# **TOSHIBA**Leading Innovation >>>



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## Overview

Upgrading from a hard disk drive (HDD) should be easy and affordable and that's where OCZ TR150 SSDs come in. Designed to boost the speed of your notebook or PC over conventional HDD, the TR150 Series leverages TLC NAND flash memory to deliver well-balanced performance, reliability, and value that will transform your mobile or desktop system.

#### Fast and Efficient

Up your productivity with the TR150 Series and enjoy faster boot ups, file transfers, and system responsiveness. Say goodbye to hard disk drive lag and get a computing experience worthy of your time.

#### Performance Made Affordable

Upgrading to an SSD from conventional HDD can feel like you've purchased an entirely new system. TR150 SSDs balance price and performance so you have enough funds leftover for other upgrades.

### **Better Battery Life**

The more power-efficient TR150 Series provides lower consumption compared to HDD which can translate into longer battery life to keep you up and running longer.



## **Features**



# TLC Technology

Built with TLC NAND flash memory.



## **Longer Battery Life**

Lower power consumption compared to HDD for longer battery life with built-in power management modes.



## Quality & Reliability

Toshiba technology built into every drive.



#### **Toshiba Controller**

Leverages a Toshiba SSD controller.



#### Performance Made Affordable

Well-balanced price to performance ratio.



#### Slim Form Factor

Sleek housing offers slimmer 7mm height for compatibility with the thin notebooks.

# **Advanced Warranty Program**

A new approach to service that mitigates the hassle surrounding support and warranty claims consumers often have to deal with. This program provides advanced replacement with no return shipping costs. Advanced Warranty Program is limited by selected regions. Detailed warranty terms available at <a href="https://www.ocz.com">www.ocz.com</a>



## SSD Utility SSD Management Software

The SSD Utility was designed to help your OCZ drive thrive and lets you be in control of maintenance, monitoring, SSD tuning, OS tuning and more!



TR150 SSD Series Product Brief | V 1.1 | Sep 2016

# **Specifications**

Performance	120 GB	240 GB	480 GB	960 GB
Sequential Read Speed <sup>1</sup>	Up to 550 MB/s			
Sequential Write Speed <sup>1</sup>	Up to 450 MB/s	Up to 520 MB/s	Up to 520 MB/s	Up to 530 MB/s
Random Read <sup>2</sup> (4 KiB, QD32)	Up to 81,000 IOPS	Up to 86,000 IOPS	Up to 86,000 IOPS	Up to 87,000 IOPS
Random Write <sup>2</sup> (4 KiB, QD32)	Up to 40,000 IOPS	Up to 73,000 IOPS	Up to 83,000 IOPS	Up to 83,000 IOPS
Endurance				
TBW (Total Bytes Written) <sup>3</sup>	30 TB	60 TB	120 TB	240 TB
Daily Usage Guidelines <sup>4</sup>	27 GB/day	55 GB/day	110 GB/day	219 GB/day

<sup>&</sup>lt;sup>1</sup> Sequential speeds are measured with lometer.

#### **Physical**

**Capacities** 120GB, 240GB, 480GB, 960GB

NAND Flash Memory Type TLC

Interface Serial ATA (SATA) 6 Gbit/s

Form Factor 2.5-inch, 7 mm height

**Dimensions** 100.00 x 69.85 x 7.00 mm

Drive Weight 120 GB: 57 g (typ.)

240 GB, 480 GB, 960 GB: 61 g (typ.)

#### Power Requirements

Supply Voltage  $5V \pm 5\%$ 

Power Consumption Active 3.6 W (typ.) Idle 100 mW (typ.)

**DevSleep Power** 10 mW max



<sup>&</sup>lt;sup>2</sup>4 KiB random performance is measured with CrystalDiscMark 4.1.0. QD32.

<sup>&</sup>lt;sup>3</sup> Definition and conditions of TBW (Terabytes Written) are based on JEDEC standard; JESD218A, February 2011, and defined for the service life.

<sup>&</sup>lt;sup>4</sup> Daily usage guidelines value is calculated by dividing TBW by 365 x 3.

#### **Environmental**

**Operating Temperature** 0 °C to 65 °C

Storage Temperature -40 °C to 85 °C

**Shock Resistance** 14.7 km/s<sup>2</sup> {1500 G} (0.5 ms)

Vibration (Operational &

Non-operational)

196 m/s<sup>2</sup> {20 Grms} (Peak, 10 to 2,000 Hz)

Certifications UL/cUL, FCC, CE, RCM, KC, BSMI, VCCI, and ISED

#### Reliability / Security

**MTTF** 1.5 Mhours

Self-Monitoring, Analysis and Reporting Technology (SMART) Support **Product Health Monitoring** 

#### Compatibility

ATA/ATAPI Command Set-2 (ACS-2) and Serial ATA revision 3.1 interface specifications **Serial ATA** 

supported

Windows® 10, Windows® 8.1, Windows® 7; Linux® Fedora 21, Mint 17.1, ElementaryOS Operating System<sup>5</sup>

Freya, OpenSUSE 13.2, Ubuntu 14.04, Ubuntu 14.10; Mac® OS X® 10.9, 10.10, 10.11

**Connector Type** Standard SATA connector

**Targeted Applications** Client desktops and laptops

#### Additional

**Performance Optimization** TRIM, Idle Time Garbage Collection

3-Year Advanced Warranty Program<sup>6</sup>, Toll-free and onlineTech Support Service & Support

**Software** SSD management software: SSD Utility and Command Line Online Update Tool (CLOUT)

<sup>&</sup>lt;sup>6</sup>Available to limited regions and countries.

Ordering Information	Model	Part Number	UPC
TR150	120GB	TRN150-25SAT3-120G	842024037682
	240GB	TRN150-25SAT3-240G	842024037699
	480GB	TRN150-25SAT3-480G	842024037705
	960GB	TRN150-25SAT3-960G	842024037712



<sup>&</sup>lt;sup>5</sup> Compatible operating system for SSD is not the same as compatible operating system for SSD Utility or CLOUT

Definition of capacity: Toshiba defines a megabyte (MB) as 1,000,000 bytes, a gigabyte (GB) as 1,000,000,000 bytes and a terabyte (TB) as 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1GB = 2<sup>30</sup> = 1,073,741,824 bytes and therefore shows less storage capacity. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

A kibibyte (KiB) means 2<sup>10</sup>, or 1,024 bytes, a mebibyte (MiB) means 2<sup>20</sup>, or 1,048,576 bytes, and a gibibyte (GiB) means 2<sup>30</sup>, or 1,073,741,824 bytes.

IOPS: Input Output Per Second (or the number of I/O operations per second)

MTTF (Mean Time to Failure) is not a guarantee or estimate of product life; it is a statistical value related to mean failure rates for a large number of products which may not accurately reflect actual operation. Actual operating life of the product may be different from the MTTF.

Read and write speed may vary depending on the host device, read and write conditions, and file size.

Subject to Change: While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice.

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Product image may represent design model.

OCZ TR150 comes with a 3-Year Advanced Warranty Program. Advanced Warranty Program is limited by selected regions. Detailed warranty terms available at www.ocz.com

