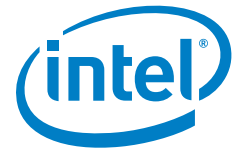


# PRODUCT BRIEF

Intel® Solid State Drive 540s Series



## Expect More. Do More.

### The Next Level of Consumer Computing

Optimize your computing experience with performance and reliability you can trust.



#### Intel Evolving Storage Technology

Introducing the Intel® Solid State Drive 540s Series, Intel's latest evolution of solid state drives.

Designed for a range of devices from Ultrabooks to desktops and laptops, the Intel SSD 540s Series delivers a low-power storage solution to meet the performance, quality, and reliability requirements demanded by today's consumer devices. Additionally, the 540s Series offers increased value as Intel's first TLC-based drive in the Intel SSD 5 Series family.

#### TLC Done Right

Utilizing a uniquely architected combination of single level cell (SLC) cache and triple level cell (TLC) NAND Flash Memory, the 540s Series delivers an optimized balance of performance and value.

#### Flexibility for Any Solution

The 540s Series is the first Intel 5 Series drive to deliver up to 1TB of storage capacity.

Available in both the 2.5" and M.2 80mm form factors, and with storage capacities ranging from 120GB up to 1TB (1000GB), the 540s Series accelerates performance across a variety of computing devices.

#### Quality & Reliability You Can Trust

The 540s Series is backed by Intel's five year limited warranty, including Intel's world-class post sales customer support.

#### Accelerate Your Performance

The 540s Series accelerates platform performance with sequential reads of up to 560 megabytes and sequential writes of up to 480 megabytes per second (MB/s) and random read and write input/output operations (IOPS) of up to 78K and 85K respectively.<sup>1</sup>

#### Performance that Matters

The 540s Series is architected to optimize performance for a 70%/30% 4KB random read/write mixed work load, the most utilized workload across common applications—delivering performance where it matters.

#### Charge Your Device Less Often

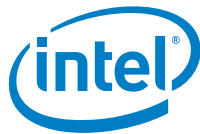
Managing tasks efficiently, the 540s Series reduces the drain on your battery. It reduces idle consumption by >90% compared to a typical hard drive disk, reducing power consumption from watts to milliwatts.<sup>1</sup> When coupled with a 6th generation Intel® Core™-based platform, the advanced power mode settings reduce power consumption another order of magnitude—from milliwatts to microwatts.

#### Product Spotlight

- Intel quality and reliability
- Performance that Matters
- Capacities up to 1TB
- Flexible form factors
- Low power consumption
- AES 256-bit self-encryption
- Backed by Intel's five year warranty

TECHNICAL SPECIFICATIONS<sup>1</sup>

Model Name	Intel Solid State Drive 540s Series				
Capacity (GB)	<b>M.2</b> - 120, 180, 240, 360, 480, 1000 (1TB is double-sided) <b>2.5-inch</b> - 120, 180, 240, 360, 480, 1000				
NAND Flash Memory	16nm NAND Flash Memory Tri-Level Cell (TLC)				
Bandwidth	<b>Form Factor</b>	Sequential Read (up to) <sup>2</sup>	Sequential Write (up to) <sup>2</sup>	Random Read (up to) <sup>2</sup>	Random Write (up to) <sup>3</sup>
	<b>M.2 and 2.5-inch</b>	560 MB/s	480 MB/s	78K IOPS	85K IOPS
Interface	SATA 6Gb/s, compatible with SATA 3Gb/s				
Form Factor, Height and Weight	<b>Form Factor</b>	<b>Height/Weight</b>			
	M.2 (80mm)	Up to 3.73mm / up to 7 grams			
	2.5-inch	Up to 7mm / up to 68 grams			
Life Expectancy <sup>4</sup>	1.6 million hours Mean Time Between Failures (MTBF)				
Power Consumption M.2	Active: 80mW Typical <sup>5</sup>		Idle: 40 mW Typical <sup>6</sup>		DevSleep: 3mW
Power Consumption 2.5-inch	Active: 90 mW Typical <sup>5</sup>		Idle: 50 mW Typical <sup>6</sup>		DevSleep: 5mW
Operating Temperature	0°C to 70°C				
RoHS Compliance	Meets the requirements of European Union (EU) RoHS Compliance Directives				
Software Tools	Intel® Solid State Drive Toolbox with Intel® SSD Optimizer at <a href="http://www.intel.com/go/ssdtoolbox">www.intel.com/go/ssdtoolbox</a> Intel® Data Migration Software at <a href="http://www.intel.com/go/ssdinstallation">www.intel.com/go/ssdinstallation</a>				



For more information, visit [www.intel.com/ssd](http://www.intel.com/ssd)

<sup>1</sup> Based on the Intel SSD 540s Series Product Specifications: <http://www.intel.com/content/www/us/en/solid-state-drives/ssd-540s-series-spec.html> and <http://www.intel.com/content/www/us/en/solid-state-drives/ssd-540s-series-m2-spec.html>

<sup>2</sup> Performance varies by capacity and is measured by Intel using IOMeter\* with Queue Depth 32.

<sup>3</sup> Random 4KB writes measured using out-of-box SSD

<sup>4</sup> All documented endurance test results are obtained in compliance with JESD218 Standards. See [www.jedec.org](http://www.jedec.org) for detailed definitions of JESD218 Standards.

<sup>5</sup> Active power measured during execution of MobileMark\* 2012 Workload with SATA Link Power Management (LPM) enabled.

<sup>6</sup> Idle power defined as SSD at idle with SATA Link Power Management (LPM) enabled. Idle power measured by temperature sensor, SMART Attribute BEh. Active airflow is recommended within the system for managing proper device operating temperatures in heavier workloads.

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer or learn more at [www.intel.com/ssd](http://www.intel.com/ssd).

Tests document performance of components on a particular test, in specific systems. Differences in hardware, software, or configuration will affect actual performance. Consult other sources of information to evaluate performance as you consider your purchase.

IOMeter\* Test and System Configurations: Intel® Core™ i7-4790 (8MB L3 Cache, 3.60GHz), ASUS\* Deluxe Z97I-PLUS motherboard, Intel® HD Graphics 4600 driver 10.18.10.3920, BIOS: AMI\* 2605 5/19/2015, Chipset: Intel® INF 10.0.16.0, Memory: 8GB (2X4GB) Kingston DDR3-1555, Intel® RST driver 13.5, Microsoft\* Windows 7 Enterprise 64-bit with SP1.

For more complete information about performance and benchmark results, visit <http://www.intel.com/performance>

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request. Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.

Intel, the Intel logo, Ultrabook, and Intel Core are trademarks of Intel Corporation in the U.S. and/or other countries.

Copyright © 2016 Intel Corporation. All rights reserved.

\* Other names and brands may be claimed as the property of others.

Printed in the USA

0316/RA/JL

333967-001US