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Apacer AST680S

Reliable Solution for Computer System

Optimization

Apacer AST680S is a solid state drive (SSD) in standard 2.5" SATA form factor. Designed in SATA 6 Gb/s interface, the drive can deliver outstanding performance up to 525 MB/s data transfer speed, highly suitable to serve as operating system boot drive or storage media of important data. The mechanical design of AST680S conforms to the latest requirements of SATA 6.0 Gbps interface. Hence, power efficiency wise, AST680S supports SATA power management modes which greatly cut power consumptions to make it an environmental and economical storage drive than traditional hard disk drives.

In terms of reliability, AST680S supports wear leveling, S.M.A.R.T., NCQ command, and ECC engine correcting up to 72bit per 1KB data. With the advantages of performance and reliability mentioned above, AST680S is proved to be the best companion for PC and laptop upgrade.

Applications

- PC/NB for general storage
- Operating system boot drive for PC/NB
- Network servers
- Industrial PCs
- Graphic and video applications
- Kiosk, POS and automation.
- Multimedia
- Gaming

Features:

- SATA 6.0 Gb/s interface compliance
- Outstanding read/write performance
- Supports SATA Power Management
- Powerful ECC engine correcting up to 72bit/1KB
- Supports S.M.A.R.T. commands
- Supports TRIM commands

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General Product Specifications

Specifications					
Interface	SATA 6.0 Gb/s interface				
SATA 6.0 Gbps Burst Speed	600 MB/s				
Capacity*	64 GB, 128 GB				
Performance**	64 GB	Read: up to 440 MB/s; Write: up to 205 MB/s			
	128 GB	Read: up to 525 MB/s; Write: up to 380 MB/s			
Form Factor	2.5 inch				
NAND Flash Media	MLC				
ECC	Up to 72bit/1KB				
MTBF	1,000,000 hours (approx.)				
Operating Voltage	5V ± 5%				
Power consumption*** (unit: mA)	Capacity	Operating	Idle	Partial	Slumber
	64 GB	850	85	20	15
	128 GB	870	85	20	15
Dimension	100.10mm(L) x 69.85mm(W) x 7.00mm(H)				
Endurance****	64 GB: 158 TBW				
	128 GB: 317 TBW				
Reliability Features	S.M.A.R.T, TRIM, Wear-leveling				
Temperature	Operating	0℃ to 70℃			
	Storage	-40℃ to 85℃			
Humidity	RH 90% under 40℃				
Shock*****	500G/2ms				
Vibration*****	80 – 2000Hz/20G				
Acoustic	0dB				
Warranty	3 years				
Package Content	Retail package				
Certifications	RoHS, CE, FCC, BSMI				

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*Unformatted. Theoretically, 1GB=1,000,000,000 Bytes. Under operating systems, the capacity might appear to be less than the theoretical capacity because the calculation in OS is based on 1 GB = 1024 MB / 1MB =1024KB and a minority of the capacity is reserved for maintenance purposes.
**Performance results may vary from flash configurations or host system settings. Test results are based on ATTO platform.
***Power consumption were measured at 5.0V and results may vary from flash configurations or host system settings.
****Estimated under typical PC user behaviors, NAND endurance cycles, write amplification and wear leveling factors.
*****Shock and vibrations are subject to change without notice

Ordering Information

Capacity	Bulk	Distributor/Retailer
64 GB	AP64GAST680S	AP64GAST680S-1
128 GB	AP128GAST680S	AP128GAST680S-1

Revision History

Version	Description	Date
1.0	Preliminary release	04/23/2015
1.1	Changed product drawing	04/28/2015
1.2	Revised ordering information	07/28/2015

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