MTS800 –

SATA III 6Gb/s M.2 SSD

Transcend MTS800 series are M.2 SSDs with high performance and quality Flash Memory assembled on a printed circuit board. These M.2 SSDs feature cutting-edge technology to enhance product life and data retention. MTS800 is designed specifically for various applications such as Ultrabooks, industrial PCs, vehicle PCs and road surveillance recording.

- Power Supply: 3.3V±5%
- Fully compatible with devices and OS that support the SATA III 6.0Gb/s standard
- Compliant with M.2 standards in SATA specification

Features

- Advanced global wear-Leveling and block management for reliability

- Built-in ECC (Error Correction Code) functionality

- Features a DDR3 DRAM cache

- Supports DEVSLP mode

- Supports Advanced Garbage Collection

- Supports enhanced S.M.A.R.T. function

- Real time full drive encryption with Advanced Encryption Standard (AES)

- Power Shield to prevent data loss in the event of a sudden power outage

- Supports partial and slumber mode

- Supports security command

- Supports Hardware purge and write protect (Optional)

- Supports Transcend SSD scope pro (Optional)

- RoHS compliant

Specifications

Physical Specification			
Form Factor	M.2 TYPE 2280-D2-B-M		
Storage Capacities	32~512GB		
Dimensions	Length	80.00 ± 0.15 mm	3.150 ± 0.006 inch
	Width	22.00 ± 0.15 mm	0.866 ± 0.006 inch
	Height	3.50 ± 0.15 mm	0.138 ± 0.006 inch
Input Voltage	3.3V ± 5%		
Weight	9 g ± 5%		
Connector	M.2 module notch B+M		

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)

Performance								
Model P/N	ATTO		CrystalDiskMark				IOMeter	
	Max Read*	Max Write*	Sequential Read**	Sequential Write**	Random Read (4KB QD32)**	Random Write (4KB QD32)**	IOPS Random Read (4KB QD32)***	IOPS Random Write (4KB QD32)***
TS32GMTS800	260	40	260	40	90	40	20K	10K
TS64GMTS800	520	80	510	80	170	80	40K	20K
TS128GMTS800	560	160	520	160	280	160	70K	40K
TS256GMTS800	560	310	520	320	310	300	75K	75K
TS512GMTS800	570	460	520	450	280	310	70K	75K

Note: Maximum transfer speed recorded
* 25 ℃, test on GIGABYTE GA-Z87X-D3H, 4GB, Windows® 7 Professional with AHCI mode, benchmark utility ATTO (version 2.41), unit MB/s
** 25 ℃, test on GIGABYTE GA-Z87X-D3H, 4GB, Windows® 7 Professional with AHCI mode, benchmark utility CrystalDiskMark (version 3.0.1), copied file 1000MB, unit MB/s
*** 25 ℃, test on GIGABYTE GA-Z87X-D3H, 4GB, Windows® 7 Professional with AHCI mode, benchmark utility IOmeter2006 with 4K file size and queue depth of 32, unit IOPs
**** The recorded performance is obtained while the SSD is not operating as an OS disk Physical Specification

Actual Capacity

Model P/N	User Max. LBA	Cylinder	Head	Sector
TS32GMTS800	62,533,296	16,383	16	63
TS64GMTS800	125,045,424	16,383	16	63
TS128GMTS800	250,069,680	16,383	16	63
TS256GMTS800	500,118,192	16,383	16	63
TS512GMTS800	1,000,215,216	16,383	16	63

Power Consumption

Input Voltage		3.3V ± 5%
Model P/N / Power Consumption		**Typical (mA)**
TS32GMTS800	**Read***	255
	Write*	255
	Idle*	85
TS64GMTS800	**Read***	330
	Write*	355
	Idle*	85
TS128GMTS800	**Read***	345
	Write*	530
	Idle*	85
TS256GMTS800	**Read***	375
	Write*	860
	Idle*	90
TS512GMTS800	**Read***	530
	Write*	914
	Idle*	95

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

Reliability

Reliability		
Data Reliability	Supports BCH ECC 40 bit per 1024 byte	
MTBF	1,500,000 hours	
Endurance (Terabytes Written)	32G	45 (TB)
	64G	80 (TB)
	128G	150 (TB)
	256G	380 (TB)
	512G	550 (TB)

*Note: Based on JEDEC JESD218A specification, Client Application Class. And based on the following scenario: Active use: 40°C, 8hrs/day; Retention use: 30°C 1year

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

Reference to 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

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

| Regulations	
Compliance	CE, FCC and BSMI

MTS600 –
SATA III 6Gb/s M.2 SSD

Transcend MTS600 series are M.2 SSD device with high performance and quality Flash Memory assembled on a printed circuit board. These devices feature cutting-edge technology to enhance product life and data retention. These product is designed specifically for varies applications, such as ultrabook, industrial PC, vehicle PC and road surveillance record.

- Power Supply: 3.3V±5%
- Fully compatible with devices and OS that support the SATA III 6.0Gb/s standard
- Compliant with M.2 standard in SATA specification

Features

- Advanced global wear-Leveling and block management for reliability
- Built-in ECC (Error Correction Code) functionality
- With DDR3 DRAM cache
- Support DEVSLP mode
- Advanced garbage collection
- Support enhanced S.M.A.R.T. function
- Power Shield to prevent data loss when sudden power off
- Supports partial and slumber mode
- Support security command
- Hardware purge and write protect (Optional)
- Support Transcend SSD scope pro (Optional)
- RoHS compliant

Placement
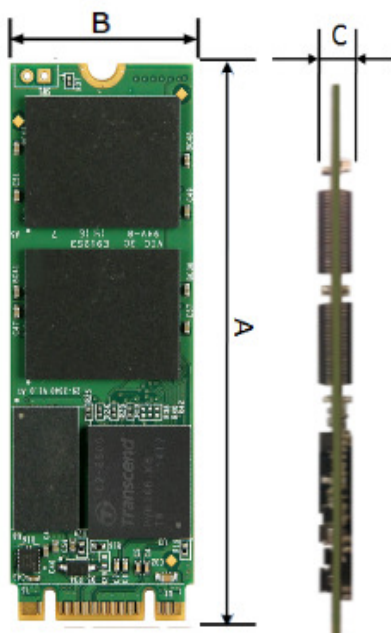
Specifications

Physical Specification		
Form Factor		M.2 TYPE 2260-D2-B-M
Storage Capacities		32~512GB
Dimensions (mm)	**Length**	60.00 ± 0.15
	Width	22.00 ± 0.15
	Height	3.50 ± 0.15
Input Voltage		3.3V ± 5%
Weight		6 g ± 5%
Connector		M.2 module notch B+M

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)

Performance								
	ATTO		**CrystalDiskMark**				**IOMeter**	
Model P/N	**Max Read***	**Max Write***	**Sequential Read****	**Sequential Write****	**Random Read (4KB QD32)****	**Random Write (4KB QD32)****	**IOPS Random Read (4KB QD32)*** **	**IOPS Random Write (4KB QD32)*** **
TS32GMTS600	260	40	260	40	90	40	20K	10K
TS64GMTS600	520	80	510	80	170	80	40K	20K
TS128GMTS600	560	160	520	160	280	160	70K	40K
TS256GMTS600	560	310	520	320	310	300	75K	75K
TS512GMTS600	570	460	520	450	280	310	70K	75K

Note: Maximum transfer speed recorded

* 25 ℃, test on GIGABYTE GA-Z87X-D3H, 4GB, Windows® 7 Professional with AHCI mode, benchmark utility ATTO (version 2.41), unit MB/s

** 25 ℃, test on GIGABYTE GA-Z87X-D3H, 4GB, Windows® 7 Professional with AHCI mode, benchmark utility CrystalDiskMark (version 3.0.1), copied file 1000MB, unit MB/s

*** 25 ℃, test on GIGABYTE GA-Z87X-D3H, 4GB, Windows® 7 Professional with AHCI mode, benchmark utility IOmeter2006 with 4K file size and queue depth of 32, unit IOPs

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

Reliability

Reliability		
Data Reliability	Supports BCH ECC 40 bit per 1024 byte	
MTBF	1,500,000 hours	
Endurance (Terabytes Written)	32G	45 (TB)
	64G	80 (TB)
	128G	150 (TB)
	256G	380 (TB)
	512G	550 (TB)

Actual Capacity

Model P/N	User Max. LBA	Cylinder	Head	Sector
TS32GMTS600	62,533,296	16,383	16	63
TS64GMTS600	125,045,424	16,383	16	63
TS128GMTS600	250,069,680	16,383	16	63
TS256GMTS600	500,118,192	16,383	16	63
TS512GMTS600	1,000,215,216	16,383	16	63

*Note: Based on JEDEC JESD218A specification, Client Application Class. And based on the following scenario: Active use: 40oC, 8hrs/day; Retention use: 30oC 1year

Vibration

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

Reference to 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

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.

Regulations	
Compliance	CE, FCC and BSMI

Power Consumption		
Input Voltage		3.3V ± 5%
Model P/N / Power Consumption		Typical (mA)
TS32GMTS600	Read*	255
	Write*	255
	Idle*	120
TS64GMTS600	Read*	330
	Write*	355
	Idle*	120
TS128GMTS600	Read*	345
	Write*	530
	Idle*	120
TS256GMTS600	Read*	395
	Write*	872
	Idle*	120
TS512GMTS600	Read*	444
	Write*	952
	Idle*	130

MTS400 –

SATA III 6Gb/s M.2 SSD

Transcend MTS800 series are M.2 SSDs with high performance and quality Flash Memory assembled on a printed circuit board. These M.2 SSDs feature cutting-edge technology to enhance product life and data retention. MTS800 is designed specifically for various applications such as Ultrabooks, industrial PCs, vehicle PCs and road surveillance recording.

- Power Supply: 3.3V±5%
- Fully compatible with devices and OS that support the SATA III 6.0Gb/s standard
- Compliant with M.2 standards in SATA specification

Features

- Advanced global wear-Leveling and block management for reliability

- Built-in ECC (Error Correction Code) functionality

- Features a DDR3 DRAM cache

- Supports DEVSLP mode

- Supports Advanced Garbage Collection

- Supports enhanced S.M.A.R.T. function

- Real time full drive encryption with Advanced Encryption Standard (AES)

- Power Shield to prevent data loss in the event of a sudden power outage

- Supports partial and slumber mode

- Supports security command

- Supports Hardware purge and write protect (Optional)

- Supports Transcend SSD scope pro (Optional)

- RoHS compliant

Specifications

Physical Specification

Form Factor	M.2 TYPE 2242-D2-B-M	
Storage Capacities	32~256GB	
Dimensions	**Length**	42.00 ± 0.15 mm	1.654 ± 0.006 inch
	Width	22.00 ± 0.15 mm	0.866 ± 0.006 inch
	Height	3.50 ± 0.15 mm	0.138 ± 0.006 inch
Input Voltage	3.3V ± 5%	
Weight	4 g ± 5%	
Connector	M.2 module notch B+M	

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)

Performance

Model P/N	ATTO		CrystalDiskMark				IOMeter	
	Max Read*	Max Write*	Sequential Read**	Sequential Write**	Random Read (4KB QD32)**	Random Write (4KB QD32)**	IOPS Random Read (4KB QD32)***	IOPS Random Write (4KB QD32)***
TS32GMTS400	260	40	260	40	90	40	20K	10K
TS64GMTS400	520	80	510	80	170	80	40K	20K
TS128GMTS400	560	160	520	160	280	160	70K	40K
TS256GMTS400	560	320	530	310	290	290	72K	70K

Note: Maximum transfer speed recorded
* 25 ℃, test on GIGABYTE GA-Z87X-D3H, 4GB, Windows® 7 Professional with AHCI mode, benchmark utility ATTO (version 2.41), unit MB/s
** 25 ℃, test on GIGABYTE GA-Z87X-D3H, 4GB, Windows® 7 Professional with AHCI mode, benchmark utility CrystalDiskMark (version 3.0.1), copied file 1000MB, unit MB/s
*** 25 ℃, test on GIGABYTE GA-Z87X-D3H, 4GB, Windows® 7 Professional with AHCI mode, benchmark utility IOmeter2006 with 4K file size and queue depth of 32, unit IOPs
**** The recorded performance is obtained while the SSD is not operating as an OS disk Physical Specification

Actual Capacity

Model P/N	User Max. LBA	Cylinder	Head	Sector
TS32GMTS400	62,533,296	16,383	16	63
TS64GMTS400	125,045,424	16,383	16	63
TS128GMTS400	250,069,680	16,383	16	63
TS256GMTS400	500,118,192	16,383	16	63

Power Consumption

Input Voltage	3.3V ± 5%	
Model P/N / Power Consumption		**Typical (mA)**
TS32GMTS400	**Read***	255
	Write*	255
	Idle*	120
TS64GMTS400	**Read***	330
	Write*	355
	Idle*	120
TS128GMTS400	**Read***	345
	Write*	530
	Idle*	120
TS256GMTS400	**Read***	375
	Write*	860
	Idle*	120

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

Actual Capacity

Model P/N	User Max. LBA	Cylinder	Head	Sector
TS32GMTS400	62,533,296	16,383	16	63
TS64GMTS400	125,045,424	16,383	16	63
TS128GMTS400	250,069,680	16,383	16	63
TS256GMTS400	500,118,192	16,383	16	63

*Note: Based on JEDEC JESD218A specification, Client Application Class. And based on the following scenario: Active use: 40oC, 8hrs/day; Retention use: 30oC 1year

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

Reference to 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

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

Regulations	
Compliance	CE, FCC and BSMI