

Industrial SSD & DRAM Solutions for 5G Networking Applications



Under 5G and ORAN infrastructures, from one user's mobile phone to a multi-storey data center, everything is connected to a more flexible and scalable network. As server and networking applications need to process loads of big data, memory products with **higher capacity** and **endurance**, **faster speed** of data processing, and higher level of **data security** are on demand. Understanding the best and most efficient ways to protect and store data, Apacer is committed to helping the server and networking industry grow into the next decade and beyond.

Featured Technologies for 5G Networking Applications

SLC
liteX

SLC-liteX

Apacer's 3D NAND SLC-liteX technology breaks through the limitations of existing technology and provides up to 100,000 P/E cycles, which is over 33 times more than MLC or industrial 3D TLC.



Anti-Sulfuration

Apacer's world's first patented anti-sulfuration DRAM modules and anti-sulfuration SSDs with the industry's highest level of anti-corrosion ANSI/ISA 71.04 G3 Certification can meet the needs of industrial products facing harsh environments.



Power Stability

- CorePower
- DataDefender™



Longevity & Value-added

- SLC-liteX
- SSDWidget 2.0
- Fixed BOM
- 6+6 PCN/EOL Policy



Survivability

- Anti-Sulfuration
- Conformal Coating
- Nano Coating (IP57)
- Wide Temperature
- Sidefill



Data Security

- Bidirectional Security Identification
- Signed Firmware
- TCG Opal 2.0

Recommended Industrial SSD Solutions



Model	PV930-M280	PV210-M280	PV220-M280	PH920-M280	SV24P-25	SH250-25	SH250-M280	UH110-UFD1
Features	High Performance Signed Firmware	TCG Opal 2.0	Anti-Sulfuration	High Endurance, Signed Firmware	CorePower, TCG Opal 2.0	High Endurance, TCG Opal 2.0	High Endurance, TCG Opal 2.0, Anti-Sulfuration	High Endurance, Bidirectional Security Identification
Form Factor	M.2 2280	M.2 2280	M.2 2280	M.2 2280	2.5"	2.5"	M.2 2280	USB Flash Drive
Interface	PCIe Gen4 x4	PCIe Gen3 x4	PCIe Gen3 x4	PCIe Gen3 x4	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	USB 3.1 Gen1
Connector	M.2 M Key	M.2 M Key	M.2 M Key	M.2 M Key	(7+15) pin	(7+15) pin	M.2 B & M Key	USB Type A Plug
NAND Flash Type	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC
Capacity	480~1920 GB	240~1920 GB	120~1920 GB	160~640 GB	120~1920 GB	10~320 GB	10~320 GB	16~64 GB
External DRAM	Yes	Yes	No	No	Yes	No	No	No
Max. R/W Performance (MB/sec)	5080/4735	3130/2620	1710/1685	1740/1530	560/495	560/520	560/520	265/125
IOPS (4K Random Write)	633K	521K	263K	265K	84K	74K	74K	700
Standard Operating Temp. (°C)	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70
Wide Temp. (°C)	-	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85 (16GB Not supported)
MTBF (Hours)	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000
Recommended Applications	5G-ORAN CU, DU, MEC	5G-ORAN DU, MEC	5G-ORAN DU MEC, Fronthaul Gateway, Switch, Router, SD-WAN, Firewall	5G-ORAN DU MEC, Fronthaul Gateway, Switch, Router	5G-ORAN DU MEC, Fronthaul Gateway, Switch, Router	5G-ORAN DU MEC, Fronthaul Gateway, Switch, Router	5G-ORAN DU MEC, Fronthaul Gateway, Switch, Router	Switch, Firewall



Model	SH250-M242	SH250-300	SV250-25	SV250-M280	SV250-M242	SV250-300	SV250-7LP2	UV110-UFM2
Features	High Endurance, TCG Opal 2.0		TCG Opal 2.0	Anti-Sulfuration, TCG Opal 2.0	TCG Opal 2.0	TCG Opal 2.0	Compact, Write Protect Switch	
Form Factor	M.2 2242	JEDEC MO-300	2.5"	M.2 2280	M.2 2242	JEDEC MO-300	SATA Disk Module	USB Disk Module
Interface	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	USB 2.0
Connector	M.2 B & M Key	52-pin mSATA	(7+15) pin	M.2 B & M Key	M.2 B & M Key	52-pin mSATA	7 pin	10-pin (2x5) female header in 2.00mm
NAND Flash Type	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC
Capacity	10~160 GB	10~160 GB	30~1920 GB	30~1920 GB	30~960 GB	30~1920 GB	30~120 GB	16~128 GB
External DRAM	No	No	No	No	No	No	No	No
Max. R/W Performance (MB/sec)	560/520	560/520	560/520	560/520	560/515	560/515	560/510	40/33
IOPS (4K Random Write)	75K	75K	73K	73K	73K	71K	75K	300
Standard Operating Temp. (°C)	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70
Wide Temp. (°C)	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85
MTBF (Hours)	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000
Recommended Applications	Router, Switch, Fronthaul Gateway			5G Small Cell, uCPE, SD-WAN, Firewall			Switch, SD-WAN, Firewall	

Recommended Industrial DRAM Solutions



Module Type	RDIMM	ECC UDIMM	ECC SODIMM	VLP RDIMM	VLP ECC UDIMM	ECC UDIMM	ECC SODIMM	RDIMM
Memory Technology	DDR4	DDR4	DDR4	DDR4	DDR4	DDR5	DDR5	DDR5
Frequency	2133/2400/2666/2933/3200	2133/2400/2666/2933/3200		2133/2400/2666/2933/3200		DDR5-4800		
Density	4G/8G/16G/32G/64G/128G	4G/8G/16G/32G		4G/8G/16G/32G		16GB / 32GB		
Voltage	1.2v	1.2v	1.2v	1.2v	1.2v	1.1v	1.1v	1.1v
Pin Count	288-Pin	288-Pin	260-Pin	288-Pin	288-Pin	288-Pin	262-Pin	288-Pin
Width	72-Bit	72-Bit	72-Bit	72-Bit	72-Bit	72-Bit	72-Bit	80-Bit
PCB Height	1.23"	1.23"	1.18"	0.738"	0.738"	1.23"	1.18"	1.23"
Operation Temperature. (°C)	TC = 0 ~ +85	TC = 0 ~ +85	TC = 0 ~ +85	TC = 0 ~ +85	TC = 0 ~ +85	TC = 0 ~ +85	TC = 0 ~ +85	TC = 0 ~ +85

Value-added Technology



(Optional) (Optional) (Optional)

(Optional) (Optional) (Optional)