

Data Sheet

Pulsar.2™

MLC-enabled, enterprise SSD –
from the enterprise storage leader

**800, 400, 200 and 100 GB • MLC NAND flash •
6 Gb/s SAS and SATA 6 Gb/s**

Key Advantages

- The first MLC-enabled solid-state drive (SSD) to deliver the price-performance benefits with the data integrity and drive endurance needed for enterprise applications
- Helps protect against unintended data change or loss to ensure accurate data retention and integrity
- Supports 6 Gb/s SAS and SATA 6 Gb/s for interface scalability and reliability – avoiding incompatibility across the software stack
- 2.5-inch form factor fits existing HDD slots
- Hot pluggable to avoid unnecessary downtime
- Provides OEMs, system builders and data centres with the highest levels of flexibility, service, support and fulfilment they need for demanding enterprise environments
- Provides a common storage foundation to reduce system complexity and operating costs
- Helps protect against unexpected data change or loss
- Optional Self-Encrypting Drive (SED) models (800 GB, SAS only) help companies to comply with corporate and federal data security mandates, and help protect data should the drive be lost, stolen or retired¹

Best-fit Applications

- Tier 0, external storage arrays
- Performance-hungry enterprise applications, such as server virtualisation, online transaction processing (OLTP), data warehousing, content delivery networks (CDN) and cloud computing
- Blade servers, general servers and direct-attached storage (DAS) solutions that crave the advantages of solid-state technology
- Enterprise architectures that use auto-tiering solutions



¹ Self-Encrypting Drive models not available in all countries or capacities. Requires TCG-compliant host or controller support.

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Data centre managers must provide faster data storage and access without incurring data corruption or loss. They must also achieve this while juggling tight IT budgets and managing highly complex system environments. The Seagate® Pulsar.2™ SSD is an enterprise-class, MLC-enabled, high-capacity (up to 800 GB) SSD that delivers the price-performance, data integrity and endurance benefits needed by Tier 0 performance-hungry enterprise applications. And it does so while minimising any time variance that end users may experience between read and write storage operations.

MLC-Enabled, Enterprise Class Endurance and Data Integrity

Performance is important, but endurance and data integrity are critical. The Pulsar.2 SSD can routinely complete more than ten full drive writes per day (or 15 petabytes over the life of the device), providing the endurance needed in demanding enterprise environments. The Pulsar.2 drive has been designed for the enterprise environment with the intelligence to automatically detect and correct a multitude of data errors that can occur during normal drive operation to deliver the highest levels of enterprise-class data integrity. Additional data integrity and endurance features include:

- **Advanced media-management technology and Protection Information (PI)** (is for SAS only) help protect against unexpected data change or loss
- **Background media scanning** helps protect against read disturb errors
- **Power-loss data protection** helps to ensure that data is not lost or inadvertently changed during an unexpected power loss
- **I/O error detection and correction** intelligently and automatically detects and corrects data errors that can occur during normal drive operation
- **Wear-levelling algorithms** ensure that every block on the NAND is written to an equal number of times and as evenly as possible to maximise the life of the device
- **Rubbish collection techniques** identify the next best block on the NAND flash to erase and rewrite before the space is actually needed

World-Class Service and Support

Seagate has the global presence and enterprise storage ecosystem customer relationships, systems, people and processes to consistently deliver the industry's highest quality enterprise SSD products and support.

Specifications ²	800 GB ¹	400 GB ¹	200 GB ¹	100 GB ¹
Model Number	ST800FM0002 ST800FM0012 ³	ST400FM0002 ST400FM0012	ST200FM0002 ST200FM0012	ST100FM0002 ST100FM0012
Interface	6 Gb/s SAS	6 Gb/s SAS SATA 6 Gb/s	6 Gb/s SAS SATA 6 Gb/s	6 Gb/s SAS SATA 6 Gb/s
NAND Flash Type	MLC	MLC	MLC	MLC
Product Application Class	Enterprise	Enterprise	Enterprise	Enterprise
Storage Type	SSD	SSD	SSD	SSD
Configuration/Reliability				
Non-recoverable Read Errors per Bits Read	1 LBA per 10E16	1 LBA per 10E16	1 LBA per 10E16	1 LBA per 10E16
Annualised Failure Rate (AFR)	0.44%	0.44%	0.44%	0.44%
Power Management				
DC Power Requirements (V)	+5/+12	+5/+12 ⁵ , +5 ⁶	+5/+12 ⁵ , +5 ⁶	+5/+12 ⁵ , +5 ⁶
Environmental				
Ambient Temperature (°C)				
Operating	0 to 60	0 to 60	0 to 60	0 to 60
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Temperature Change per Hour, Operating, Max	20	20	20	20
Temperature Change per Hour, Non-operating, Max	20	20	20	20
Physical				
Height (in/mm) ⁴	0.591/15.00	0.276/7.00	0.276/7.00	0.276/7.00
Width (in/mm) ⁴	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10
Length (in/mm) ⁴	3.955/100.46	3.955/100.46	3.955/100.46	3.955/100.46
Carton Unit Quantity	20	20	20	20
Cartons per Pallet	45	45	45	45
Cartons per Layer	9	9	9	9
Warranty				
Limited Warranty (years)	3	3	3	3

¹ One gigabyte, or GB, equals one billion bytes; and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

² Data provided is based on format at 512 bytes.

³ Self-Encrypting Drive model requires TCG-compliant host or controller support.

⁴ These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org. For connector-related dimensions, see SFF-8223.

⁵ SAS model

⁶ SATA model

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Seagate
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Storage™

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