

## PRODUCT BRIEF

### Intel® Solid-State Drive Professional 1500 Series Non-Volatile Memory Storage Solutions

## Deliver Like A Pro

Intel® Solid-State Drive Pro 1500 Series accelerates business storage and lowers Total Cost of Ownership with integrated drive encryption and remote management capabilities

### Engineered for IT

Introducing Intel's first Solid-State Drive in a new family of advanced SSD client solutions built for business. The Intel® Pro 1500 Series is an Enterprise-ready SSD with capacities ranging from 80GB to 480GB. Available in both thin 2.5-inch and smaller M.2 form factors, the Intel® SSD Professional Series was designed for the latest Ultrabook™ 2 in 1 designs and can also fit into more traditional PC platforms. The Intel® SSD Pro 1500 Series is the ultimate enterprise client storage solution designed specifically for easy IT deployment and secure manageability.

### Enhanced Security & Manageability

The Intel® SSD Professional Family introduces Trusted Computing Group\* Opal protocols<sup>1</sup> across the full range of supported capacities and form factors, providing industry standard encryption key management capabilities to keep your enterprise data safe. The integrated hardware-based 256-bit AES engine seamlessly encrypts and decrypts data without compromising performance. When deployed in an Intel® vPro™ enabled environment using the Setup and Configuration Service (SCS) version 9.0, the Intel® SSD Pro 1500 Series takes advantage of remote management capabilities. In addition, important drive diagnostics can be accessed for proactive health monitoring to help identify problems before they arise. SSD management can be accomplished remotely whether the platform is powered on or off lessening the need for costly desk-side visits.

### Power Efficient Performance

The Intel® SSD Pro 1500 Series accelerates platform performance with sequential performance up to 540 megabytes per second (MB/s) and random input/output operations per second (IOPS) up to 80K. In addition to strong performance gains, the Intel® SSD Pro 1500 Series provides extended battery life through advanced low power modes reducing idle power by over 90% in comparison to a typical hard disk drive. This takes power from watts to milliwatts. When the Intel® SSD Pro 1500 Series is coupled with a 4th Gen Intel® Core™ vPro™ Platform, power consumption is reduced another order of magnitude – from milliwatts to microwatts.

### World-Class Quality & Reliability

Intel® SSDs are known industry wide for their quality and reliability and the Pro1500 Series is no exception. The Pro 1500 Series was engineered for IT to specifically reduce employee downtime as a result of storage related failures. The Pro 1500 Series is designed to meet an Annualized Failure Rate (AFR) of less than 1%. An Intel® SSD Pro 1500 Series deployment can translate into a compelling Total Cost of Ownership (TCO) due to these low failure rates. For further peace of mind, Intel® SSD Pro 1500 Series is supported with Intel's outstanding warranty and customer support.

### Stable and Predictable

Intel® Stable Image Platform Program (Intel® SIPP) reduces the complexity in managing a platform's lifecycle by stabilizing the variability in the key components and making the transition to the next generation product line more predictable. Now, with Intel® SSD Pro 1500 Series as a part of Intel® SIPP, it is easier for IT to plan the next deployment. Choose the Intel® SSD Professional Series and Deliver like a Pro.



## Intel® Solid-State Drive Professional Series 1500

Technical Specifications <sup>2</sup>					
Model Name	Intel® Solid-State Drive Pro 1500 Series				
Capacity(GB) <sup>3</sup>	M.2- 80, 120, 180, 240, 360; 2.5-inch - 80, 120, 180, 240, 360, 480				
NAND Flash Memory	20nm Intel® NAND Flash Memory Multi-Level Cell (MLC)				
Bandwidth <sup>3,4</sup>	<b>Form Factor</b> Capacity Point	Sequential Read (up to)	Sequential Write (up to)	Random Read (up to)	Random Write <sup>5</sup> (up to)
	<b>M.2</b> 80GB, 120GB, 180GB, 240, 360GB	540 MB/s	490 MB/s	41K IOPS	80K IOPS
	<b>2.5-inch</b> 80GB, 120GB, 180GB, 240GB, 360GB, 480GB	540 MB/s	490 MB/s	41K IOPS	80K 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 3.7mm / up to 10 grams			
	2.5-inch	Up to 7mm / up to 78 grams			
Life Expectancy	1.2 million hours Mean Time Between Failures (MTBF)				
Power Consumption M.2	Active: 140 mW Typical <sup>6</sup>		Idle: 55 mW Typical <sup>7</sup>	DevSleep: 200µW	
Power Consumption 2.5-inch	Active: 195 mW Typical <sup>6</sup>		Idle: 125 mW Typical <sup>7</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>				

<sup>1</sup> Non-OPAL Pro Series SSDs also available

<sup>2</sup> Based on the Intel® Solid-State Drive Pro 1500 Series Product Specification.

<sup>3</sup> All capacities and form factors will not be available at launch.

<sup>4</sup> Performance varies by capacity and is measured using Iometer\* with Queue Depth 32.

<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.

<sup>6</sup> Active power measured during execution of MobileMark\* 2007 Workload with SATA Link Power Management (LPM) enabled.

<sup>7</sup> Idle power defined as SSD at idle with SATA Link Power Management (LPM) enabled.

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

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

A "Mission Critical Application" is any application in which failure of the Intel Product could result, directly or indirectly, in personal injury or death. SHOULD YOU PURCHASE OR USE INTEL'S PRODUCTS FOR ANY SUCH MISSION CRITICAL APPLICATION, YOU SHALL INDEMNIFY AND HOLD INTEL AND ITS SUBSIDIARIES, SUBCONTRACTORS AND AFFILIATES, AND THE DIRECTORS, OFFICERS, AND EMPLOYEES OF EACH, HARMLESS AGAINST ALL CLAIMS COSTS, DAMAGES, AND EXPENSES AND REASONABLE ATTORNEYS' FEES ARISING OUT OF, DIRECTLY OR INDIRECTLY, ANY CLAIM OF PRODUCT LIABILITY, PERSONAL INJURY, OR DEATH ARISING IN ANY WAY OUT OF SUCH MISSION CRITICAL APPLICATION, WHETHER OR NOT INTEL OR ITS SUBCONTRACTOR WAS NEGLIGENT IN THE DESIGN, MANUFACTURE, OR WARNING OF THE INTEL PRODUCT OR ANY OF ITS PARTS.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

No computer system can provide absolute security under all conditions. Built-in security features available on select Intel® Solid State Drives may require additional software, hardware, services and/or an Internet connection. Results may vary depending upon configuration. Consult your system manufacturer for more details.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

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.

Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or go to: <http://www.intel.com/design/literature.htm>

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

Copyright © 2013 Intel Corporation. All rights reserved. Intel, the Intel logo, and Ultrabook are trademarks of Intel Corporation in the U.S. and other countries.