

## Industrial SSD & DRAM Solutions for Gaming Applications



Confidentiality and data protection of game play data and programming patterns in storage applications are of primary concern and cannot be compromised. In order to meet the high-end image processing and strict security demands of the gaming industry, Apacer offers high-performance industrial SSD and memory solutions, and implements critical security features without sacrificing our well-known reliability benchmarks.



### Featured Technologies for Gaming Devices

SLC  
liteX

#### SLC-liteX

Apacer's 3D NAND SLC-liteX technology breaks through the limitations of existing technology and provides up to 30,000 P/E cycles, which is 10 times more than MLC or industrial 3D TLC.



#### Write Protect

Write protect can prevent drives from unauthorized data writing via a hardware switch/pin or vendor software command.



#### Data Security

- AES 256-bit Encryption
- Signed Firmware
- TCG Opal 2.0
- Write Protect



#### Reliability & Endurance

- CorePower
- DataDefender™
- Page Mapping
- SLC-liteX
- Over-provisioning
- Multi-Powerpath
- Thermal Throttling
- Wide Temperature



#### Data Integrity

- DataRAID™
- Smart Read Refresh™



#### Longevity

- Double-barreled Solution
- Fixed BOM
- 6+6 PCN/EOL Policy

### Recommended Industrial SSD Solutions

#### High Endurance 3D NAND SLC-liteX SSD Series



Model	PH920-M280	SH250-25	SH250-CFast	SH250-M242	UH110-UFD4	CH210-MSD	CH710-CF
<b>Features</b>	AES 256-bit Encryption				Write Protect	Smart Read Refresh™	High Endurance
<b>Form Factor</b>	M.2 2280	2.5"	CFast	M.2 2242	USB Flash Drive	microSD	CompactFlash Type I
<b>Interface</b>	PCIe Gen3 x4	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	SATA 3.2 (6Gb/s)	USB 3.1 Gen1	SD 5.0	PC Card Memory Mode; PC Card I/O Mode; True IDE Mode
<b>Connector</b>	M.2 M key	(7+15) pin	(7+17) pin male	M.2 B & M key	USB Type A Plug	-	50-pin
<b>NAND Flash Type</b>				3D TLC			
<b>Capacity</b>	160~640 GB	10~320 GB	10~160 GB	10~160 GB	4~8 GB	16~64 GB	8~64 GB
<b>External DRAM</b>	No	No	No	No	-	-	No
<b>Max. R/W Performance (MB/sec)</b>	1700/1500	560/520	560/515	560/520	265/50	90/70	115/80
<b>Standard Operating Temp. (°C)</b>	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	0 ~ +70	-25 ~ +85	0 ~ +70
<b>Wide Temp. (°C)</b>	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85 *	Not support	-40 ~ +85
<b>MTBF (Hours)</b>	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>3,000,000	>1,000,000
<b>Recommended Applications</b>	Jackpot Controller			Electronic Gaming Machine			Jackpot Controller & EGM

\* Not supported on 4GB

### Industrial SSD Solutions



Model	PV920-M280	PV910-CFX	SV24P-25
<b>Features</b>	High Performance, Signed Firmware	Write Protect, Signed Firmware	CorePower
<b>Form Factor</b>	M.2 2280	CFexpress 2.0 Type B	2.5"
<b>Interface</b>	PCIe Gen3 x4	PCIe Gen3 x2	SATA 3.2 (6Gb/s)
<b>Connector</b>	M.2 M key	-	(7+15) pin
<b>NAND Flash Type</b>	3D TLC		
<b>Capacity</b>	240~1920 GB	60~480 GB	120~1920 GB
<b>External DRAM</b>	No	No	Yes
<b>Max. R/W Performance (MB/sec)</b>	1700/1500	1770/1265	560/485
<b>Standard Operating Temp. (°C)</b>	0 ~ +70	0 ~ +70	0 ~ +70
<b>Wide Temp. (°C)</b>	-40 ~ +85	-40 ~ +85	-40 ~ +85
<b>MTBF (Hours)</b>	>3,000,000	>3,000,000	>3,000,000
<b>Recommended Applications</b>	Electronic Gaming Machine		

### Recommended Industrial DRAM Solutions



Module Type	UDIMM	SODIMM	ECC UDIMM	ECC SODIMM
<b>Memory Technology</b>	DDR4			
<b>Frequency</b>	2133/2400/2666/2933/3200			
<b>Density</b>	2GB/4GB/8GB/16GB/32GB	2GB/4GB/8GB/16GB/32GB	4GB/8GB/16GB/32GB	4GB/8GB/16GB/32GB
<b>Voltage</b>	1.2v	1.2v	1.2v	1.2v
<b>Pin Count</b>	288-Pin	260-Pin	288-Pin	260-Pin
<b>Width</b>	64-Bit	64-Bit	72-Bit	72-Bit
<b>PCB Height</b>	1.23"	1.18"	1.23"	1.18"
<b>Operation Temperature. (°C)</b>	TC = 0 ~ +85	TC = 0 ~ +85	TC = 0 ~ +85	TC = 0 ~ +85

#### Value-added Technology

