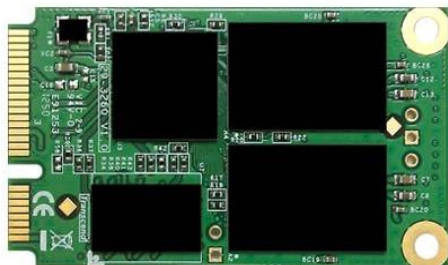


## SATA II 3Gb/s mSATA SSD



- MO-300A Form Factor
- Fully compatible with devices and OS that support the SATA II 3Gb/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
- Advanced Garbage Collection
- Hardware Purge and Write Protect
- Supports Transcend SSD Scope Pro
- Advanced Power Shield

### MSA630 Benefits

Transcend MSA630 is a SATA II 3Gb/s mSATA 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 MSA630 is capable of running many demanding system applications, including specialized multimedia computing and advanced gaming. As a result, MSA630 is the perfect storage device for industrial PCs, Laptops, gaming systems, and handheld devices.

### Enhanced Performance

MSA630 is able to offer incredible transfer speeds of up to 260MB/s read and 80MB/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 MSA630 by optimizing the order in which received read and write commands are executed.

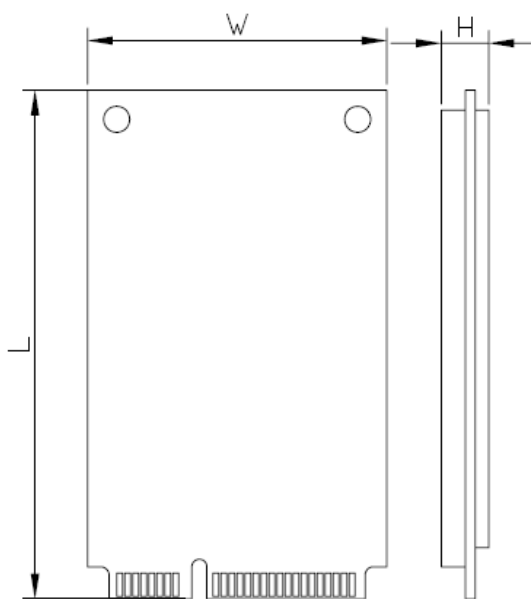
### Applications

The MSA630 which fits the standard dimensions of mSATA 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. MSA630 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. MSA630 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

MSA630 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



## 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%<br>(Non-condensing) |
|                              | Non-Operating | 0% to 95%<br>(Non-condensing) |

\*- 40 °C to 85 °C is optional

| Physical Specification |                                 |
|------------------------|---------------------------------|
| Form Factor            | MO-300A                         |
| Storage Capacities     | 16 GB to 64 GB                  |
| Input Voltage          | 3.3V ± 5%                       |
| Weight                 | 10g                             |
| 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)** |
|-------------|------------------|-------------------|-------------------------|--------------------------|-------------------------------|--------------------------------|
| TS16GMSA630 | 125              | 20                | 66.0                    | 18.5                     | 13520                         | 2055                           |
| TS32GMSA630 | 225              | 40                | 70.5                    | 38.5                     | 14385                         | 3555                           |
| TS64GMSA630 | 260              | 80                | 70.5                    | 68.0                     | 14355                         | 4155                           |

Note: Maximum transfer speed recorded

\* 25 °C, test on ASUS P8P67 + Intel Core i5, 4GB, Windows® 7 with AHCI mode, benchmark utility Crystal DiskMark (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) |
| TS16GMSA630                   | Read  | 245          |
|                               | Write | 230          |
|                               | Idle  | 170          |
| TS32GMSA630                   | Read  | 320          |
|                               | Write | 305          |
|                               | Idle  | 170          |
| TS64GMSA630                   | Read  | 325          |
|                               | Write | 400          |
|                               | Idle  | 180          |

\*Tested with IOMeter running sequential reads/writes and idle mode

| Reliability                           |                                                    |
|---------------------------------------|----------------------------------------------------|
| <b>Data Reliability</b>               | Supports 40 bits per 1024 bytes                    |
| <b>MTBF</b>                           | 1,000,000 hours                                    |
| <b>Endurance (TeraBytes Written)*</b> | 16G: 17.0 (TB)<br>32G: 35.0 (TB)<br>64G: 76.0 (TB) |

\*Note: Based on JEDEC JESD218 & 219A specification,

Client application class. And based on the following scenario:

Active use: 40°C, 8hrs/day; Retention use: 30°C 1year

| Vibration            |                               |
|----------------------|-------------------------------|
| <b>Operating</b>     | 3.0G(peak-to-peak), 5 - 800Hz |
| <b>Non-Operating</b> | 5.0G(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 1.5hrs.

| Shock                |              |
|----------------------|--------------|
| <b>Operating</b>     | 1500G, 0.5ms |
| <b>Non-Operating</b> | 1500G, 0.5ms |

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