

## PRODUCT BRIEF

### Intel® Solid-State Drive 520 Series

Non-Volatile Memory Storage Solutions from Intel



# Get Fast. Play Fierce.

Faster game and application loads, less lag, smoother visuals

## Stay ahead of the competition when you level up to 6.0 gigabits per second (Gb/s) performance

Intel® Solid-State Drives (Intel® SSDs) continue to evolve with the Intel SSD 500 Family. Available in a wide range of capacities, the Intel® Solid-State Drive 520 Series offers built-in data protection features and delivers exceptional performance over hard drives.

### New Level of Performance

Built with compute-quality Intel 25 nanometer (nm) NAND Flash Memory, the Intel SSD 520 Series accelerates PC performance where it matters most. With random read performance up to 50,000 input/output operations per second (IOPS)<sup>1</sup> and sequential read performance of up to 550 megabytes per second (MB/s)<sup>2</sup>, your PC will blaze through the most demanding applications and will handle intense multi-tasking needs. Couple that read performance with random writes up to 80,000 IOPS<sup>3</sup> and sequential writes of 520 MB/s<sup>2</sup> to unleash your applications. With the Intel SSD 520 Series, Intel continues to deliver solutions designed to satisfy the most demanding gamers, media creators and technology enthusiasts.<sup>4</sup>

### Superior Data Protection Features

The new Intel SSD 520 Series offers the best security features of any Intel® Solid-State Drive to date and comes pre-configured with Advanced Encryption Standard (AES) 256 bit encryption capabilities. In the event of theft or loss of your computer, you have the peace of mind that your personal data is secured by an advanced encryption technology.

Additionally, the Intel SSD 520 Series contains “End to End Data Protection” ensuring integrity of stored data from the computer to the SSD and back.

### Proven Reliability with Lower Operating Costs

With no moving parts, the Intel SSD 520 Series reduces your risk of data loss due to laptop bumps or drop, all while consuming less power than a traditional hard drive—so you can stay mobile longer. Now that your work is safe, use the world-class performance of the Intel SSD 520 Series to dominate your gaming competition or to reach new levels of creativity and productivity. The choice is yours!

# Product Brief: Intel® Solid-State Drive 520 Series

Technical Specifications					
<b>Model Name</b>	Intel Solid-State Drive 520 Series				
<b>Capacity</b>	60 GB, 120 GB, 180 GB, 240 GB, 480 GB				
<b>NAND Flash Memory</b>	25nm Intel NAND Flash Memory Multi-Level Cell (MLC) Compute-Quality Components				
<b>Bandwidth<sup>2</sup></b>	Sustained Sequential Reads up to		Sustained Sequential Writes up to		
	SATA 6Gb/s (SATA 3Gb/s)		SATA 6Gb/s (SATA 3Gb/s)		
			60 GB: 475 MB/s	(245 MB/s)	
			120 GB: 500 MB/s	(260 MB/s)	
	550 MB/s	(280 MB/s)	180 GB: 520 MB/s	(260 MB/s)	
			240 GB: 520 MB/s	(260 MB/s)	
		480 GB: 520 MB/s		(260 MB/s)	
<b>Random I/O Operations per Second (IOPS)</b>	Random 4 KB Reads up to <sup>1</sup>		Random 4 KB Writes up to <sup>5</sup>		
	60 GB: 15,000 IOPS		60 GB:	23,000 IOPS	
	120 GB: 25,000 IOPS		120 GB:	40,000 IOPS	
	180 GB: 50,000 IOPS		180 GB:	60,000 IOPS	
	240 GB: 50,000 IOPS		240 GB:	60,000 IOPS	
	480 GB: 50,000 IOPS		480 GB:	42,000 IOPS	
<b>Out-of-the-Box Write Performance (IOPS)<sup>3</sup></b>			60GB:	80,000 IOPS	
			120 GB:	80,000 IOPS	
			180 GB:	80,000 IOPS	
			240 GB:	80,000 IOPS	
			480 GB:	50,000 IOPS	
<b>Interface</b>	SATA 6.0 Gb/s, compatible with SATA 3.0Gb/s				
<b>Form Factor and Height</b>	Form Factor		Height		
	2.5 inch		7 mm	9.5 mm	
			120 GB, 180 GB, 240 GB	All capacities	
<b>Life Expectancy</b>	1.2 million hours Mean Time Between Failures (MTBF)				
<b>Operating Temperature</b>	0°C to 70°C				
<b>RoHS Compliance</b>	Meets the requirements of European Union (EU) RoHS Ecological Compliance Directives				
<b>Product Health Monitoring and Data Migration</b>	<ul style="list-style-type: none"> <li>Intel® Data Migration Software at <a href="http://www.intel.com/go/ssdinstallation">www.intel.com/go/ssdinstallation</a></li> <li>Intel® Solid-State Drive Toolbox with Intel® SSD Optimizer at <a href="http://www.intel.com/go/ssdtoolbox">www.intel.com/go/ssdtoolbox</a></li> <li>Self-Monitoring, Analysis and Reporting Technology (SMART) commands</li> </ul>				

<sup>1</sup> Performance varies by capacity.

<sup>2</sup> Performance measured using Iometer\* with Queue Depth 32.

<sup>3</sup> Random 4 KB write performance using an out-of-the-box SSD.

<sup>4</sup> The Intel SSD 520 Series is currently not validated for data center usage.

<sup>5</sup> Performance measured using Iometer^ with Queue Depth 32. Measurements are performed on 8GB of Logical Block Address (LBA) range on a full SSD.

Solid-State Computing Starts with Intel Inside® For more information, visit [www.intel.com/go/ssd](http://www.intel.com/go/ssd)

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