



Samsung SSD 830 Series

2.5" SATA 6Gb/s SSD for Desktop PC & Laptop PC

- Samsung 3-core MCX controller
- Samsung 2x nm Toggle DDR NAND Flash memory
- Samsung 256MB DDR2 SDRAM cache memory
- Magician software for SSD management
- Black-tone, brushed metal design
- Only 7mm thick to accommodate the latest slim-profile laptop PCs



Outstanding Performance in Multi-tasking

The Samsung SSD 830 Series boasts superior random read speeds (up to 80,000 IOPS) and faster sequential read and write speeds (up to 520 MB/s & 400 MB/s respectively). It's the ideal solution for your everyday computing needs, such as web browsing, document creation, viewing or editing multimedia files, playing PC games, etc.

Superior 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 SSD 830 Series is optimized for exceptional, sustained performance and unrivaled reliability through its specially-engineered wear-leveling and garbage collection algorithms.

Industry-leading Design

The Samsung SSD 830 Series features stunning design and precision engineering – inside and out. It measures only 7mm thick, so it can even accommodate the latest ultra-slim laptop PCs.

Magician Software

Samsung's SSD Magician software eliminates the confusion and uncertainties of SSD management, making it simple for users to maximize the performance and lifetime of their Samsung SSD. The software helps to maintain the SSD at its peak condition, giving you the same great performance and reliability throughout the life of your PC. In addition to its performance maintenance features, SSD Magician also provides system information and facilitates performance benchmarking, performance optimization, OS optimization, firmware updates, secure erasing, and over provisioning.

A complete, user-friendly Solution

The Samsung SSD 830 series is available with both desktop and laptop installation kits. The desktop kit comes with SATA data and power cables, screws, and a 2.5" to 3.5" adapter bracket. The laptop kit includes a SATA to USB adapter cable to facilitate easy data migration and a mounting spacer so that laptops with traditional 9.5mm drive bays can accommodate the Samsung SSD 830 Series' new slim profile.

All Samsung SSD 830 Series models include a full version of Norton Ghost 15.0, rather than the limited data migration utilities included with most SSDs today. In addition to its robust data migration features, Norton Ghost 15.0 offers users advanced data backup and recovery functionality to ensure data integrity throughout the useful lifetime of the drive.

Finally, Samsung takes the stress out of the upgrade process by offering the best, most extensive User Manuals in the industry.

Technical Specifications

| Model Name | Samsung SSD 830 Series | |
|-------------------------|--|---|
| Capacity | 64GB, 128GB, 256GB, 512GB | |
| Dimensions (L* W* H) | 100 x 69.85 x 7 (mm) | |
| Interface | SATA 6Gb/s (compatible with SATA 3Gb/s and SATA 1.5Gb/s) | |
| Form Factor | 2.5 inch | |
| NAND Flash Memory | 2x nm Samsung Toggle DDR MLC NAND Flash Memory | |
| Performance* | Sequential Read: | Max. 520 MB/s (64GB/128GB/256GB/512GB) |
| | Sequential Write: | Max. 400 MB/s (256GB/512GB) |
| | | Max. 320 MB/s (128GB) Max. 160 MB/s (64GB) |
| | 4KB Random Read: | Max. 80,000 IOPS (128GB/256GB/512GB) |
| Max. 75,000 IOPS (64GB) | | |
| 4KB Random Write: | Max. 36,000 IOPS (256GB/512GB) | |
| | Max. 30,000 IOPS (128GB) Max. 16,000 IOPS (64GB) | |
| TRIM Support | Yes (Requires OS Support) | |
| Garbage Collection | Yes | |
| S.M.A.R.T | Yes | |
| Weight | Max. 62.5g (256GB/512GB) | |
| | Max. 61g (64GB/128GB) | |
| Reliability | 1.5 million hours MTBF (Mean Time Between Failures) | |
| Power Consumption | Active : 0.127W ** (Typical) | Idle : 0.078W*** (Typical) |
| Temperature | Operating: | 0°C to 60°C |
| | Non-Operating: | -55°C to 95°C |
| Humidity | 5% to 95%, non-condensing | |
| Vibration | Operating: | Random: 2.17Grms (7~800Hz) |
| | Non-Operating: | Random: 3.08Grms (7~800Hz) |
| | | Swept sine: 20G peak @ 10~2KHz |
| Shock | 1500G & 0.5ms (Half sine) | |
| Warranty | 3 years | |

* Performance measurements based on Iometer with queue depth equal to 32.

** Active power is measured during execution of MobileMark 2007 in Windows 7

*** DIPM enabled value

Product Lineup & Model Number

| Density | | Model Number | Part Number |
|---------|--------------------------|--------------|-----------------|
| 64 GB | Basic Kit | MZ-7PC064B | MZ7PC064HADR-0B |
| | Laptop Installation Kit | MZ-7PC064N | MZ7PC064HADR-0D |
| | Desktop Installation Kit | MZ-7PC064D | MZ7PC064HADR-0C |
| 128 GB | Basic Kit | MZ-7PC128B | MZ7PC128HAFU-0B |
| | Laptop Installation Kit | MZ-7PC128N | MZ7PC128HAFU-0D |
| | Desktop Installation Kit | MZ-7PC128D | MZ7PC128HAFU-0C |
| 256 GB | Basic Kit | MZ-7PC256B | MZ7PC256HAFU-0B |
| | Laptop Installation Kit | MZ-7PC256N | MZ7PC256HAFU-0D |
| | Desktop Installation Kit | MZ-7PC256D | MZ7PC256HAFU-0C |
| 512 GB | Basic Kit | MZ-7PC512B | MZ7PC512HAGH-0B |
| | Laptop Installation Kit | MZ-7PC512N | MZ7PC512HAGH-0D |
| | Desktop Installation Kit | MZ-7PC512D | MZ7PC512HAGH-0C |

Accessories

| Accessory | Basic Kit | Desktop Installation Kit | Laptop Installation Kit |
|-------------------------------------|-----------|--------------------------|-------------------------|
| Samsung software & manual CD | ✓ | ✓ | ✓ |
| Norton Ghost 15.0 CD (Full version) | ✓ | ✓ | ✓ |
| Quick user manual | ✓ | ✓ | ✓ |
| 3.5" bracket with screws | N/A | ✓ | N/A |
| SATA data and power cables | N/A | ✓ | N/A |
| Mounting spacer | N/A | N/A | ✓ |
| SATA to USB adapter cable | N/A | N/A | ✓ |

For more information, visit www.samsung.com/ssd

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