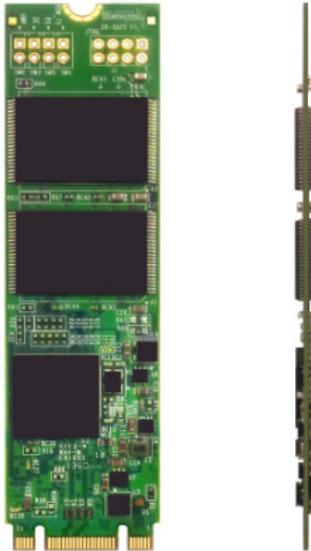# M.2 SATA III 6Gb/s SSD

- RoHS compliant
- Fully compatible with devices and OS that support the SATA III 6Gb/s standard
- With DDR3 DRAM cache
- Non-volatile Flash Memory for outstanding data retention
- Built-in ECC (Error Correction Code) functionality and wear-leveling algorithm ensures highly reliable of data transfer
- Support DevSleep mode
- Support Intel ISRT function
- Support Trim and NCQ command
- Shock resistance

N8S750 Benefits

Transcend's N8S750 is a SATA III 6Gb/s SSD device built with high performance, quality Flash Memory assembled on a printed circuit board. It features cutting-edge technology to enhance product life and data retention. Designed with multitasking power users in mind, the N8S750 is capable of running many demanding system applications, including specialized multimedia computing and advanced gaming. As a result, the N8S750 is the ultimate performance upgrade for various applications, such as Ultrabooks, PCs, Laptops, gaming systems, and handheld devices.
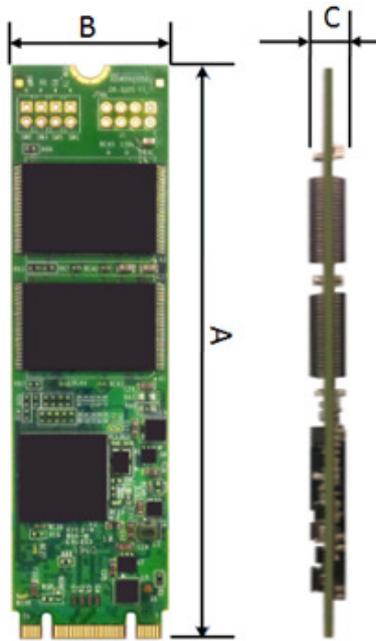
Enhanced Performance

N8S750 combining the latest SATA III 6Gb/s specification with Silicon Motion controller, the N8S750 is able to offer incredible transfer speeds of up to 520MB/s read and 180MB/s write, application launch speed, data transfers, and overall system responsiveness. Moreover, N8S750 also supports DevSleep mode, which allows devices to completely shut down the SATA interface and conserve battery life unlike existing partial/slumber states.

Applications

The N8S750 is compliant with the standard of M.2 SSD to address the size limitations of today's modern Ultrabooks, notebooks, and other thin and light form factor devices. The N8S750 is backwards compatible with SATA II/I (3Gbps/1.5Gbps) connection options. N8S750 not only provides resistance from shock and vibration, but also offers low power consumption and cool, silent operation to greatly benefit users with increased efficiency and longer battery runtime.

Placement

Specifications

Environmental Specifications

Operating Temperature		0 ℃ to 70 ℃
Storage Temperature		- 40 ℃ to 85 ℃
Humidity	Operating	0% to 95% (Non-condensing)
	Non-Operating	0% to 95% (Non-condensing)

Physical Specification

Form Factor	M.2 TYPE 2280-D2-B-M
Storage Capacities	32 GB to 64 GB
Input Voltage	3.3V ± 5%
Weight	11g ± 5%
Connector	M.2 module notch B+M

Dimensions

Side	Millimeters	Inches
A	80.00 ± 0.15	3.150 ± 0.006
B	22.00 ± 0.15	0.866 ± 0.006
C	3.50 ± 0.15	0.138 ± 0.006

Performance

Model P/N	Sequential Read*	Sequential Write*	Random Read (4KB QD32)*	Random Write (4KB QD32)*	IOPS Random Read (4KB QD32)**	IOPS Random Write (4KB QD32)**
TS32GN8S750	520	90	195	90	48035	22850
TS64GN8S750	520	180	315	180	77485	44900

Note: Maximum transfer speed recorded

* 25 ℃， test on ASUS P8Z68-M PRO, 4GB, Windows® 7 with AHCI mode, benchmark utility CrystalDiskMark (version 3.0), copied file 1000MB, unit MB/s

** Random read/write performance based on IOmeter2008 with 4K file size and queue depth of 32 at full size LBA address, unit IOPs

*** The recorded performance is obtained while the SSD is not operating as an OS disk

Power Consumption

Model P/N / Power Consumption		Typical (mA)
TS32GN8S750	**Read***	350
	Write*	350
	Idle*	90
	DEVSLP	0.5
TS64GN8S750	**Read***	360
	Write*	500
	Idle*	100
	DEVSLP	0.5

*Tested with IOmeter running sequential reads/writes and idle mode

Reliability

Data Reliability	Supports 60 bits per 1024 bytes
MTBF	1,000,000 hours
Endurance (TeraBytes Written)	32GB: TBD TBW 64GB: TBD TBW

Note: Endurance test follow JESD219A SPEC.

Vibration

Operating	3.0G, 5 - 800Hz
Non-Operating	5.0G, 5 - 800Hz

Note: Reference to the IEC 60068-2-6 Testing procedures;
Operating-Sine wave, 5-800Hz/1 oct., 1.5mm, 3g, 0.5 hr./axis, total 1.5hrs.

Shock

Operating	1500G, 0.5ms
Non-Operating	1500G, 0.5ms

Reference to IEC 60068-2-27 Testing procedures; Operating-Half-sine wave, 1500g, 0.5ms, 3 times/dir., total 18 times