SATA II 3Gb/s mSATA mini SSD

- RoHS compliant
- Advanced Global Wear-Leveling and Block management for reliability
- Built-in ECC (Error Correction Code) functionality
- Advanced Garbage Collection
- Support Enhanced S.M.A.R.T. function
- Advanced Power Shield
- Support Security Command
- Hardware Purge and Write Protect
- Support Transcend SSD Scope Pro (Optional)

MSM610 Benefits

Transcend's MSM610 is a SATA II 3Gb/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 MSM610 is capable of running many demanding system applications, including specialized multimedia computing and advanced gaming. As a result, MSM610 is the perfect storage device for industrial PCs, Laptops, gaming systems, and handheld devices.

Enhanced Performance

MSM610 is able to offer incredible transfer speeds of up to 170MB/s read and 40MB/s write. This fast 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 MSM610 by optimizing the order in which received read and write commands are executed.
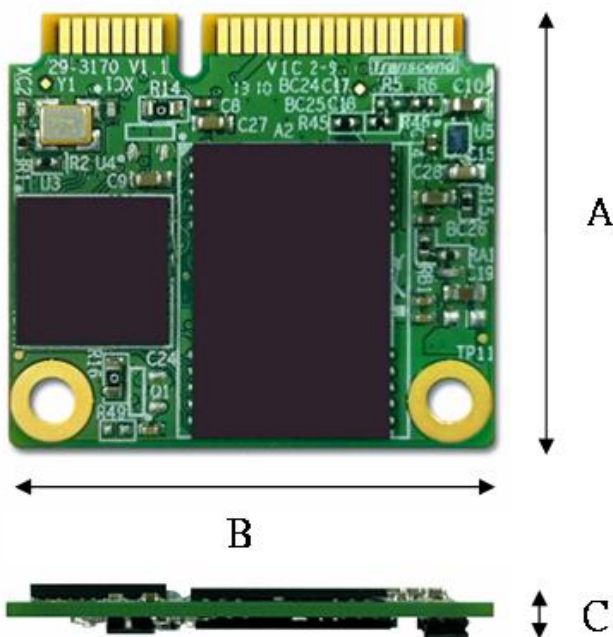
Applications

The MSM610 which fits the standard dimensions of mSATA mini Hard Disk Drives boasts an ultra-slim to address the size limitations of today's modern Ultrabooks, notebooks, and other thin and light form factor devices. MSM610 not only provides resistance from shock and vibration, but also offers low power consumption and cool, silent operation to greatly benefit notebook users with increased efficiency and longer battery runtime. MSM610 also supports hardware purge which may quickly erase all data with a push of a button or write protect which may prevent any data from being modify.

Built-In Reliability

MSM610 is built with advanced power shield which prevent the SSD from damage during sudden power off or power failure. MSM610 also utilizes advanced garbage collection algorithm which maintains SSD high performance even after long time operation. 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

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-300B
Storage Capacities		8 GB to 32 GB
Input Voltage		3.3 V $\pm$ 5%
Weight		4 g
Connector		PCI Express Mini Card Connector

Dimensions

Side	Millimeters	Inches
A	26.8 ± 0.15	1.06 ± 0.006
B	29.8 5± 0.15	1.175 ± 0.006
C	3.85 (Max)	0.152 (Max)

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)**
TS8GMSM610	100	13	14	0.5	3600	135
TS16GMSM610	90	20	11	0.9	3500	180
TS32GMSM610	170	40	11	1.1	3500	180

Note: Maximum transfer speed recorded

* 25 °C, test on ASUS P5Q-Pro, 2GB, Windows® XP Version   SP3 with AHCI mode, benchmark utility CrystalDiskMark (version 3.0), copied file 1000MB, unit MB/s

** Random read/write performance based on IOmeter2006 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)
TS8GMSM610	Read	205
	Write	175
	Idle	155
TS16GMSM610	Read	275
	Write	210
	Idle	155
TS32GMSM610	Read	300
	Write	275
	Idle	155

Reliability

Data Reliability	Supports 72 bits per 1024 bytes	
MTBF	1,000,000 hours	
Endurance (TeraBytes Written)	8 GB	1.14 TB
	16 GB	2.26 TB
	32 GB	5.57 TB

Vibration

Operating	3.0 G (peak-to-peak), 5 – 800 Hz
Non-Operating	5.0 G (peak-to-peak), 5 – 800 Hz

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