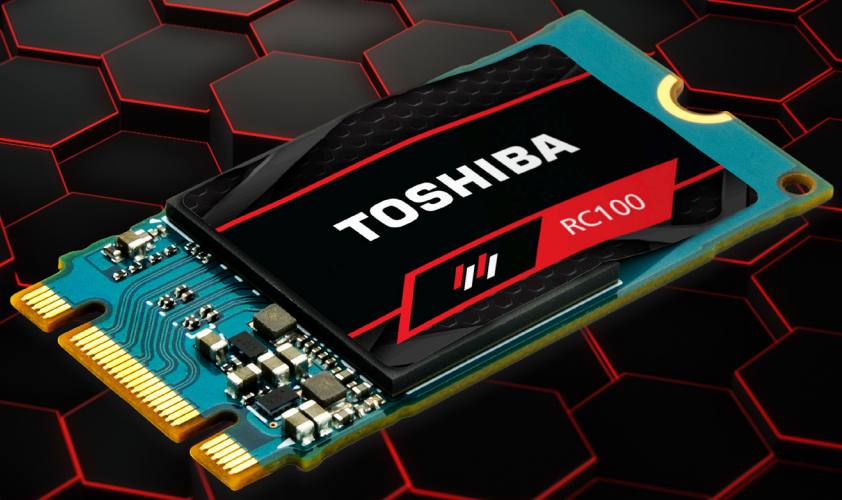
TOSHIBA

# Toshiba OCZ RC100 Series

NVMe™ Solid State Drive (SSD)

## NVMe™ Made Affordable

**May 2018**




BiCS FLASH™

# Overview

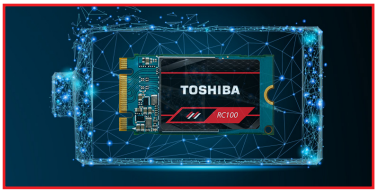
Want to take advantage of the latest storage technologies without breaking the bank? The Toshiba OCZ RC100 brings NVMe™ to everybody with performance surpassing that of SATA drives, but without the killer cost. Based off Toshiba's single package BGA SSDs, the Toshiba OCZ RC100 brings strong performance and power efficiency in a compact form factor suitable for both desktops and laptop systems.

## No More SATA Bottleneck

Don't be held back by an interface designed for hard drives. The NVMe™ interface was designed from the ground up to take advantage of NAND flash technology and the PCI Express® bus means it has the bandwidth to deliver performance outclassing even enthusiast SATA SSDs.

## NVMe™ Made Affordable

First generation NVMe™ drives had high performance, but also came at a high cost. Toshiba has leveraged our expertise in NAND flash to design an entire SSD that fits within a single BGA package, delivering an NVMe drive that balances cost and performance.




## Power-Optimized Architecture

Leveraging this BGA SSD has resulted in a drive that's extremely power efficient, consuming almost half the active power draw of enthusiast NVMe drives giving you even longer battery life on the go.

## Small Form Factor

Since the entire SSD is contained within a single BGA chip, the Toshiba OCZ RC100 fits onto an M.2 2242 PCB, making it one of the smallest SSDs available in retail. It's perfect for small form factor builds and plugs directly into the motherboard, reducing additional cable clutter.

BiCS FLASH™

## State-of-the-Art 3D Flash Memory

Each Toshiba OCZ RC100 is built with Toshiba's advanced 3D BiCS FLASH™ memory and a vertically stacked cell structure, delivering a state-of-the-art storage experience.

## SSD Utility SSD Management Software

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

# Specifications

| Performance | 120 GB | 240 GB | 480 GB |
|---|---|---|---|
| **Sequential Read/Write Speed**[1] | Up to 1350/700 MB/s | Up to 1600/1050 MB/s | Up to 1600/1100 MB/s |
| **Random Read/Write**[2] | Up to 80,000/95,000 IOPS | Up to 130,000/110,000 IOPS | 150,000/110,000 IOPS |

[1] Sequential speeds are measured with ATTO v3.05, QD10.
[2] 4KiB random performance is measured with Iometer QD32, Drive as Data Disk.

| Endurance | 120 GB | 240 GB | 480 GB |
|---|---|---|---|
| **TBW (Total Bytes Written)**[3] | 60 TB | 120 TB | 240 TB |
| **Daily Usage Guideline**[4] | 55 GB/day | 110 GB/day | 219 GB/day |

[3] Definition and conditions of TBW (Terabytes Written) are based on JEDEC standard; JESD219A Solid-State Drive (SSD) Endurance Workloads, July 2012, and defined for the service life.

[4] Daily usage guidelines value is calculated by dividing TBW by 365 x 3.

## Physical

| | |
|---|---|
| **Capacites** | 120 GB, 240 GB, 480 GB |
| **NAND Flash Memory Type** | 64-layer 3D BiCS TLC |
| **Interface** | PCI Express® Base Specification Revision 3.1a (PCIe®)<br>**Maximum Speed**<br>16 GT/s (PCIe® Gen3x2L)<br>**Command**<br>NVM Express™ Revision 1.2.1 command set |
| **Form Factor** | M.2 Type 2242-S3-B-M |
| **Dimension (L x W x H)** | 42.00 ± 0.15 mm x 22.00 ± 0.15 mm x 2.38 mm |
| **Drive Weight** | 120GB: 3.0 g (typ.)<br>240GB: 3.1 g (typ.)<br>480GB: 3.5 g (typ.) |

## Power Requirements

| | |
|---|---|
| **Supply Voltage** | 3.3 V ±5 % |
| **Power Consumption (Active)** | 3.20 W (typ.) |
| **Power Consumption (L1.2 Power)** | 5 mW (typ.) |

## Environmental

| | |
|---|---|
| **Operating Temperature (Tc)** | 0°C (Tc) to 70°C (Tc) |
| **Storage Temperature** | -40°C to 85°C |
| **Shock Resistance** | 14.709 km/s$^2$ {1500 G} 0.5 ms half sine wave |
| **Vibration** | 196 m/s$^2$ {20 G} Peak, 10~2000 Hz, (20 min / Axis) x 3 Axis |
| **Certifications** | TÜV-Bauart, BSMI, RCM, CE, UL & cUL (CSA), China RoHS, KC, FCC, ISED, VCCI, WEEE, PCI Express® |

## Reliability / Security

| | |
|---|---|
| **MTTF** | 1 Mhours |
| **Product Health Monitoring** | SSD Utility version 3.1 and above |

## Compatibility

| | |
|---|---|
| **PCI Express** | Compatible with PCI Express® Base Specification Revision 3.1a and NVM Express™ Revision 1.2.1 command set |
| **Operating System[5]** | Windows® 10, Linux® Fedora 26, Fedora 27; Mint 18.1, 18.3; Ubuntu 17.10 |
| **Connector Type** | M.2 B-M key Socket |
| **Targeted Applications** | Client desktops and laptops |

[5] Compatible operating system for SSD is not the same as compatible operating system for SSD Utility

## Additional Features

| | |
|---|---|
| **Performance Optimization** | TRIM, Idle Time Garbage Collection |
| **Services and Support** | 3-Year Standard Warranty Program, Online Tech Support |
| **Software** | SSD management software: SSD Utility v3.1 and above. |

## Ordering Information

| Ordering Information | Model | Part Number | UPC |
|---|---|---|---|
| **Toshiba OCZ RC100** | 120 GB | THN-RC10Z1200G8(TS | 811375030024 |
| **Toshiba OCZ RC100** | 240 GB | THN-RC10Z2400G8(TS | 811375030031 |
| **Toshiba OCZ RC100** | 480 GB | THN-RC10Z4800G8(TS | 811375030048 |

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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 = $2^{30}$ = 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 $2^{10}$, or 1,024 bytes, a mebibyte (MiB) means $2^{20}$, or 1,048,576 bytes, and a gibibyte (GiB) means $2^{30}$, 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.

Product image may represent design model.