Apacer

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

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 and sets a new standard for high endurance.

CoreSnapshot

Full backup and recovery of SSD data can be performed in seconds, which can instantly eliminate catastrophic system issues and prevent data damage or downtime from translating into operational risks and losses.

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
- TCG Opal 2.0

Recommended Industrial SSD Solutions

Model	PT160-M280	PH160-M280	PV25P-M280	PV250-M280	PH250-M242	TCG SSD SV240-25	SH25P-25	SH250-M280
Features	High Perfformance High Capacity	High Endurance	CorePower	TCG-OPAL2.0	High Endurance Small Form Factor	FIPS 140-2 Certified	High Endurance, CorePower	High Endurance, TCG-OPAL2.0
Form Factors	M.2 2280	M.2 2280	M.2 2280	M.2 2280	M.2 2242	2.5"	2.5"	M.2 2280
Interface	PCIe Gen4 x4	PCIe Gen4 x4	PCIe Gen4 x4	PCIe Gen4 x4	PCIe Gen4 x4	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)
Connector	Double-sided M.2 2280-M	Double-sided M.2 2280-M	Double-sided: M.2 2280 M key	Double-side: M.2 2280-D5-M key	Double-sided: M.2 2242 M key	(7+15) pin male	(7+15) pin male	M.2 B & M key
NAND Flash Type	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC
Capacity	4TB ~ 8TB	1280GB/1920GB	240GB~1920GB	240GB~3840GB	160GB-320GB	120GB~1920GB	40GB~640GB	10GB~320GB
External DRAM	Yes	Yes	No	No	No	Yes	No	No
Max. R/W Performance (MB/sec)	6970/2310	7345/6165	3325/3020	3675/3215	3740/2855	560/505	560/550	560/510
IOPS	517K	1378K	600K	600K	544K	87K	63K	70K
Standard Operating Temp.	0 ~ + 70	-	0 ~ + 70	240GB~3840GB: 0 ~ + 70	0 ~ + 70	0 ~ + 70	0 ~ + 70	0 ~ + 70
Wide Temp.	-40 ~ +85 (8TB not support)	-40 ~ +85	-40 ~ + 85	240GB~1920GB: -40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ + 85	-40 ~ + 85
MTBF	>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 Application	5G-ORAN CU, DU, MEC	5G-ORAN CU, DU, MEC	5G-ORAN CU,DU, MEC	5G-ORAN DU, MEC	Switch, Router, SD-WAN	5G-ORAN DU, MEC	5G-ORAN DU MEC, Switch, Router	5G-ORAN DU MEC, Switch, Router
Support SLC-liteX	No	Yes	No	No	Yes	No	Yes	Yes

Model	SH250-M242	SH250-300	SH250-CFast	SV250-25	SV250-7LP2	CF6A-SL	EH150-eMMC	UH110-UFD1
Features	High Endurance, TCG Opal 2.0	High Endurance, TCG-OPAL2.0	High Endurance, Write Protect Switch	CoreSnapshot	Compact	High Endurance, Write Protect Switch	High Endurance	High Endurance, Bidirectional Security Identification
Form Factors	M.2 2242	JEDEC MO-300	CFast	2.5"	SSD Module	CompactFlash Type I	eMMC	USB Flash Drive
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)	PC Card Memory Mode; PC Card I/O Mode; True IDE Mode	eMMC5.1 HS400	USB 3.2 Gen1
Connector	M.2 B & M Key	52-pin mSATA	(7+17) pin male	(7+15) pin male	7-pin	50-pin	153 Ball FBGA	USB Type-A
NAND Flash Type	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC	MLC	TLC	3D TLC
Capacity	40GB~320GB	40GB~640GB	40GB-320GB	120GB~1920GB	120GB-480GB	4GB~32GB	16GB~32GB	32GB~64GB
External DRAM	No	No	No	No	No	No	No	No
Max. R/W Performance (MB/sec)	550/485	550/485	550/485	560/500	560/480	115/80	320/245	270/140
IOPS	63K	63K	63K	68K	68K	157	-	900
Standard Operating Temp.	0 ~ + 70	0 ~ + 70	0 ~ + 70	0 ~ + 70	0 ~ + 70	0 ~ + 70	-	0 ~ + 70
Wide Temp.	- 40 ~ + 85	-40 ~ + 85	-40 ~ + 85	-40 ~ + 85	-40 ~ + 85	-40 ~ + 85	-40 ~ + 85	-40 ~ + 85 * Not supported on 16GB
MTBF	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>1,000,000	-	>3,000,000
Recommended Application	Router, Switch	Router, Switch	Switch, Router, SD-WAN, Firewall	Router, Switch	5G small cell,uCPE, SD-WAN, Firewall	Switch, Router, SD-WAN, Firewall	Switch, uCPE, SD-WAN	Switch, Firewall
Support SLC-liteX	Yes	Yes	Yes	No	No	No	Yes	Yes

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		Wide Temperature, Thermal Sensor, 30μ Gold Finger, Underfill (Optional), Anti-Sulfuration (Optional), Conformal Coating (Optional)				Thermal Sensor, 30μ Gold Finger, Underfill (Optional), Anti-Sulfuration (Optional), Conformal Coating (Optional)		