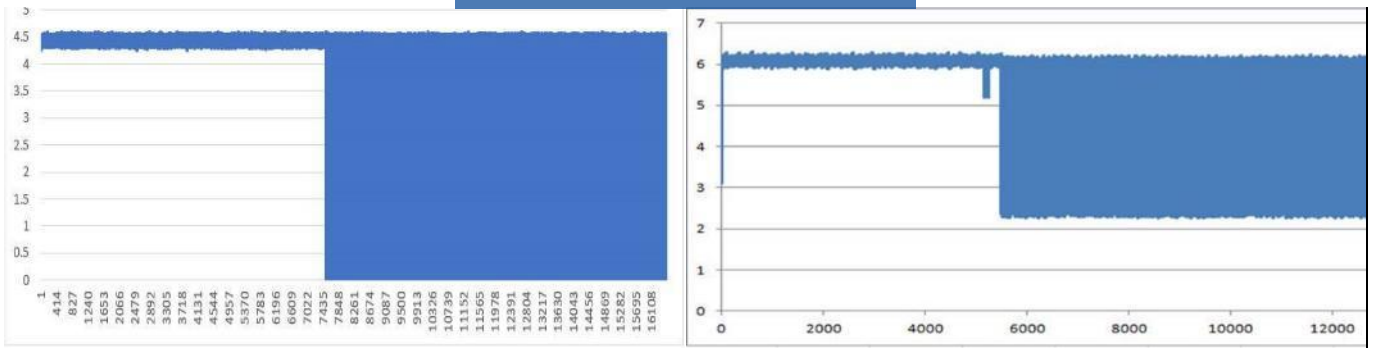
Low Power Consumption SD Card

- Special FW to adjust low power consumption for Body Worn Camera (BWC) in order to increase the usage time.

128GB	BWC FW	Standard FW
IDLE	0.05 mA	0.06 mA
Power Consumption (Write)	30.6 mA	60.8 mA

Small Data

Test Size : 6MB



Standard FW

IOPS varied a lot; some dropped to very small

Customized FW

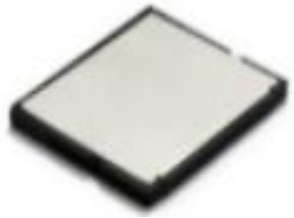
GC is activated evenly to have a higher IOPS

New Products

15360GB High Capacity SSD solutions

- Applied on 2.5” SATA SSD & PCIe U.2 SSD
- Perfectly implement into Heavy industrial, Surveillance, Security, Transportation Systems, and more applications.

PCIe Gen 3x4	R : 3400 / W : 1000 (MB/s)	Up to 15360 GB
SATA 3.1	R : 550 / W : 530 (MB/s)	Only Supports 0~70 ℃



FIPS 140-2 SSD

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

- Applied on, 2.5” SATA SSD, M.2 SATA 2280 & M.2 NVMe 2280 products
- Security Label is performed on 2.5” SATA SSD
- Conformal Coating is implement on M.2 SATA 2280 & M.2 NVMe 2280 SSD.

New Products

PCIe M.2 2280 with PLP

- With Power Loss Protection function (PLP) helps secure the integrity of data from losing during power sudden off.
- Perfect solution for medical, military, measurement, transportation, heavy industrial and mobile applications.

PCIe Gen 3x4	Up to 1920 GB	R : 3300 / W : 1000 (MB/s)	Supports -40~85 ℃

CFeXpress (CFX) with PLP Lite

- Supports 3D pSLC mode
- CFX card with PLP Lite can extend additional 13ms power stability to protect system failure due to uncertain power issue.
- Use a lot on Gaming systems, Medical instrument, In-vehicle & Transportation or other applications.

PCIe Gen 3x2	Up to 960 GB	R : 1750 / W : 1600 (MB/s)	Supports -40~85 ℃

New Products

PCIe M.2 2230

- Supports 3D pSLC mode
- Small Form Factor (22mm x 30mm)
- M key interface.
- Designed for small size applications development

PCIe Gen 3x4	Up to 960 GB	R : 2500 / W : 2000 (MB/s)	Supports -40~85 ℃

PCIe M.2 2242 (B Key + M Key)

- Supports 3D pSLC mode
- B Key + M Key interface
- Its small form factor gives designers to have more space on their final product to obtain their achievement.

PCIe Gen 3x2	Up to 1920 GB	R : 1700 / W : 1400 (MB/s)	Supports -40~85 ℃

New Products - 2023

Edge computing SSD series solutions

- Applied on PCIe M.2 2280 SSD & PCIe U.2 SSD
- Perfectly implement into Heavy industrial & Edge computing with mixed workload & write intensive

M.2	PCIe Gen 4x4	R : 7000 / W : 6500 (MB/s)	Up to 7680 GB
	Supports -40~85 ℃	With TCG OPAL	Heat Sink Appliable
U.2	PCIe Gen 4x4	R : 6000 / W : 6000 (MB/s)	Up to 153600 GB
	Supports -40~85 ℃	With TCG OPAL	PLP Optional

SD card with PLP Lite

- A SD card with 450uF capacitor inside to protect power instability
- Extra power to protect SD card from losing FW, Tables or Partition

MLC only	Supports -40~85 ℃	Up to 128 GB