

## SATA III 6Gb/s mSATA SSD



- SandForce Driven
- Fully compatible with devices and OS that support the SATA III 6Gb/s standard
- Non-volatile Flash Memory for outstanding data retention
- Built-in ECC (Error Correction Code) functionality and wear-leveling algorithm ensures reliable data transfer
- Support TRIM and NCQ command
- Shock resistance

### MSA720 Benefits

Transcend's MSA720 is a SATA III 6Gb/s mSATA 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 MSA720 is capable of running many demanding system applications, including specialized multimedia computing and advanced gaming. As a result, the MSA720 is the ultimate performance upgrade for various applications, such as Ultrabooks, PCs, Laptops, gaming systems, and handheld devices.

### Enhanced Performance

Combining the latest SATA III 6Gb/s specification with a powerful SandForce Driven controller, the MSA720 is able to offer incredible transfer speeds of up to 550MB/s read and 520MB/s write, taking a mere 15 seconds to transfer a 4.7GB DVD. This ultrafast speed translates into significantly faster system boot up, application launch speed, data transfers, and overall system responsiveness. Moreover, support for Native Command Queuing (NCQ), increases the performance and efficiency of the MSA720 by optimizing the order in which received read and write commands are executed.

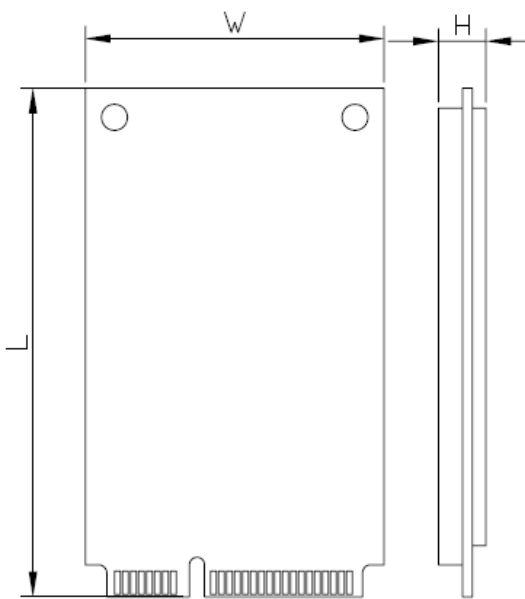
### High-End Applications

The MSA720 boasts an ultra-slim to address the size limitations of today's modern Ultrabooks, notebooks, and other thin and light form factor devices. The MSA720 fit the standard dimensions of mSATA Hard Disk Drives and is backwards compatible with SATA II/I (3Gbps/1.5Gbps) connection options. MSA720 not only provides resistance from shock and vibration, but also offers low power consumption, silent operation to greatly benefit notebook users with increased efficiency and longer battery runtime.

## Built-In Reliability

For Windows 7 users, the MSA720 fully supports the TRIM command to automatically remove deleted data permanently, helping to maintain optimum write speeds and prevent long-term SSD wear. For operating systems that do not support the TRIM command, the MSA720 utilizes an intelligent garbage collection algorithm for advanced free space management. To further increase the lifespan of the SSD, built-in wear-leveling and Error Correction Code (ECC) ensure reliable data transfer, while full support of the S.M.A.R.T. command helps detect possible hard drive failures before they occur.

## Placement



## Dimensions

Side	Millimeters	Inches
L	50.80 ± 0.15	2.000 ± 0.006
W	29.85 ± 0.15	1.175 ± 0.006
H	3.70 ± 0.10	0.146 ± 0.004

## Specifications

Environmental Specifications		
Operating Temperature		0 °C to 70 °C
Storage Temperature		- 40 °C to 85 °C
Humidity	Operating	0% to 95% (Non-condensing)
	Non-Operating	0% to 95% (Non-condensing)

Physical Specification	
Form Factor	MO-300A
Storage Capacities	64 GB to 128 GB
Input Voltage	3.3V ± 5%
Weight	7g
Connector	PCI Express Mini Card Connector

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)**	Max. Read ***	Max. Write ***
TS64GMSA720	387.1	82.48	66.11	80.61	16,458	89,684	556.66	512.53
TS128GMSA720	451.1	164.3	121.5	159.9	29,445	90,897	557.95	523.78

Note: Maximum transfer speed recorded

\* 25 °C, test on ASUS P8Z68-V PRO, 6GB, Windows<sup>®</sup> 7 Professional 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, unit IOPs

\*\*\* 25 °C, test on P8Z68-V PRO, 6GB, Windows<sup>®</sup> 7 with AHCI mode, benchmark utility ATTO (version 2.41), unit MB/s

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

Power Requirements		
Input Voltage		3.3V ± 5% @25°C
Mode P/N / Power Consumption		Typical (mA)
TS64GMSA720	Read	TBD
	Write	TBD
	Idle	TBD
TS128GMSA720	Read	611.7
	Write	909.4
	Idle	180.5

Reliability	
Data Reliability	Supports 55 bits in 512 bytes
MTBF	1,000,000 hours

Vibration	
Operating	3.0G(peak-to-peak), 5 - 800Hz
Non-Operating	3.0G(peak-to-peak), 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 1.5 hrs.

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