

## PRODUCT BRIEF

### Intel® Solid-State Drive 310 Series

NAND Storage Solutions from Intel



# Intel® Solid-State Drive 310 Series

34nm Intel® NAND Flash Memory available in an mSATA form factor



## Compact Size, Big Performance

Great things come in small packages! Based on 34nm Intel NAND Flash Memory, the Intel® Solid-State Drive 310 Series offers similar performance to a 2.5" Intel Solid-State Drive (SSD), but in an eighth of the size.

The compact mSATA footprint enables dual-drive storage for traditional embedded platforms, as well as a single drive option for innovative, low-power handheld devices.

## Lightweight for On-the-Go Computing

The mSATA Intel SSD 310 Series enables a flexible, scalable and accelerated-storage solution in a form factor that is up to 8 times smaller than a 2.5" hard-disk drive, and weighs 10 times less. Supporting SATA signals over a PCI Express (PCIe) mini-connector, the Intel SSD 310 Series provides compact storage acceleration for single-drive systems like netbooks, tablets and other hand-held devices.

## High Performance Dual-Drive Option

The small footprint also augments hard-disk drive performance in dual-drive systems, such as all-in-ones, notebooks and small-form-factor (SFF) desktops. The mSATA form factor connects easily to an existing mSATA port on a PC—enabling the SSD to perform as a boot drive, quick access to frequently-used applications or storage.

## SSD Ruggedness

With no moving parts, Intel Solid-State Drives offer a revolutionary breakthrough that delivers a giant leap in storage performance. Designed to satisfy the most demanding gamers, media creators and technology enthusiasts, the Intel SSD 310 Series brings a high level of performance and reliability to a small form factor by utilizing the powerful 10-channel controller architecture of the Intel® X25-M SATA SSD series.

## Capacities to Fit Your Needs

Whether you chose the 40GB or 80GB capacity, the Intel SSD 310 Series provides the storage performance that fits your innovative designs. Make your system come alive with an Intel SSD 310 Series.



## Intel® Solid-State Drive 310 Series

### Technical Specifications

Model Name	Intel Solid-State Drive 310 Series
Capacity	40GB and 80GB
NAND Flash Components	34nm Intel NAND Flash Memory Multi-Level Cell Components
Bandwidth	Sustained Sequential Reads <ul style="list-style-type: none"><li>Up to 170 MB/s (40GB)</li><li>Up to 200 MB/s (80GB)</li></ul> Sustained Sequential Writes <ul style="list-style-type: none"><li>Up to 35 MB/s (40GB)</li><li>Up to 70 MB/s (80GB)</li></ul>
Read Latency	65 microseconds (40GB and 80GB)
Write Latency	110 microseconds (40GB) 75 microseconds (80GB)
Random I/O Operations per Second (IOPS) <sup>1</sup>	Random 4KB Reads <ul style="list-style-type: none"><li>Up to 25 K IOPS (40GB)</li><li>Up to 35 K IOPS (80GB)</li></ul> Random 4KB Writes <ul style="list-style-type: none"><li>Up to 2.5 K IOPS (40GB)</li><li>Up to 6.6 K IOPS (80GB)</li></ul>
Interface	Compatible with SATA 1.5 Gb/s and 3 Gb/s
Form Factor, Height and Weight	Full-sized mSATA form factor (50.80 mm x 29.85 mm) Less than 4.85 mm thick Weighs less than 10 grams
Compatibility	SATA revision 2.6 compliant. Compatible with SATA 3.0 Gb/s with Native Command Queuing and SATA 1.5 Gb/s interface rates.
Life Expectancy	1.2 million hours Mean Time Before Failure (MTBF)
Power Consumption	Active: 150 mW Typical <sup>2</sup> Idle: 75 mW Typical
Operating Temperature	0°C to 70°C
RoHS Compliance	Meets the requirements of European Union (EU) RoHS Compliance Directives and the Halogen Free <sup>3</sup> Compliance Directives
Product Health Monitoring	<ul style="list-style-type: none"><li>Self-Monitoring, Analysis and Reporting Technology (S.M.A.R.T.) commands</li><li>Intel® Solid-State Drive Toolbox</li></ul>

<sup>1</sup> Measurement performed on 8GB span.

<sup>2</sup> Active power measured during execution of BAPCo MobileMark\* 2007 with Device Initiated Power Management (DIPM) enabled.

<sup>3</sup> Halogen-free products: Applies only to halogenated flame retardants and PVC in the products. Halogens are below 900ppm bromine and 900ppm chlorine.

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