

**Samsung Solid State Drive - 840 PRO Series BASIC**

Model code		MZ-7PD256BW	
Attribute	Description		
General Feature	Application	Desktop PC & Laptop PC	Compatible Device: Desktop PC & Laptop PC
	Capacity	256 GB (1GB=1Billionbyte)	256 GB (1GB=1Billionbyte by IDEMA) * Actual usable capacity may be less (due to formatting, partitioning, operating system, applications or otherwise)
	Form Factor	2.5 inch	2.5 inch Form Factor
	Interface	SATA 6Gbp/s (Compatible with SATA 3Gbp/s & SATA 1.5Gbp/s)	SATA 6Gbp/s Interface and compatible with SATA 3Gbp/s & SATA 1.5Gbp/s interface also
	Dimension (WxHxD)	100 X 69.85 X 6.8 (mm)	100 X 69.85 X 6.8 (mm) Dimension
	Weight	Max 53.5 g	Max 53.5g Weight
	Storage Memory	Samsung 2x nm Toggle DDR 2.0 NAND Flash Memory	Samsung 2x nm Toggle DDR 2.0 NAND Flash Memory (400Mbps)
	Controller	Samsung 3-core MDX Controller	Samsung 3-core MDX Controller
Cache Memory	Samsung 512 MB LP-DDR2 SDRAM	Samsung 512 MB Low Power DDR2 SDRAM cache memory	
Special Feature	TRIM Support	Yes	TRIM Supported
	S.M.A.R.T Support	Yes	S.M.A.R.T Supported
	GC (Garbage Collection)	Auto	Auto Garbage Collection Algorithm
	Encryption Support	Yes (AES 256bit)	AES 256bit Full Disk Encryption (Class 0)
	WWN Support	Yes	World Wide Name supported
	Device Sleep Mode Support	No	No
Performance	Sequential Read	Up to 540 MB/sec	Up to 540 MB/sec Sequential Read * Actual performance may vary depending on use conditions and environment.
	Sequential Write	Up to 520 MB/sec	Up to 520 MB/sec Sequential Write * Actual performance may vary depending on use conditions and environment.
	Random Read (4KB, QD32)	Up to 100,000 IOPS	Up to 100,000 IOPS Random Read * Actual performance may vary depending on use conditions and environment.
	Random Write (4KB, QD32)	Up to 90,000 IOPS	Up to 90,000 IOPS Random Write * Actual performance may vary depending on use conditions and environment.
	Random Read (4KB, QD1)	Up to 9,900 IOPS	Up to 9,900 IOPS Random Read * Actual performance may vary depending on use conditions and environment.
	Random Write (4KB, QD1)	Up to 31,000 IOPS	Up to 31,000 IOPS Random Write * Actual performance may vary depending on use conditions and environment.
Environment	Average Power Consumption (system level)	0.069W (Typical)	0.069 Watts Average power use (Typical) * Average power is measured during execution of Mobilemark2007 in windows7 * Actual power consumption may vary depending on use conditions and environment.
	Power consumption (Idle)	0.054 W (DIPM on), 0.349 W (DIPM off)	0.054 Watts (Typical, DIPM Enabled Value), 0.349 Watts (Typical, DIPM Disabled Value) * Actual power consumption may vary depending on use conditions and environment.
	Power consumption (Active)	Seq. read : Seq. write : Ran. Read : Ran. Write :	Sequential read : Sequential write : Random Read : Random Write : * Actual power consumption may vary depending on use conditions and environment.
	Allowable Voltage	5V ± 5%	5V ± 5% Allowable voltage
	Reliability (MTBF)	1.5 M Hours	1.5 Million Hours Reliability (MTBF)
	Operating Temperature	0 - 70 °C	0 - 70 °C Operating Temperature
	Shock	1,500G & 0.5ms (Half sine)	1,500G & 0.5ms (Half sine)
Accessories	Installation Kit	N/A	Not Available
Software	Management SW	Magician Software	Magician Software for SSD management
Warranty		5 Years Limited Warranty	5 Years Limited Warranty