



# SAMSUNG PM830 SOLID STATE DRIVE

## 2.5" & mSATA 6.0Gb/s Data Center Edition

Samsung stays a step ahead in technology, delivering multiple top-tier SSDs, for data center applications, with improved performance, enabling increased productivity and data protection.

### Superior Endurance and Reliability

As the world's #1 DRAM, NAND Flash, and SSD supplier, Samsung has unique, industry-leading engineering resources, technologies, and manufacturing processes as well as more stringent quality and testing standards. All Samsung SSDs are designed and built completely in-house, rather than sourcing generic parts from the market. The Samsung PM830 Data Center Edition uses 20nm-class MLC NAND Flash and the latest MCX controller delivering superior endurance (up to 60 to 1250 TBW), thus enabling sustained performance and unmatched reliability through its specifically-engineered wear-leveling and garbage collection algorithms.

### Outstanding Performance in Read-Centric Applications

The Samsung PM830 Data Center Edition delivers superior sequential reads (up to 500 MB/s), and fast sequential write speeds (up to 400 MB/s). It's the ideal solution for your *read-intensive* workloads, such as web caching, video streaming and archiving, etc.

### Industry-leading Design

The Samsung PM830 Data Center Edition features stunning design and precision engineering—inside and out. It measures 7mm down to 3.8mm in thickness, enabling easy adoption for installing into the most compact data center environments.

### Increased Capacity and Security

The Samsung PM830 Data Center Edition is available in a variety of capacities, including 32, 64, 128, 256 and 512GB, and ensures the all sensitive data is secure. Samsung's PM830 protects your data with AES 256-bit encryption, eliminating any concerns, confusion and uncertainties.

### Key Benefits

- Samsung 3-core controller
- Samsung 20nm-class Toggle DDR NAND Flash memory
- Samsung 256MB DDR2 SDRAM cache memory
- Endurance up to 60 TBW to 1250 TBW
- For easy adoption, variety of physical dimensions from 7mm down to 3.8mm thickness



# SAMSUNG PM830 TECHNICAL SPECIFICATIONS

## High-Read Environments

<b>Form Factor</b>	2.5 inches	mSATA
<b>Capacity (GB)</b>	64, 128, 256, 512	32, 64, 128, 256
<b>Host Interface</b>	SATA Gen 3.0–6Gb/s	
<b>Flash</b>	MLC 20nm-class	
<b>Encryption</b>	AES-256	
<b>MTBF</b>	1.5 mm hours	1 mm hours
<b>Uncorrectable Bit Error Rate (UBER)</b>	1 in $10^{15}$	
<b>Power Consumption</b>	Active: 0.127W Idle: 0.078W	
<b>Write Endurance (Terabytes Written)</b>	Up to 60–1250TBW	Up to 30–625TBW
<b>Peak/Sustained Sequential Performance*</b>	Read: 500 MB/s Write: 400 MB/s	
<b>Peak Random Performance</b>	Read: 80,000 IOPS Write: 36,000 IOPS	Read: 50,000 IOPS Write: 29,000 IOPS
<b>Sustained Random Performance*</b>	Read: 57,000 IOPS Write: 2,200 IOPS	Read: 50,000 IOPS Write: 1,900 IOPS
<b>Physical Dimensions</b>	100 x 69.85 x 7mm	50.95 x 30 x 3.8mm
<b>Weight</b>	61g–62.5g	9–10g

\*Based on SNIA RTP 2.0 Benchmark



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