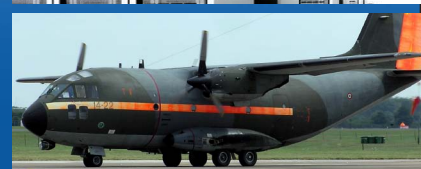


Product Overview

Industrial Products



Leveraging over 25 years of industrial-grade manufacturing expertise, Transcend has built a great reputation as one of the world's most innovative developers of high quality and reliable industrial-grade memory devices. Continuing research and development investment allows us to create cutting-edge new products for industrial computing applications.

Product Lines



SATA SSD

2.5" SATA III SSD	MLC	04
2.5" SATA II SSD	MLC SLC	05
SATA III M.2 SSD	MLC	06
Half-Slim SATA SSD	MLC SLC	07
mSATA / mSATA mini SSD	MLC SLC	08

PATA SSD

2.5" PATA SSD	MLC SLC	09
Half-Slim PATA SSD / 1.0" PATA SSD	MLC	10

eMMC

eMMC	MLC	11
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Memory Card

CFast (SATA CF) Card	MLC SLC	12
Industrial SD / SDHC / microSDHC Card	MLC SLC	13
Industrial CF Card	MLC SLC	14

Flash Module

USB Flash Module	SLC	15
SATA Flash Module	SLC	16
PATA Flash Module	SLC	17
USB Flash Drive	MLC SLC	18

Memory Module

Industrial Memory Module	19
Memory Modules for Server Application	20

Advanced Functions

Advanced Functions & Comparison Table	21
Transcend Environmental Technology	22



Why Choose Transcend

Guaranteed Quality

Reliable Customization Services

Comprehensive Support System
(strong partnership with key suppliers)

Worldwide Support

Transcend Equals Quality

Transcend qualifies all components and tests all industrial-grade products in every stage of production.

- 100% In-house Development and Manufacturing
- Single-threading and multithreading tests
- All industrial-grade Flash products are tested in High Temperature Dynamic Chamber and pass the four-corner test

Perfect for harsh industrial environments

Our industrial-grade products are specially designed to meet the strict demands of high-end equipment and machines that run at extreme temperatures. Aside from their excellent temperature flexibility, these industrial-grade products are exceptionally resistant to shock, vibration and dust, while consuming less power and maintaining ultra fast data transfer speeds. Their superb compatibility and durability makes them suitable for use in industrial PCs, embedded systems, medical instruments, factory automation systems, network infrastructures and other industrial equipment.

Customized industrial-grade products tailored to your specific demands

Transcend's industrial-grade products target extremely demanding applications in rugged environments in terms of shock, vibration, humidity and temperature. In addition to standard products, we offer customized industrial-grade products to fit your specific application demands. To provide customers with high-quality products which perfectly match the strict requirements of industrial environments, Transcend utilizes its expertise to offer reliable customization services.

• Fixed BOM Management

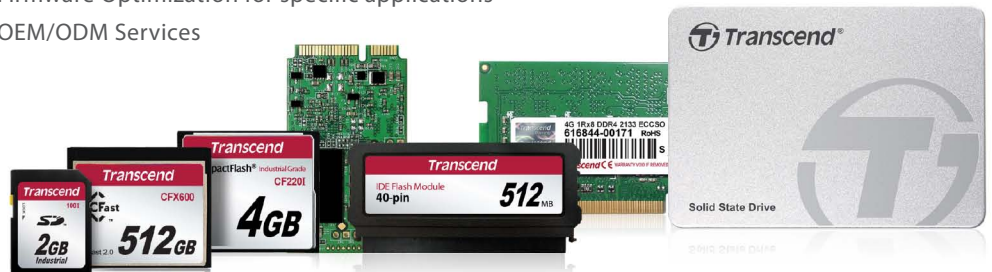
- Transcend Information System
- Customized part number
- PCN (Product Change Notice)

• Customized Solutions

- Hardware
- Firmware
- Software

• Customized Subjects

- Customized Sticker and Logo Printing
- Customized Package Designs
- Preloaded Device Content
- Firmware Optimization for specific applications
- OEM/ODM Services



Industrial PC Applications

TRANSCEND INDUSTRIAL PRODUCTS ARE WIDELY USED IN ALL AREAS OF INDUSTRY

Industrial computers (also known as IPCs) are PC-based computer platforms for industrial applications. Our clients include leading vendors of industrial computer equipment, and our products are widely used in factory automation, medical equipment, military applications, data acquisition, banking/ATMs, gaming, transportation, POS/POI, kiosks, vending machines, digital signage, and more.



Product Features

Key features shown at top of each page

Look for the following icons on each product page to check support for key features such as wide-temperature operation and power-loss protection.



Industrial Temperature
Wide operating temperature ranging from -40°C to 85°C



Advanced Power Shield
(Intelligent Power Shield by request)
Hardware-based power loss protection



Shock & Vibration
Excellent resistance to excessive shock and vibration



Zone Protection
Built-in protected area to secure important data



SSD Scope Pro
Maintain a healthy and efficient SSD

2.5" SATA III SSD
MLC

Features

- Faster load times & lag-free multitasking
- Slim 7mm drive height
- Powerful Transcend and SMI controller with ultra-fast MLC flash chips
- Supports TRIM, NCQ, S.M.A.R.T. and firmware updates
- Silent, low-power operation. Resistant to shock and vibration
- Backwards compatible with SATA II (3Gb/s) and SATA I (1.5Gb/s)
- Built-in ECC (Error Correction Code) functionality and Wear-Leveling algorithm ensure reliable data transfer
- Built-in Advanced Power Shield active monitoring circuit prevents data loss in the event of a sudden power outage

Specifications

- Standard
- By Request
- Not available

SSD420	☑	☑	☑	☑	☑
SSD420I	○	○	○	○	○
SSD370	○	○	○	○	○

85°C
-40°C

(Storage Temp.)



Features

- Faster load times & lag-free multitasking
- Slim 7mm drive height
- Powerful Transcend controller with ultra-fast MLC flash chips
- Supports TRIM, NCQ, S.M.A.R.T. and firmware updates
- Silent, low-power operation. Resistant to shock and vibration
- Backwards compatible with SATA II (3Gb/s) and SATA I (1.5Gb/s)
- Built-in ECC (Error Correction Code) functionality and Wear-Leveling algorithm ensure reliable data transfer
- Built-in Advanced Power Shield active monitoring circuit prevents data loss in the event of a sudden power outage

- Standard
- By Request
- Not available



SSD420	-	•	•	-	•
SSD420I	-	•	•	-	•
SSD370	○	-	-	-	•



Industrial: Operating & Storage Temp.

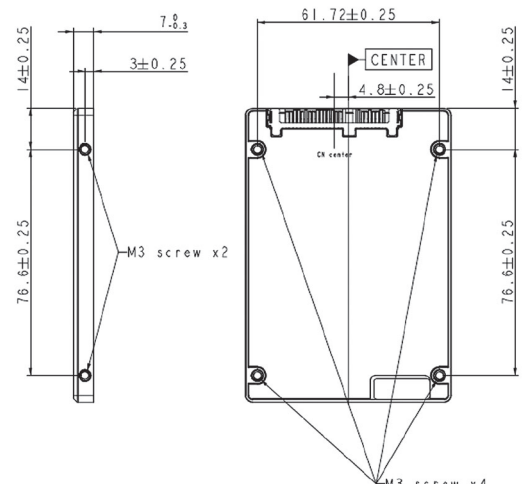
Specifications

Interface	SATA III 6Gb/s (backwards compatible with SATA II/I)
Connection Type	SATA (7+15-pin)
Form Factor	2.5"
Flash Type	Synchronous MLC
Controller	Transcend TS6500
Capacity	32GB/64GB/128GB/256GB/512GB/1TB
Max. Transfer Performance (Varies by density)	SSD420: Seq. Read: 560MB/s, Seq. Write: 460MB/s Max. 4k random file read: 75,000 IOPS Max. 4k random file write: 75,000 IOPS SSD420I: Seq. Read: 560MB/s, Seq. Write: 460MB/s Max. 4k random file read: 75,000 IOPS Max. 4k random file write: 75,000 IOPS SSD370: Seq. Read: 560MB/s, Seq. Write: 460MB/s Max. 4k random file read: 75,000 IOPS Max. 4k random file write: 75,000 IOPS
Operating Voltage	5V±5%
Power Consumption	3.5W (active), 0.35W (idle)
Operating Temp.	Standard: 0°C~70°C Industrial: -40°C~85°C
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1,500G
Vibration (Hz/G)	5G (Peak-to-Peak), 5Hz to 800Hz (Frequency)
Dimensions	SSD420/420I: 99.8mm x 69.8mm x 7mm SSD370 : 100mm x 69.85mm x 6.8mm
MTBF	1,000,000hrs (SSD420/420I: 1,500,000hrs)
Warranty	3-year Limited



Ordering Information

SSD420 Series	Capacity	SSD370	Capacity
TS32GSSD420	32GB	TS32GSSD370	32GB
TS32GSSD420I	32GB	TS64GSSD370	64GB
TS64GSSD420	64GB	TS128GSSD370	128GB
TS64GSSD420I	64GB	TS256GSSD370	256GB
TS128GSSD420	128GB	TS512GSSD370	512GB
TS128GSSD420I	128GB	TS1TSSD370	1TB
TS256GSSD420	256GB		
TS256GSSD420I	256GB		
TS512GSSD420	512GB		
TS512GSSD420I	512GB		
TS1TSSD420	1TB		
TS1TSSD420I	1TB		



*Tighten mounting screws with no more than 3.0kg-cm of torque.



Features

- Suitable for wide-temperature applications
- Built-in ECC and Wear-Leveling ensure reliable data transfer
- Supports hot swapping in AHCI mode
- TRIM command and NCQ support
- Advanced S.M.A.R.T. and software monitoring tools
- Built-in Advanced Power Shield active monitoring circuit prevents data loss in the event of a sudden power outage (SSD630)
- Optional support for Write Protect and Hardware Purge security functions

- Standard
- By Request
- Not available

SSD630	◦	•	•	-	◦
SSD500	-	-	•	-	◦
SSD500I	•	-	•	-	◦



Industrial: Operating & Storage Temp.

Specifications

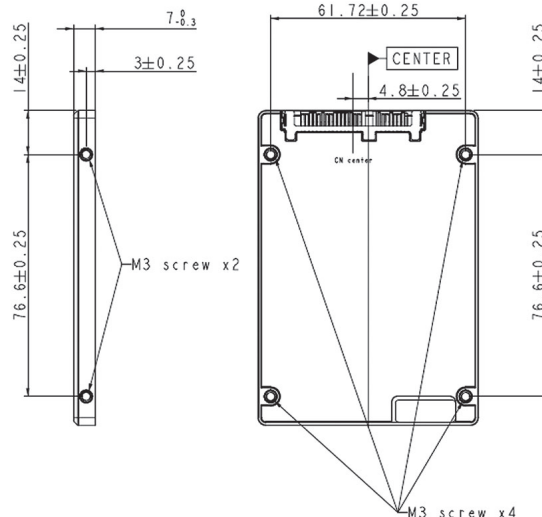
Interface	SATA II 3Gb/s (backwards compatible with SATA I)
Connection Type	SATA (7+15-pin)
Form Factor	2.5"
Flash Type	MLC : SSD630, SLC : SSD500/500I
Capacity	MLC : 16GB/32GB/64GB/128GB/256GB SLC : 8GB/16GB/32GB/64GB
Max. Transfer Performance (Varies by density)	MLC : Read: 260MB/s, Write: 225MB/s SLC : Read: 260MB/s, Write: 240MB/s
Operating Voltage	5V±5%
Power Consumption	4.3W (active), 0.75W (idle)
Operating Temp.	Standard: 0°C~70°C Industrial: -40°C~85°C (optional)
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1,500G
Vibration (Hz/G)	5G (Peak-to-Peak), 5Hz to 800Hz (Frequency)
Dimensions	SSD500/500I: 100.3mm x 69.85mm x 9.5mm SSD630: 99.8mm x 69.80mm x 7mm
MTBF	1,000,000hrs
Warranty	3-year Limited



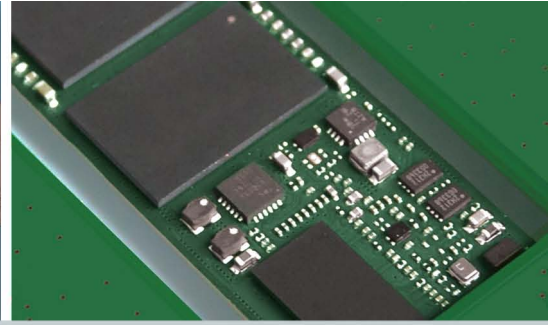
Ordering Information

SSD630 MLC	TS16GSSD630	16GB
	TS32GSSD630	32GB
	TS64GSSD630	64GB
	TS128GSSD630	128GB
	TS256GSSD630	256GB
SSD500 Series SLC	TS8GSSD500	8GB
	TS8GSSD500I	8GB
	TS16GSSD500	16GB
	TS32GSSD500	32GB
	TS32GSSD500I	32GB
	TS64GSSD500	64GB

Other Industrial temp. capacities available by request



*Tighten mounting screws with no more than 1.0kg-cm (0.07 ft-lb) of torque.



Features

- Fully compliant with the M.2 SATA SSD standard
- Hardware ECC: 40bit/1KB BCH
- Advanced Global Wear-Leveling and Block Management ensure reliable data transfer
- Supports partial, slumber and DEVSLP mode
- Optional support for Hardware Purge and Write Protect function
- DDR3 DRAM cache
- Power Shield to prevent data loss in the event of a sudden power outage

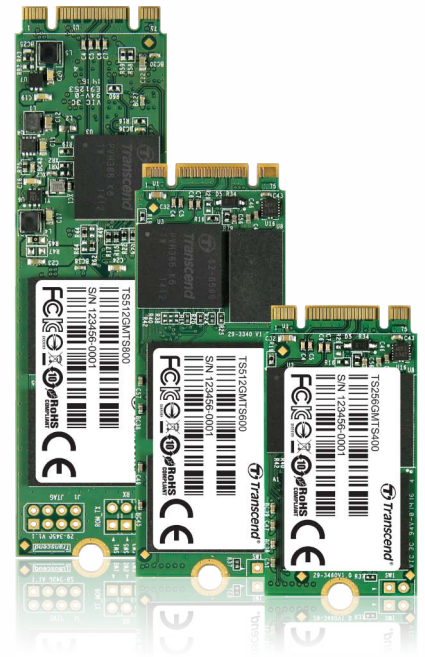
- Standard
- By Request
- Not available



	●	○	-	-	-
MTS800	-	-	●	-	-
MTS600	-	-	●	-	-
MTS400	-	-	●	-	-

Specifications

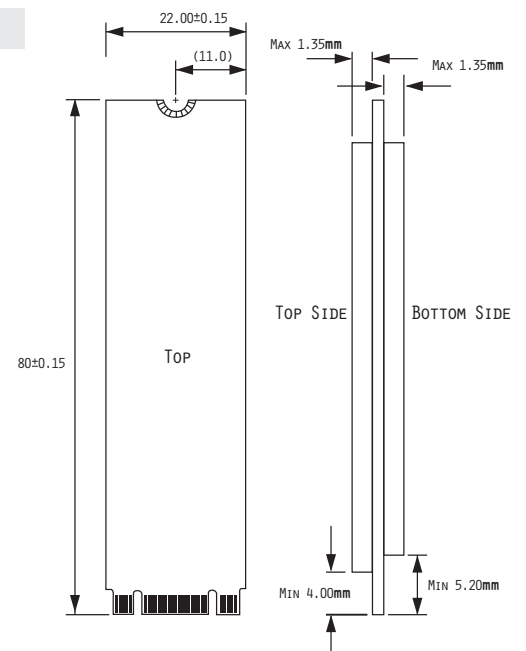
Interface	SATA III 6Gb/s (backwards compatible with SATA II/I)
Connection Type	M.2 module notch B+M
Form Factor	M.2 TYPE 2280-D2-B-M / 2260-D2-B-M / 2242-D2-B-M
Flash Type	Synchronous MLC
Capacity	32GB/64GB/128GB/256GB/512GB
Max. Transfer Performance (Varies by density)	MTS800 Read: 550MB/s, Write: 460MB/s MTS600 Read: 550MB/s, Write: 460MB/s MTS400 Read: 560MB/s, Write: 320MB/s
Operating Voltage	3.3V±5%
Power Consumption	3.10W (active), 0.33W (idle), 2mW (DEVSLP)
Operating Temp.	0°C~70°C
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1500G, 0.5ms, 3 axis
Vibration (Hz/G)	3G, 5Hz to 800Hz (Operating) 5G, 5Hz to 800Hz (Non-Operating)
Dimensions	22.0mm x 80.0mm x 3.5mm(MTS800) 22.0mm x 60.0mm x 3.5mm(MTS600) 22.0mm x 42.0mm x 3.5mm(MTS400)
MTBF	1,500,000hrs
Warranty	3-year Limited



Ordering Information

MTS800	TS32GMTS800	32GB
	TS64GMTS800	64GB
	TS128GMTS800	128GB
	TS256GMTS800	256GB
MTS600	TS512GMTS800	512GB
	TS32GMTS600	32GB
	TS64GMTS600	64GB
	TS128GMTS600	128GB
MTS400	TS256GMTS600	256GB
	TS512GMTS600	512GB
	TS32GMTS400	32GB
	TS64GMTS400	64GB
	TS128GMTS400	128GB
	TS256GMTS400	256GB

Other capacities available by request



Half-Slim SATA SSD

MLC SLC



Features

- Suitable for wide-temperature applications
- On-chip hardware BCH-ECC engine
- Supports AHCI mode, TRIM commands and NCQ
- Supports DEVSLEEP mode (HSD370/370I)
- Compliant with JEDEC MO-297
- Specifically designed for mobile devices such as tablets and notebooks
- Advanced S.M.A.R.T. and SSD Scope Pro drive health monitoring tools
- Built-in Advanced Power Shield active monitoring circuit prevents data loss in the event of a sudden power outage
- Efficient Global Wear-Leveling and Block Management ensure long-term reliability

Standard
 By Request
 Not available

Model	Standard	By Request	Not available	Temperature	Shock	Vibration	Warranty
HSD630	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HSD370	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HSD370I	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SSD25H-S	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

-40°C
 85°C

Industrial: Operating & Storage Temp.

Specifications

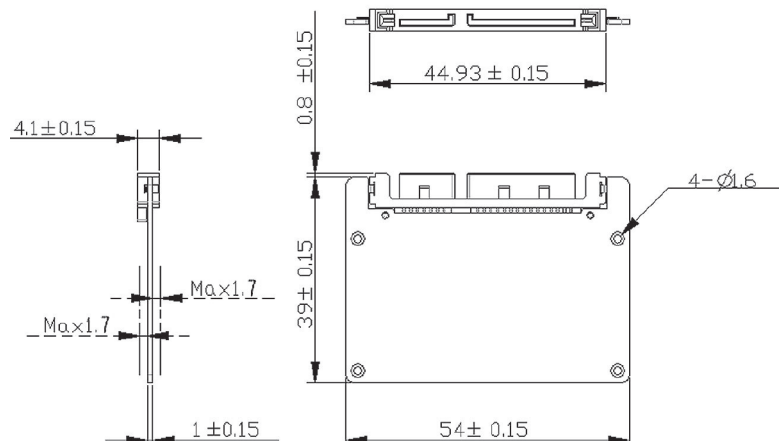
Interface	SATA III 6Gb/s (HSD370/370I, backwards compatible with SATA II/I) SATA II 3Gb/s (HSD630 & SSD25H-S, backwards compatible with SATA I)
Connection Type	SATA (7+15-pin)
Form Factor	Half-Slim MO-297
Flash Type	MLC : HSD630,370,370I SLC : SSD25H-S
Capacity	SATA III MLC : 16GB/32GB/64GB/128GB SATA II MLC : 8GB/16GB/32GB/64GB SLC : 2GB/4GB
Max. Transfer Performance (Varies by density)	SATA III MLC : Read: 550MB/s, Write: 160MB/s SATA II MLC : Read: 260MB/s, Write: 80MB/s SLC : Read: 95MB/s, Write: 75MB/s
Operating Voltage	5V±5%
Power Consumption (Varies by density)	SATA III: 2.5W (active), 0.5W (idle) SATA II: 1.6W (active), 0.7W (idle)
Operating Temp.	0°C~70°C (Industrial: -40°C~85°C)
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1,500G, 0.5ms, 3 axis
Vibration (Hz/G)	Operating: 3G (Peak-to-Peak), 5Hz to 800Hz (Frequency) Non-Operating: 5G (Peak-to-Peak), 5Hz to 800Hz (Frequency)
Dimensions	54.0mm x 39.8mm x 4.1mm
MTBF	1,500,000hrs
Warranty	3-year Limited



Ordering Information

HSD630 MLC	TS8GHSD630	8GB
	TS16GHSD630	16GB
	TS32GHSD630	32GB
	TS64GHSD630	64GB
SSD25H-S SLC	TS2GSSD25H-S	2GB
	TS4GSSD25H-S	4GB
	TS16GHSD370	16GB
HSD370 Series MLC	TS16GHSD370I	16GB
	TS32GHSD370	32GB
	TS64GHSD370	64GB
	TS128GHSD370	128GB

Industrial temp. capacities available by request



*Tighten mounting screws with no more than 1.0kg-cm (0.07 ft-lbs) of torque.



Features

- Suitable for wide-temperature applications (industrial versions available upon request)
- On-chip hardware BCH-ECC engine corrects up to 40 bit errors per 1,024 bytes of data
- Built-in Advanced Power Shield active monitoring circuit prevents data loss in the event of a sudden power outage (MSA630 & MSA370/370I & MSM610 & MSM360)
- Supports Intel® Smart Response Technology (ISRT) and DEVSLP (MSA370 & MSA340)
- Optional support for Write Protect and Hardware Purge security functions
- Supports AHCI mode, TRIM commands and NCQ

Specifications

Interface	SATA III 6Gb/s (MSA370/370I/MSM360 backwards compatible with SATA II/I) SATA II 3Gb/s (MSA630/520/500/MSM610 backwards compatible with SATA I)
Connection Type	mSATA 52-pin
Form Factor	MO-300
Flash Type	MLC : MSA630/370/370I, MSM610/360, SLC : MSA500/520
Capacity	SATA III MLC : 16GB/32GB/64GB/128GB/256GB/512GB SATA II MLC : 16GB/32GB/64GB/128GB SLC : 1GB/2GB/4GB/8GB/16GB/32GB
Max. Transfer Performance (Varies by density)	SATA III MLC : Read: 570MB/s, Write: 450MB/s SATA II MLC : Read: 260MB/s, Write: 80MB/s SLC : Read: 144MB/s, Write: 126MB/s
Operating Voltage	3.3V±5%
Power Consumption (Varies by density)	SATA III: 2.54W (active), 0.5W (idle) SATA II: 1.4W (active), 0.6W (idle)
Operating Temp.	Standard: 0°C~70°C Industrial: -40°C~85°C
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1,500G, 0.5ms, 3 axis
Vibration (Hz/G)	Operating: 3G (Peak-to-Peak) , 5Hz to 800Hz (Frequency) Non-Operating: 5G (Peak-to-Peak) , 5Hz to 800Hz (Frequency)
Dimensions	SATA III : 50.8mm x 29.85mm x 4.0mm SATA II : 50.8mm x 29.85mm x 3.7mm MSM610: 26.8mm x 29.85mm x 3.85mm
MTBF	1,000,000hrs
Warranty	3-year Limited

- Standard
- By Request
- Not available

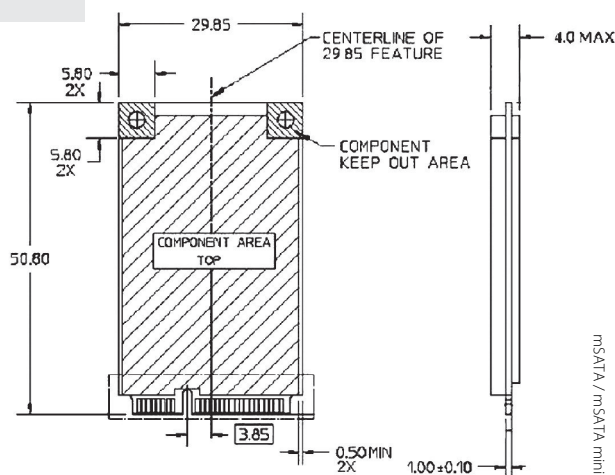
MSM360	◦	•	•	-	◦
MSA630	◦	•	•	-	◦
MSM610	◦	•	•	-	◦
MSA520	◦	◦	•	-	◦
MSA500	◦	◦	•	-	◦
MSA370	◦	•	•	-	◦
MSA370I	•	•	•	-	◦



Ordering Information

MSM610 MLC (mSATA Mini SSD)	TS8GMSM610	8GB	MSA500 SLC	TS1GMSA500*	1GB
	TS16GMSM610	16GB		TS2GMSA500	2GB
	TS32GMSM610	32GB		TS4GMSA500	4GB
MSM360 MLC	TS128GMSM360	128GB	MSA370 Series MLC	TS8GMSA500	8GB
	TS16GMSA630	16GB		TS16GMSA370	16GB
MSA630 MLC	TS32GMSA630	32GB		TS32GMSA370	32GB
	TS64GMSA630	64GB		TS32GMSA370I	32GB
MSA520 SLC	TS1GMSA520	1GB		TS64GMSA370	64GB
	TS2GMSA520	2GB		TS64GMSA370I	64GB
	TS4GMSA520	4GB		TS128GMSA370	128GB
	TS8GMSA520	8GB		TS256GMSA370	256GB
				TS512GMSA370	512GB

*Special request item



*Tighten mounting screws with no more than 1.0kg-cm (0.07 ft-lbs) of torque.



Features

- Suitable for wide-temperature applications (industrial versions available upon request)
- Supports up to Ultra DMA Mode 6, Multi-Word DMA Mode 2, and PIO Mode 4
- Fast system boot-up and smooth software application performance
- Supports security functions, S.M.A.R.T., and monitoring software
- Built-in Advanced Power Shield active monitoring circuit prevents data loss in the event of a sudden power outage
- On-chip hardware BCH-ECC engine corrects up to 40 bit errors per 1,024 bytes of data

- Standard
- By Request
- Not available



PSD330	○	•	•	-	○
PSD520	○	•	•	-	○



Industrial: Operating & Storage Temp.

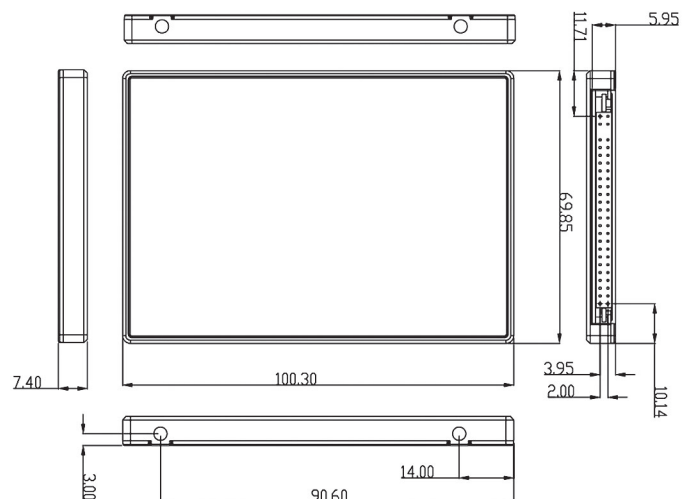
Specifications

Interface	True IDE
Connection Type	44-pin, 2.0mm pitch
Form Factor	2.5"
Flash Type	MLC : PSD330, SLC : PSD520
Capacity	MLC : 32GB/64GB/128GB SLC : 2GB/4GB/8GB/16GB/32GB/64GB
Max. Transfer Performance (Varies by density)	MLC : Read: 119MB/s, Write: 93MB/s SLC : Read: 118MB/s, Write: 102MB/s
Operating Voltage	5V±5%
Power Consumption	1.3W (active), 0.04W (idle)
Operating Temp.	Standard: 0°C~70°C MLC : -40°C~85°C (optional) SLC : -40°C~85°C (optional)
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1,500G
Vibration (Hz/G)	20G (Peak-to-Peak), 20Hz to 2000Hz (Frequency)
Dimensions	100.3mm x 69.85mm x 7.4mm
MTBF	1,000,000hrs
Warranty	3-year Limited



Ordering Information

	TS32GPSD330	32GB
PSD330 MLC	TS64GPSD330	64GB
	TS128GPSD330	128GB
	TS2GPSD520	2GB
	TS4GPSD520	4GB
PSD520 SLC	TS8GPSD520	8GB
	TS16GPSD520	16GB
	TS32GPSD520	32GB
	TS64GPSD520	64GB



*Tighten mounting screws with no more than 1.0kg-cm (0.07 ft-lbs) of torque.

Half-Slim PATA SSD

MLC



Interface	True IDE
Connection Type	ZIF, 40-pin, 0.5mm pitch
Form Factor	1.8" Half-Slim
Flash Type	MLC
Capacity	8GB/16GB/32GB/64GB
Max. Transfer Performance (Varies by density)	Read: 49MB/s, Write: 21MB/s
Operating Voltage	3.3V±5% or 5V±10%
Power Consumption	0.67W
Operating Temp.	0°C~70°C
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1500G, 0.5ms, 3 axis
Vibration (Hz/G)	20G (Peak-to-Peak), 20Hz to 2000Hz (Frequency)
Dimensions	54mm x 32mm x 3.4mm
MTBF	1,000,000hrs
Warranty	3-year Limited

- Standard
 - By Request
 - Not available
- PS5D-M - - • - ○

Features

- Advanced Global Wear-Leveling and Block Management for excellent reliability
- Fully compatible with Parallel-ATA interface
- Supports up to PIO Mode 4, Ultra DMA Mode 5, Multi-Word DMA Mode 2 and PIO Mode 4
- Supports S.M.A.R.T Lifetime Monitor and ATA security commands
- Low power consumption

Ordering Information

TS8GPSSD-M	8GB
TS16GPSSD-M	16GB
TS32GPSSD-M	32GB
TS64GPSSD-M	64GB

1.0" PATA SSD

MLC



Interface	True IDE
Connection Type	ZIF, 35-Pin, 0.3mm pitch
Form Factor	1"
Flash Type	MLC
Capacity	4GB/8GB/64GB
Max. Transfer Performance (Varies by density)	Read: 30MB/s, Write: 10MB/s
Operating Voltage	3.3V±5%
Power Consumption	0.9W
Operating Temp.	0°C~70°C
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1500G, 0.5ms, 3 axis
Vibration (Hz/G)	20G (Peak-to-Peak), 20Hz to 2000Hz (Frequency)
Dimensions	40mm x 30mm x 3.8mm
MTBF	1,000,000hrs
Warranty	3-year Limited

- Standard
 - By Request
 - Not available
- SSD10-M - • • - ○

Features

- Supports up to Ultra DMA Mode 5, Multi-Word DMA Mode 2, and PIO Mode 4
- Built-in ECC and Wear-Leveling ensure reliable data transfer
- Fully compatible with 1.0-inch hard drive form factor and interface (35-Pin FPC ZIF connector)
- Supports S.M.A.R.T Lifetime Monitor and ATA security commands
- Built-in Intelligent Power Shield active monitoring circuit prevents data loss in the event of a sudden power outage

Ordering Information

TS4GSSD10-M	4GB
TS8GSSD10-M	8GB
TS64GSSD10-M	64GB



Features

- Fully compliant with JEDEC e.MMC 4.51 Spec
- Supports HS200 Operation
- Compact size for higher compatibility
- Undergoes comprehensive environmental testing
- Highly reliable MLC Flash
- HW ECC: 53bit / 1KB BCH
- NAND Health Monitor
- Supports on-Site FW update (Vendor Define)
- Delicate design for industrial use

- Standard
- By Request
- Not available



EMC210 - - ● - -

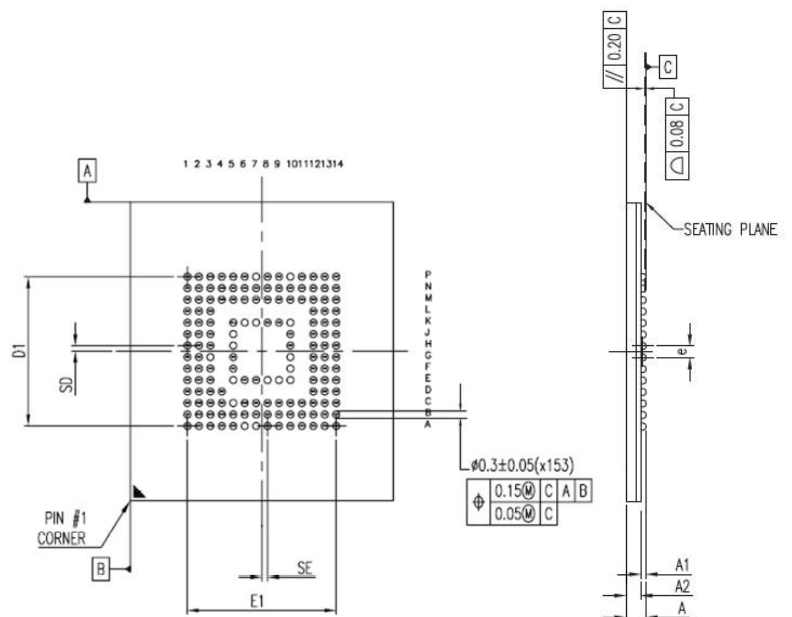
Specifications

Interface	e.MMC 4.51
Form Factor	BGA-153, pitch 0.5mm (Follow JESD84-C44)
Flash Type	MLC
Capacity	8GB/16GB/32GB
Max. Transfer Performance (Varies by density)	Read up to 140MB/s, Write up to 60MB/s (HS200)
Operating Voltage	VCC: 2.7V~3.6V VCCQ (dual voltage): 1.65V~1.95V or 2.7V~ 3.6V
Operating Temp.	-25°C~85°C
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	500G, 1ms
Vibration (Hz/G)	20G (Peak-to-Peak), 20Hz to 2000Hz (Frequency)
Dimensions	11.5 x 13.0 x 1.0 mm (8/16GB) 11.5 x 13.0 x 1.2 mm (32GB)



Ordering Information

TS8GEMC210	8GB
TS16GEMC210	16GB
TS32GEMC210	32GB



CFast (SATA CF) Card

MLC **SLC**



Features

- Suitable for wide-temperature applications (industrial versions available upon request)
- Built-in ECC and Wear-Leveling ensure reliable data transfer
- CFast specification version 2.0/1.1 compliant
- Supports S.M.A.R.T Lifetime Monitor

Specifications

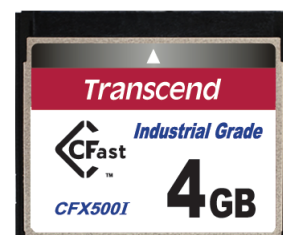
Interface	SATA III 6Gb/s (CFX650/600, backwards compatible with SATA II/I) SATA II 3Gb/s (CFX520/520I/500/500I, backwards compatible with SATA I)
Connection Type	CFast 24-pin
CFast Spec.	CFast 2.0/1.1
Flash Type	MLC : CFX650/600, SLC : CFX520/520I/500/500I
Capacity	2GB/4GB/8GB/16GB/128GB/256GB/512GB
Max. Transfer Performance (Varies by density)	CFX650: Read 515MB/s, Write 390MB/s CFX600: Read 500MB/s, Write 240MB/s CFX520/520I: Read 95MB/s, Write 85MB/s CFX500/500I: Read 110MB/s, Write 90MB/s
Operating Voltage	3.3V±5%
Power Consumption	1.22W
Operating Temp.	-5°C~70°C (Industrial: -40°C~85°C)
Storage Temp.	-40°C~85°C (Industrial: -55°C~100°C)
Humidity	0%~95%
Shock	1,500G, 0.5ms, 3 axis
Vibration (Hz/G)	3G (Peak-to-Peak), 5Hz to 800Hz (Frequency)
Dimensions	42.8mm x 36.4mm x 3.3mm
MTBF	1,000,000hrs
Warranty	3-year Limited

- Standard
- By Request
- Not available

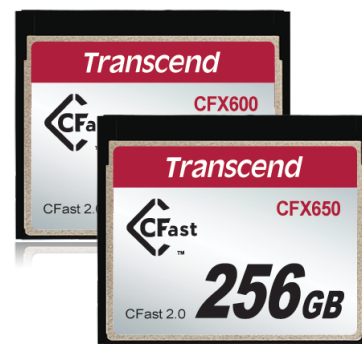
CFX650	-	●	●	-	○
CFX600	-	●	●	-	○
CFX520	-	●	●	-	○
CFX520I	●	●	●	-	○
CFX500	-	●	●	-	○
CFX500I	●	●	●	-	○



Industrial: Storage Temp.



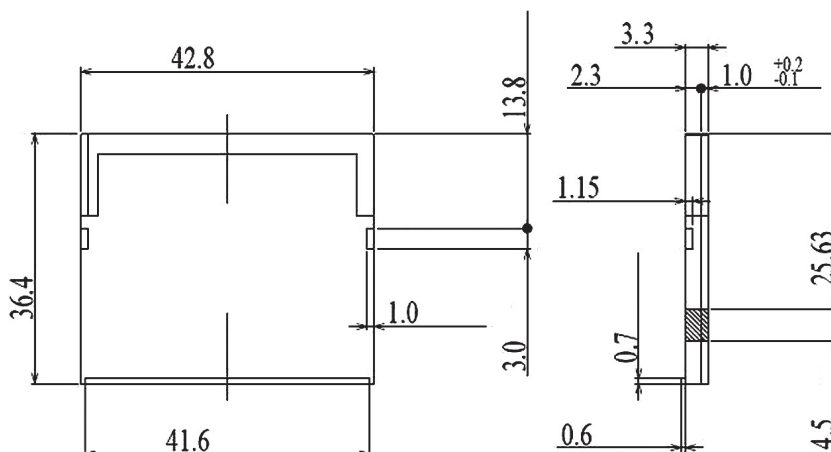
Industrial



Standard

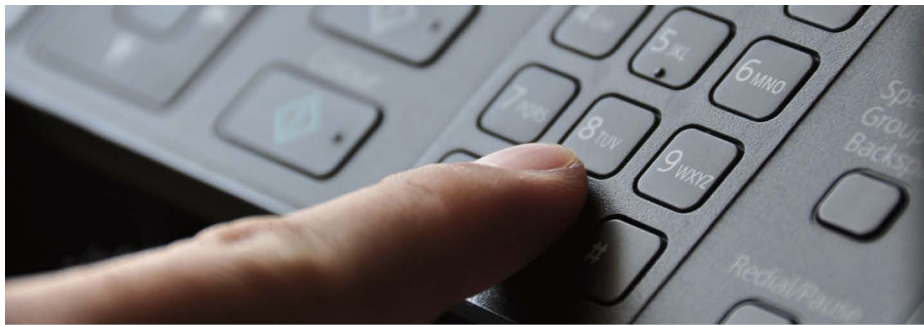
Ordering Information

CFX650 MLC	TS128GCFX650	128GB
	TS256GCFX650	256GB
	TS128GCFX600	128GB
CFX600 MLC	TS256GCFX600	256GB
	TS512GCFX600	512GB
	TS4GCFX520	4GB
CFX520 Series SLC	TS4GCFX520I	4GB
	TS8GCFX520	8GB
	TS8GCFX520I	8GB
CFX500 Series SLC	TS4GCFX500	4GB
	TS8GCFX500	8GB
	TS8GCFX500I	8GB
	TS16GCFX500	16GB



Industrial SD / SDHC / microSDHC Card

MLC SLC



Features

- Suitable for wide-temperature applications (industrial versions available upon request)
- Built-in ECC and Wear-Leveling ensure reliable data transfer
- Insertion / removal durability: 10,000 cycles
- Mechanical write-protection switch (SD/SDHC/SDXC)
- Supports Copy Protection for Recorded Media (CPRM) for music and other commercial media
- SDHC/SDXC Class 10 write performance
- Voltage detect function protects saved data

- Standard
- By Request
- Not available

	Standard	By Request	Not available
SDHC10I	•	-	•
USDC10I	•	-	•
SD100I	•	-	•
SDHC100I	•	-	•
SDHC10M	-	-	•
SDXC10M	-	-	•
USDC10M	-	-	•
SD150	-	-	•
SDHC150	-	-	•

Specifications

Interface	SD 3.0 (backwards compatible with SD 2.0/1.1)	
Connection Type	SD/microSD connector	
Form Factor	SD/SDHC/microSDHC Flash Card	
Flash Type	MLC : SDHC10I/USDC10I/SDHC10M/SDXC10M/USDC10M SLC : SD100I/SDHC100I/SD150/SDHC150	
Capacity	SDHC10I: 8GB/16GB/32GB USDC10I: 8GB/16GB/32GB SDHC/SDXC10M: 8GB/16GB/32GB/64GB USDC10M: 8GB/16GB/32GB SD100I/SDHC100I: 128MB/256MB/512MB/1GB/2GB/4GB SD150/SDHC150: 2GB/4GB/8GB	
Max. Transfer Performance (Varies by density)	SDHC10I: Read: 20MB/s, Write: 17MB/s USDC10I: Read: 20MB/s, Write: 17MB/s SDHC10M/SDXC10M: Read: 20MB/s, Write: 20MB/s USDC10M: Read: 20MB/s, Write: 16MB/s SD100I/SDHC100I: Read: 17MB/s, Write: 17MB/s SD150/SDHC150: Read: 20MB/s, Write: 18MB/s	
Operating Voltage	2.7V~3.6V	
Power Consumption	0.72W	
Operating Temp.	SDHC10I/USDC10I/SD100I/SDHC100I: -40°C~85°C SD150/SDHC150/SDHC10M/SDXC10M/USDC10M: -25°C~85°C	
Storage Temp.	-40°C~85°C	
Humidity	0%~95%	
Shock	600G	
Vibration (Hz/G)	20G (Peak-to-Peak), 20Hz to 2000Hz (Frequency)	
Dimensions	24mm x 32mm x 2.1mm (USDC10I/USDC10M: 11mm x 15mm x 1mm)	
MTBF	1,000,000 hrs	
Warranty	2-year Limited	

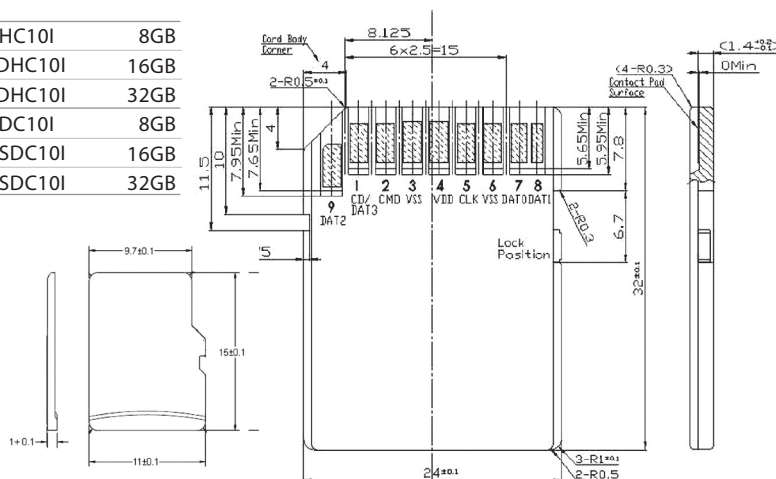


Industrial: Operating & Storage Temp.



Ordering Information

SD100I	SLC	TS128MSD100I	128MB	SDHC10I	MLC	TS8GSDHC10I	8GB
		TS256MSD100I	256MB			TS16GSDHC10I	16GB
		TS512MSD100I	512MB			TS32GSDHC10I	32GB
SDHC100I	SLC	TS1GSD100I	1GB	USDC10I	MLC	TS8GUSDC10I	8GB
		TS2GSD100I	2GB			TS16GUSDC10I	16GB
SDHC10M	MLC	TS4GSDHC100I	4GB			TS32GUSDC10I	32GB
		TS8GSDHC10M	8GB				
		TS16GSDHC10M	16GB				
SDXC10M	MLC	TS32GSDHC10M	32GB				
		TS64GSDXC10M	64GB				
USDC10M	MLC	TS8GUSDC10M	8GB				
		TS16GUSDC10M	16GB				
SD150	SLC	TS32GUSDC10M	32GB				
		TS2GSD150	2GB				
SDHC150	SLC	TS4GSDHC150	4GB				
		TS8GSDHC150	8GB				





Features

- Suitable for wide-temperature applications (industrial versions available upon request)
- Built-in ECC and Wear-Leveling ensure reliable data transfer
- Compliant with CompactFlash specification V4.1 (CF170: V6.0)
- Supports PIO modes 0-6
- Supports Multi-Word DMA modes 0-4 (CF170: 0-2)
- Supports Ultra DMA modes 0-5
- Built-in Advanced Power Shield protects data in the event of a power outage
- Supports S.M.A.R.T

- Standard
- By Request
- Not available



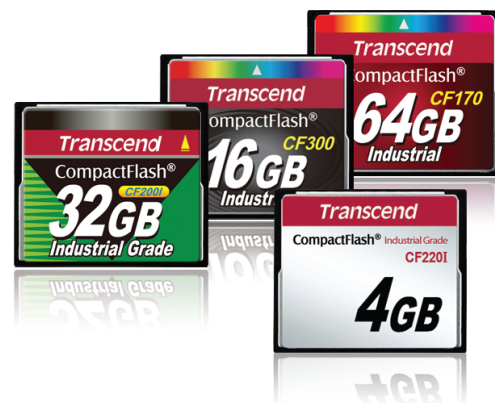
CF300	-	●	●	-	○
CF200I	●	●	●	-	○
CF220I	●	●	●	-	○
CF170	-	○	-	-	○



Industrial: Storage Temp.

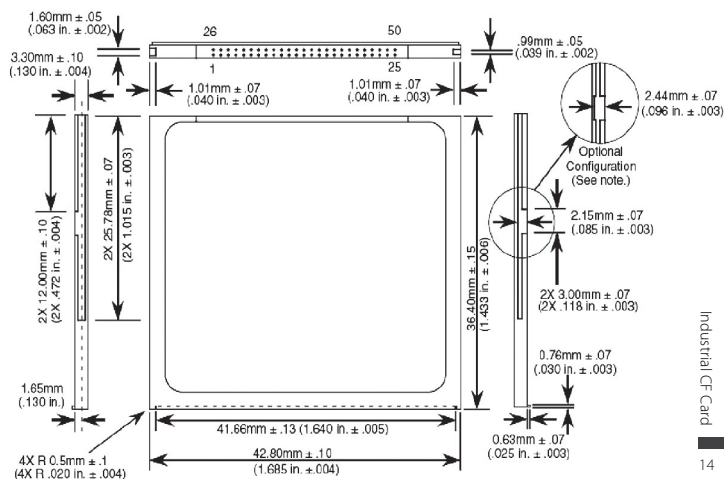
Specifications

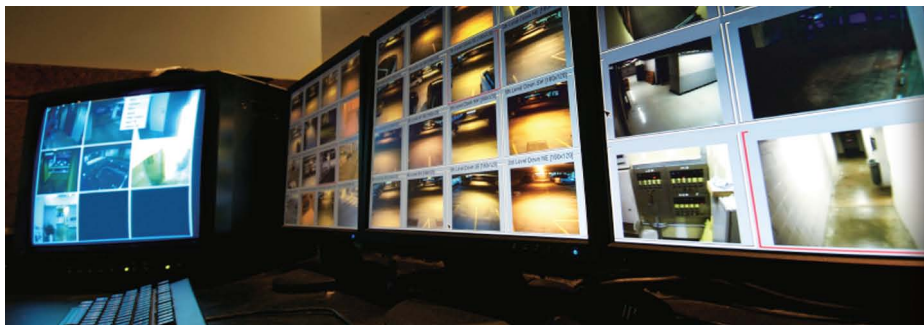
Interface	PCMCIA / True IDE
Connection Type	CompactFlash, 50-Pin
Form Factor	CompactFlash Card
Flash Type	SLC : CF300/CF220I/CF200I (TS32GCF200I SLC mode) MLC : CF170
Capacity	SLC : 128MB/256MB/512MB/1G/2G/4G/8G/16G/32G MLC : 4GB/8GB/16GB/32GB/64GB
Max. Transfer Performance (Varies by density)	CF300: Read: 57MB/s, Write: 38MB/s CF220I: Read: 40MB/s, Write: 45MB/s CF200I: Read: 92MB/s, Write: 70MB/s CF170: Read: 90MB/s, Write: 60MB/s
Operating Voltage	3.3V±5% or 5V±10%
Power Consumption	0.76W
Operating Temp.	-25°C~85°C (CF200I/CF220I: -40°C~85°C)
Storage Temp.	-40°C~85°C (CF200I/CF220I: -55°C~100°C)
Humidity	0%~95%
Shock	1500G, 0.5ms, 3 axis
Vibration (Hz/G)	20G (Peak-to-Peak), 20Hz to 2000Hz (Frequency)
Dimensions	42.8mm x 36.4mm x 3.3mm
MTBF	1,000,000hrs (CF200I/220I: 4,000,000hrs)
Warranty	2-year Limited



Ordering Information

	TS128MCF300	128MB		TS128MCF200I	128MB
	TS256MCF300	256MB		TS256MCF200I	256MB
	TS512MCF300	512MB		TS512MCF200I	512MB
CF300 SLC	TS1GCF300	1GB		TS1GCF200I	1GB
	TS2GCF300	2GB	CF200I SLC	TS2GCF200I	2GB
	TS4GCF300	4GB		TS4GCF200I	4GB
	TS8GCF300	8GB		TS8GCF200I	8GB
TS16GCF300	16GB	TS16GCF200I		16GB	
	TS128MCF220I	128MB		TS32GCF200I(SLC Mode)	32GB
	TS256MCF220I	256MB		TS4GCF170	4GB
CF220I SLC	TS512MCF220I	512MB		TS8GCF170	8GB
	TS1GCF220I	1GB	CF170 MLC	TS16GCF170	16GB
	TS2GCF220I	2GB		TS32GCF170	32GB
	TS4GCF220I	4GB		TS64GCF170	64GB





Features

- Suitable for wide-temperature applications (industrial versions available upon request)
- Built-in ECC and Wear-Leveling ensure reliable data transfer
- Hi-Speed USB 2.0 compliant
- Backwards compatible with USB 1.1
- True Plug and Play functionality
- Fully compliant with open industry standards
- Mechanical write-protection switch
- LED transfer activity indicator (for H type)

- Standard
- By Request
- Not available



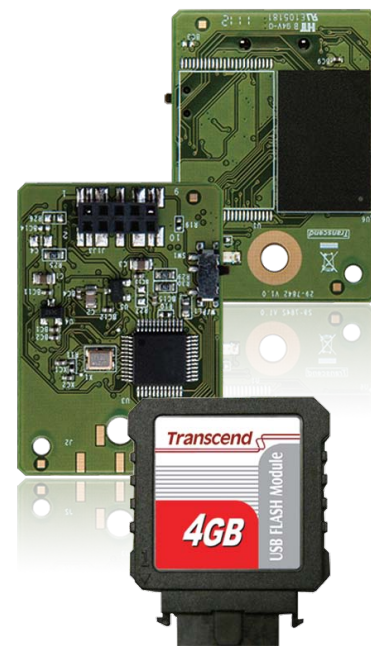
UFM-H	-	-	•	-	-
UFM-HI	•	-	•	-	-
UFM-V	•	-	•	-	-



Industrial: Operating & Storage Temp.

Specifications

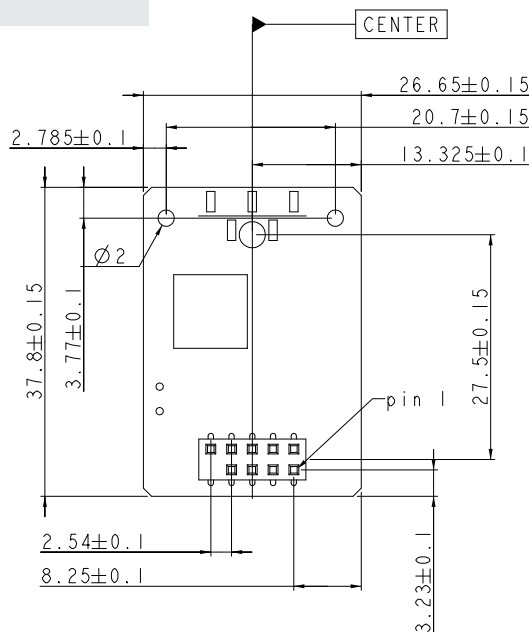
Interface	USB 2.0 (backwards compatible with USB 1.1)
Connection Type	(H)10-pin USB port: pitch=2.54mm for Normal Type; pitch=2.0mm for Low profile Type (V)10-pin USB port: pitch = 2.54mm
Form Factor	Vertical (case) or Horizontal (no case)
Flash Type	SLC
Capacity	512MB/1GB/2GB/4GB
Max. Transfer Performance (Varies by density)	Read: 18MB/s, Write: 16MB/s
Operating Voltage	5V±10%
Power Consumption (Max.)	0.6W
Operating Temp.	0°C~70°C (Industrial: -40°C~85°C)
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1500G, 0.5ms, 3 axis
Vibration (Hz/G)	20G (Peak-to-Peak), 20Hz to 2000Hz (Frequency)
Dimensions	(UFM-H) 37.80mm x 26.65mm x 9.7mm (UFM-V) 31.80mm x 26.00mm x 7.00mm
MTBF	1,000,000hrs
Waranty	2-year Limited



Ordering Information

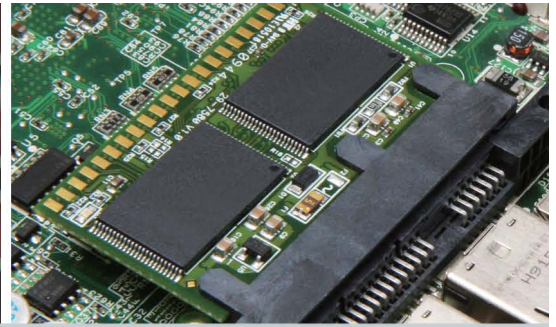
	TS512MUFM-H	512MB
	TS512MUFM-HI*	512MB
UFM-H	TS1GUFM-H	1GB
	TS2GUFM-H	2GB
	TS4GUFM-H	4GB
	TS512MUFM-V	512MB
UFM-V	TS1GUFM-V	1GB
	TS2GUFM-V	2GB
	TS4GUFM-V	4GB

*Industrial temp. version available by request



(UFM-H)

*Tighten mounting screws with no more than 1.0kg-cm (0.07 ft-lbs) of torque.



Features

- Suitable for wide-temperature applications (industrial versions available upon request)
- Built-in ECC and Wear-Leveling ensure reliable data transfer
- On-chip hardware 13/24 bit BCH-ECC engines correct up to 24 bit errors per 1,024 bytes of data
- Fully compatible with devices and operating systems that support the SATA III 6Gb/s interface (STM360)
- Supports up to Ultra DMA Mode 5
- Hardware write-protect switch (STM360/STM500-7H)
- Supports AHCI mode, TRIM command and NCQ (STM360/STM500-7H)
- Optional: Supports hardware purge function (STM360/STM500-7H)

- Standard
- By Request
- Not available



SDOM22V	-	-	•	-	◦
STM500-7H	◦	-	•	-	◦
STM360	◦	-	•	-	◦



Industrial: Operating & Storage Temp.

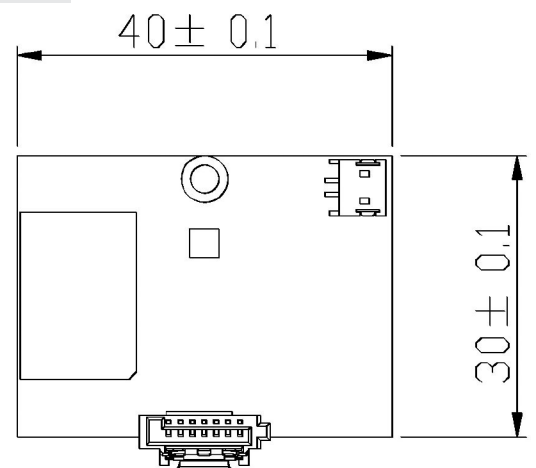
Specifications

Interface	SATA III 6Gb/s (STM360), SATA II 3Gb/s (STM500-7H), SATA I 1.5Gb/s (SDOM22V)
Connection Type	SATA (7-pin/22-pin)
Form Factor	SATA Flash Module (V)ertical/(H)orizontal
Flash Type	SLC
Capacity	SATA III: 16GB SATA II : 2GB/4GB/8GB SATA I : 1GB/2GB/4GB
Max. Transfer Performance (Varies by density)	SATA III: Read: 130MB/s, Write: 21MB/s SATA II : Read: 130MB/s, Write: 123MB/s SATA I : Read: 47MB/s, Write: 29MB/s
Operating Voltage	SATA III/SATA II: 5V±5%, SATA I: 5V±10%
Power Consumption	SATA III: 0.62W, SATA II: 1.06W, SATA I: 1.5W
Operating Temp.	0°C~70°C (Industrial SLC: -40°C~85°C)
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1500G, 0.5ms, 3 axis
Vibration (Hz/G)	3G (Peak-to-Peak), 5Hz to 800Hz (Frequency)
Dimensions	40.0mm x 30.0mm x 10.85mm (STM360/STM500-7H) 45.8mm x 7.08mm x 33.0mm (SDOM22V)
MTBF	1,000,000hrs
Warranty	2-year Limited



Ordering Information

STM360	TS16GSTM360	16GB
	TS2GSTM500-7H	2GB
STM500-7H	TS4GSTM500-7H	4GB
	TS8GSTM500-7H	8GB
SDOM22V	TS1GSDOM22V	1GB
	TS2GSDOM22V	2GB
	TS4GSDOM22V	4GB



(STM500-7H)

*Tighten mounting screws with no more than 1.0kg-cm (0.07 ft-lbs) of torque.



Features

- Suitable for wide-temperature applications (industrial versions available upon request)
- Built-in ECC function ensures high data transfer reliability
- Enhanced Wear-Leveling algorithm extends product life
- Fully compatible with devices and operating systems that support the IDE/PATA interface standard
- Supports S.M.A.R.T Lifetime Monitor
- PTM510: Supports up to PIO Mode 4 & Ultra DMA Mode 5 and Multi-Word DMA Mode 2
- PTM510: Enhanced Power regulator with thermal shutdown and current limit protection

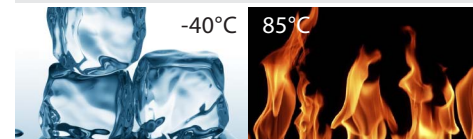
Specifications

Interface	True IDE
Connection Type	44-pin, pitch=2.00mm; 40-pin, pitch=2.54mm
Form Factor	IDE Flash Module (V)ertical/(H)orizontal
Flash Type	SLC
Capacity	128MB/256MB/512MB/ 1GB/2GB/4GB/8GB/16GB
Max. Transfer Performance (Varies by density)	Read: 57MB/s, Write: 38MB/s
Operating Voltage	3.3V±5% or 5V±10%
Power Consumption	0.9W
Operating Temp.	0°C~70°C (Industrial: -40°C~85°C)
Storage Temp.	-40°C~85°C
Humidity	0%~95%
Shock	1500G, 0.5ms, 3 axis
Vibration (Hz/G)	20G (Peak-to-Peak), 20Hz to 2000Hz (Frequency)
Dimensions	61.0mm x 27.1mm x 7.1mm (PTM510-40V/DOM40V/PTM520) 52.0mm x 29.5mm x 7.2mm (PTM510-44V/PTM720/DOM44V) 45.0mm x 28.0mm x 6.0mm (DOM44H)
MTBF	1,000,000hrs
Warranty	2-year Limited

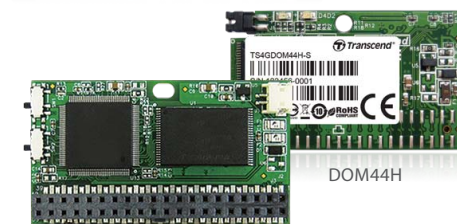
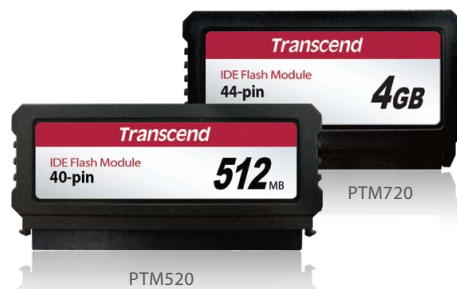
- Standard
- By Request
- Not available



DOM44H	◦	-	•	-	◦
DOM40V	◦	-	•	-	◦
PTM510-40V	◦	•	•	-	◦
DOM44V	◦	-	•	-	◦
PTM510-44V	◦	•	•	-	◦
PTM520	◦	•	•	-	◦
PTM720	◦	•	•	-	◦



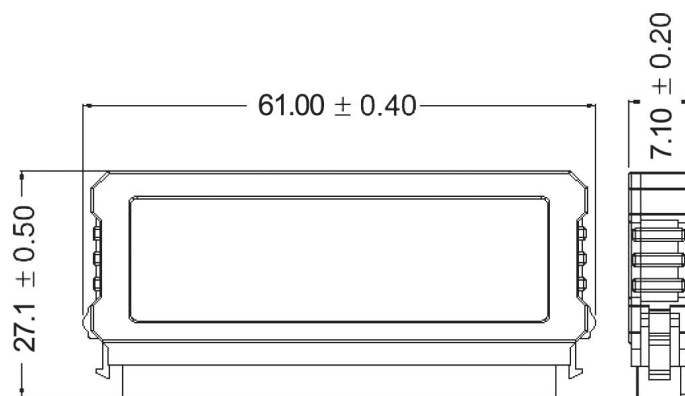
Industrial: Operating & Storage Temp.



Foolproof directions
can be customized

Ordering Information

DOM44H	TS128MDOM44H-S	128MB	PTM510 40V	TS2GPTM510-40V	2GB
	TS256MDOM44H-S	256MB		TS4GPTM510-40V	4GB
	TS512MDOM44H-S	512MB		TS8GPTM510-40V	8GB
	TS1GDOM44H-S	1GB		TS16GPTM510-40V	16GB
	TS2GDOM44H-S	2GB		TS128MDOM44V-S	128MB
DOM40V	TS4GDOM44H-S	4GB	DOM44V	TS256MDOM44V-S	256MB
	TS128MDOM40V-S	128MB		TS512MDOM44V-S	512MB
	TS256MDOM40V-S	256MB		TS1GDOM44V-S	1GB
	TS512MDOM40V-S	512MB		TS2GDOM44V-S	2GB
	TS1GDOM40V-S	1GB		TS4GDOM44V-S	4GB
PTM520	TS2GDOM40V-S	2GB	PTM510 44V	TS2GPTM510-44V	2GB
	TS4GDOM40V-S	4GB		TS4GPTM510-44V	4GB
	TS512MPTM520	512MB		TS8GPTM510-44V	8GB
PTM720	TS4GPTM720	4GB			



(PTM510-40V/DOM40V)



Features

- Gloss finish with contoured edges
- Made with high durability **SLC** / **MLC** flash memory
- Efficient Global Wear-Leveling and Block Management ensure excellent long-term reliability
- Ideal for frequently used applications
- Preloaded with AES encryption software (JF620)

- Standard
- By Request
- Not available



JF170	-	-	•	-	-
JF600	-	-	•	-	-
JF620	-	-	•	-	-
JF750K	-	-	•	-	-

Specifications

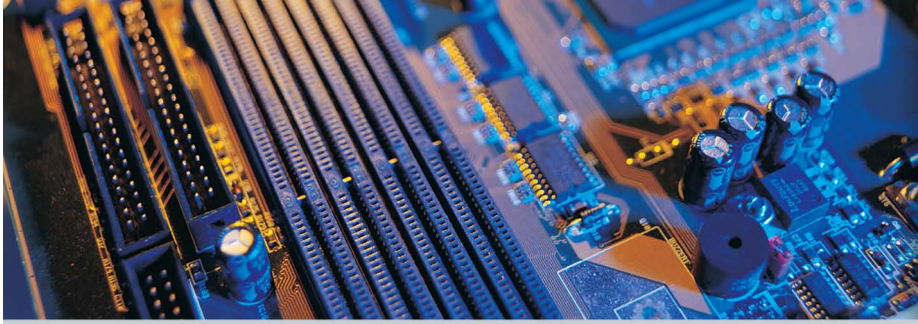
Interface	USB 2.0 / USB 3.0
Connection Type	USB 2.0(JF170/600/620) / USB 3.0(JF750K) A-Type Plug
Flash Type	MLC : JF600/620/750K, SLC : JF170
Capacity	JF170: 512MB/1GB/2GB/4GB/8GB JF600/620: 4GB/8GB/16GB/32GB/64GB JF750K: 16GB/32GB/64GB
Max. Transfer Performance (Varies by density)	JF170: Read: 29MB/s, Write: 21MB/s JF600/620: Read: 32MB/s, Write: 18MB/s JF750K: Read: 130MB/s, Write: 40MB/s
Operating Voltage	5V±10%
Power Consumption	1.1W (max. active), 0.4W (idle)
Operating Temp.	0°C~70°C
Storage Temp.	-20°C~75°C
Humidity	0%~95%
Shock	1,500G, 0.5ms, 3 axis
Vibration (Hz/G)	3G (Peak-to-Peak), 5Hz to 800Hz (Frequency)
Dimensions	60.9mm x 19.3mm x 8.5mm(JF170/600/620) 69.5mm x 19.8mm x 8.8mm(JF750K)
MTBF	1,000,000hrs
Warranty	Limited Lifetime



Ordering Information

JF170 SLC	TS512MJF170	512MB
	TS1GJF170	1GB
	TS2GJF170	2GB
	TS4GJF170	4GB
	TS8GJF170	8GB
JF600 MLC	TS4GJF600	4GB
	TS8GJF600	8GB
	TS16GJF600	16GB
	TS32GJF600	32GB
JF620 MLC	TS64GJF600	64GB
	TS4GJF620	4GB
	TS8GJF620	8GB
	TS16GJF620	16GB
JF750K MLC	TS32GJF620	32GB
	TS64GJF620	64GB
	TS16GJF750K	16GB
	TS32GJF750K	32GB
	TS64GJF750K	64GB

Industrial Memory Modules



Features

- Suitable for wide-temperature applications (industrial versions available upon request)
- Extra-thick 30u" gold-plated contact pins
- Industrial grade capacitors ensure voltage stability
- Stable operation in extreme temperatures (-40°C to 85°C)
- JEDEC compliant PCB design ensures multi-platform compatibility
- 100% tested for performance and reliability
- Ideal for non-stop, 24/7 applications
- Conformal coating for protection from environmental contaminants (available by request)

- Standard
- By Request
- Not available



DDR2	●	-	○	-	-
DDR3	○	-	-	-	-



Specifications DDR3

Module Type	DDR3 LONG DIMM/SO-DIMM
Frequency	1333MHz / 1600MHz
Function	Non-ECC / ECC Unbuffered
Pin Count	240pin(LONG) / 204pin(SO)
Capacity	1GB/2GB/4GB/8GB
DRAM Configuration	128Mx8/256Mx8/512Mx8
Timing	9-9-9 / 11-11-11
Voltage	1.35 / 1.5V
Rank Number	1 Rank / 2 Ranks
PCB Height	1.18 Inches
Operating Temp.	-40°C~85°C
Warranty	Limited Lifetime

ENERGY CONSUMPTION **-20%**



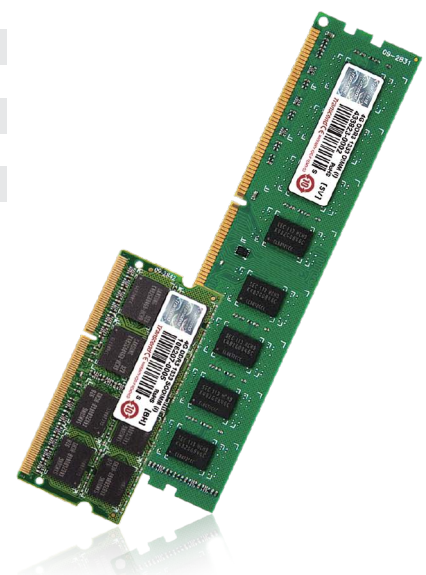
1.35V provide energy savings of up to 20%

Specifications DDR2

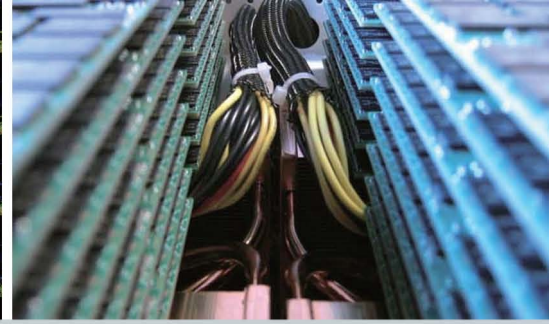
Module Type	DDR2 LONG DIMM / SO-DIMM
Frequency	533MHz/667MHz/800MHz
Function	Non-ECC / ECC Unbuffered Memory
Pin Count	240(LONG) / 200 pin(SO)
Capacity	512MB/1GB/2GB
DRAM Configuration	64Mx8/128Mx8
Timing	4-4-4 / 5-5-5 / 6-6-6
Voltage	1.8V
Rank Number	1 Rank / 2 Ranks
PCB Height	1.18 Inches
Operating Temp.	-40°C~85°C
Waranty	Limited Lifetime



Scan the QR code
for Ordering Information



Memory Modules for Server Application



Features

- Higher memory capacity with 8 DIMM per channel (FB-DIMM)
- 100% tested for reliability and quality
- Stable signal integrity at high frequency operation
- 1.35 Voltage at rated speed (DDR3L)
- Meets JEDEC standards & supports ECC function
- Conformal coating for protection from environmental contaminants (available by request)

- Standard
- By Request
- Not available

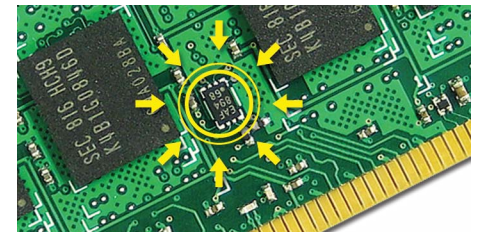


	●	○	-	●	-	-
DDR	○	-	-	●	-	-
DDR2	○	-	-	●	-	-
DDR3	○	-	-	●	-	-
DDR4	○	-	-	●	-	-

Specifications DDR4

Module Type	DDR4	DDR3
Frequency	2133MHz	1066MHz/1333MHz/1600MHz/1866MHz
Function	ECC Unbuffered/Registered	ECC Unbuffered/Registered
Pin Count	288pin(LONG) / 260pin(SO)	240pin(LONG) / 204pin(SO)
Capacity	4GB/8GB/16GB/32GB	1GB/2GB/4GB/8GB/16GB/32GB
DRAM Configuration	512Mx8/1Gx4	128Mx8/256Mx4/256Mx8 512Mx4/512Mx8/1Gx4/2Gx4
Timing	15-15-15	7-7-7 / 9-9-9 / 11-11-11 / 13-13-13
Voltage	1.2V	1.35V / 1.5V
Rank Number	1 Rank / 2 Ranks	1Rank / 2 Ranks / 4 Ranks
PCB Height	1.23 Inches	0.74 Inches / 1.18 Inches
Operating Temp.	0°C~85°C	0°C~85°C
Warranty	Limited Lifetime	Limited Lifetime

DDR3

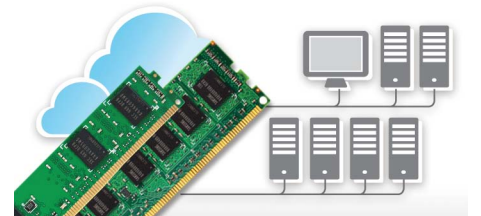


Onboard thermal sensor
ECC/Registered-DIMM only

Specifications DDR2

Module Type	DDR2	DDR
Frequency	400MHz/533MHz/667MHz/800MHz	266MHz/333MHz/400MHz
Function	ECC Unbuffered/Registered	ECC Unbuffered/Registered
Pin Count	240pin	184pin
Capacity	512MB/1GB/2GB/4GB	256MB/512MB/1GB
DRAM Configuration	64Mx8/128Mx4/128Mx8/256Mx4	32Mx8/64Mx4/64Mx8/128Mx4
Timing	3-3-3 / 4-4-4 / 5-5-5 / 6-6-6	2.5-2.5-2.5 / 3-3-3
Voltage	1.8V	2.6V
Rank Number	1 Rank / 2 Ranks	1 Rank / 2 Ranks
PCB Height	1.18 Inches	1.2 Inches
Operating Temp.	0°C~85°C	0°C~85°C
Warranty	Limited Lifetime	Limited Lifetime

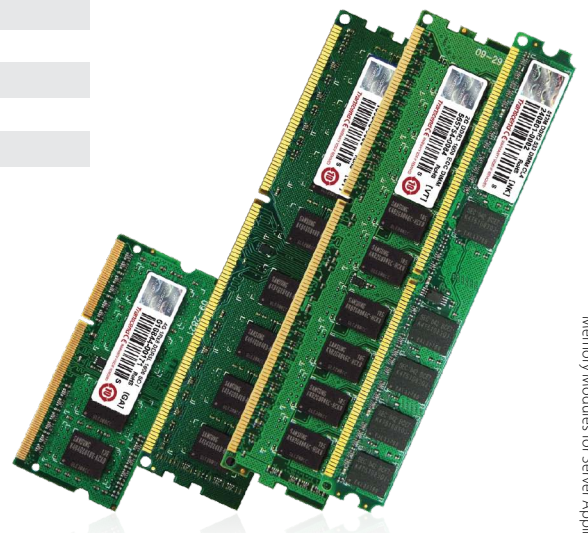
DDR



Ideal for cloud computing and virtualization

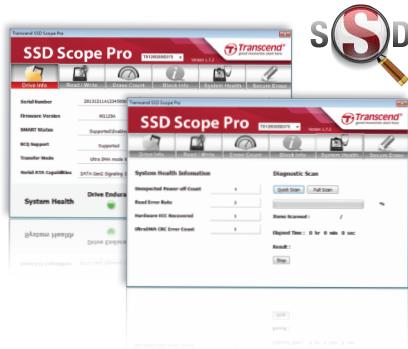


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Advanced Functions

SSD Scope Pro



Transcend SSD Scope Pro is an advanced diagnostic and maintenance tool to help keep your SSD running fast, clean, and error-free.



Drive Info

Displays standard drive information and quick overview of SSD health



Block Info

View number of valid spare blocks, new bad blocks, and varied blocks



Read/Write

Real-time graphical display of read/write operations between SSD and host



System Health

Displays SSD health history and perform quick or full diagnostic scan



Erase Count

Monitors minimum, average, maximum, and total erase count



Secure Erase

Guarantees the permanent removal of all deleted data on the drive

* SSD Scope Pro does not support all Transcend Industrial SSD models. Please contact Transcend staff for software support.

Device Sleep Mode

DevSleep saves power by allowing the host device to completely power off the SATA interface when not in use while maintaining a fast response time of less than 20ms, offering instant-on capabilities akin to a smartphone.

AES (Advanced Encryption Standard)

The Advanced Encryption Standard (AES) is a symmetric-key encryption standard adopted by the U.S. National Institute of Standards and Technology (NIST) to safeguard confidential electronic data. Each cipher has a 128-bit block size, with key sizes of 128, 192 and 256 bits. The AES is now widely implemented in software and hardware.



ISO/TS 16949: 2009 Certification

Transcend recently acquired the ISO/TS 16949:2009 certification, which demonstrates Transcend's continuous improvement in quality management. Transcend employs innovative techniques in the design, development and manufacture of its products in order to satisfy the strict product quality needs and requirements of the automotive industry.

With the certification of ISO/TS 16949:2009, customers have additional assurance that Transcend conforms to international standards and can be trusted to provide the global automotive market with products of the highest quality.



Comparison Table

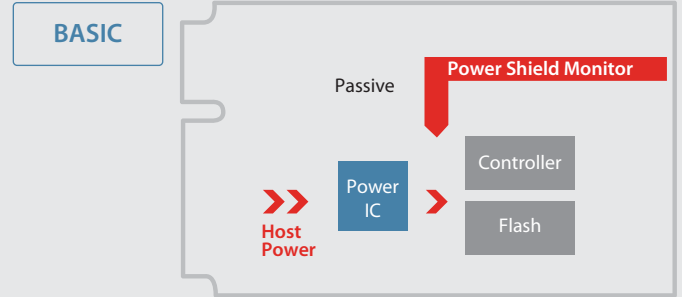
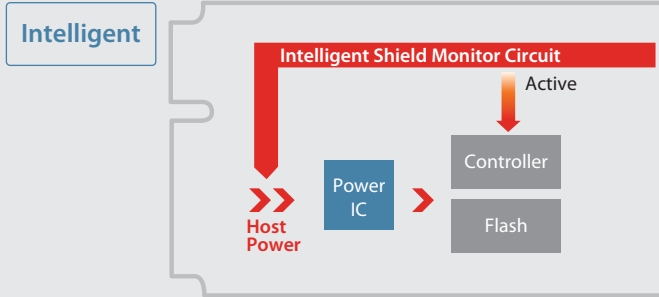
*-40°C~85°C ● standard ○ optional

Interface	PATA				CF		SD		USB
	2.5" PATA SSD	Half-Slim PATA SSD	1.0" PATA SSD	IDE Flash Modules	CF Card	I-Temp CF Card	SD Card	I-Temp SD/SDHC Card	USB Flash Modules
Model									
MLC Flash	●	●	●		●			●	
SLC Flash	●	○	○	●	●	●	●	●	●
TRIM & NCQ Support									
Intelligent Power Shield	●		●	● (PTMS10)	●	●			
S.M.A.R.T.	●	●	●	●	●	●			
Security Commands	●	●	●	●	○	●	●	●	
Hardware Purge									
Industrial Temperature*	○		○	○		●	○	●	○

Intelligent Power Shield

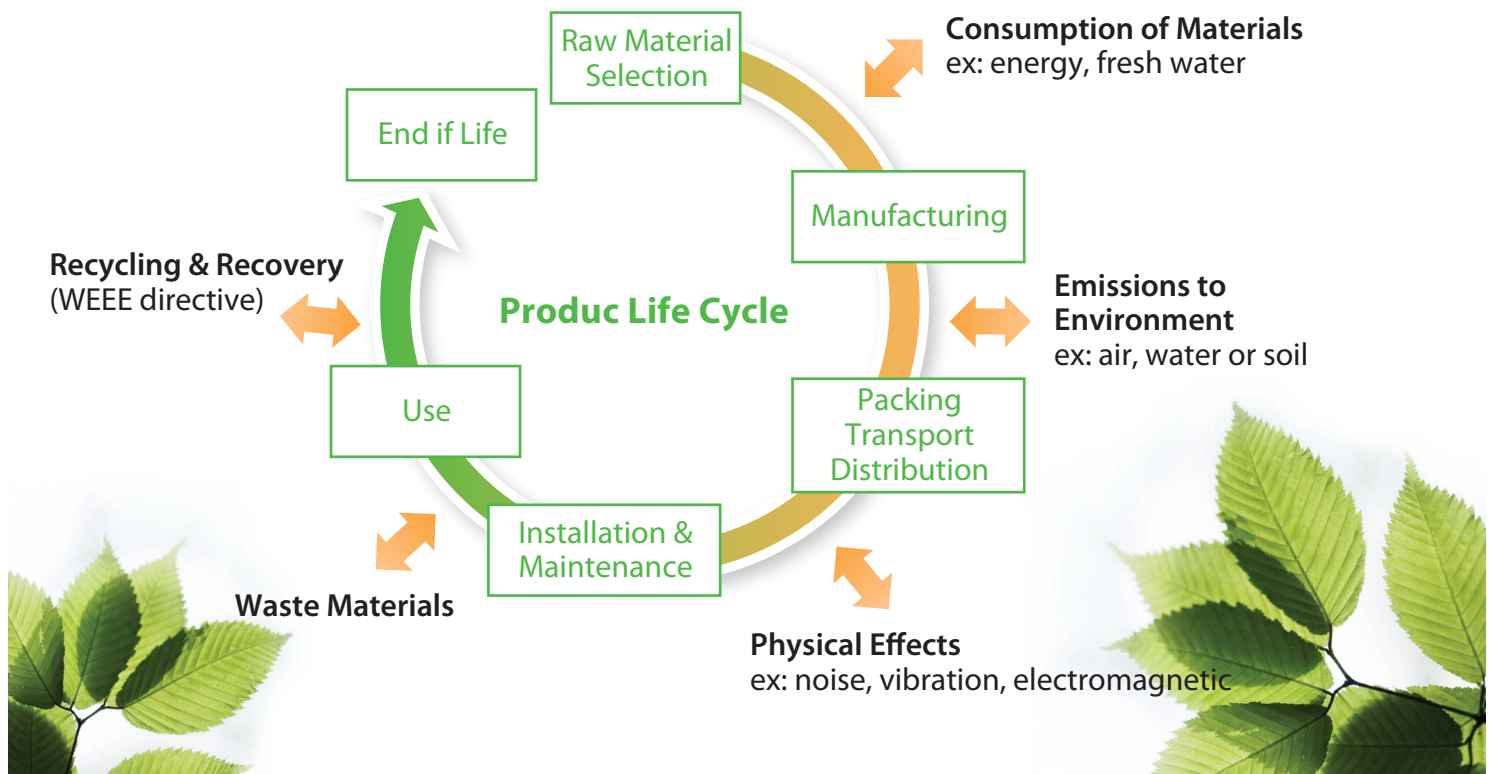
Intelligent Power Shield (IPS) is mainly designed for industrial use. With super capacitors, IPS can prolong the amount of time for the SSD controller to complete write commands and protect the data from corruption in the event of sudden power failure.

1. IPS keeps more data volume written into flash during the event of **sudden power loss**.
2. After the SSD enters **Write Protect mode**, IPS enables capacitors with fast discharging to achieve better system compatibility.



Transcend Environmental Technology

To minimize the impact our products have on the environment during their life cycle, Transcend has developed several environmentally-conscious manufacturing techniques, such as using low profile PCBs, new eco-friendly and reduced-size packaging materials, hazardous substance elimination, and many more.



Comparison Table

*-40°C~85°C ● standard ○ optional

Interface	SATA						eMMC
	M.2 SATA III 6Gb/s SSD	2.5" SATA SSD	Half Slim SATA SSD	mSATA/mSATA mini SSD	CFast Card	SATA Flash Modules	eMMC
Model							
MLC Flash	●	●	●	●	○	●	●
SLC Flash		●	●	●	●	●	
TRIM & NCQ Support	●	●	●	●		● (STM500)	
Intelligent Power Shield		○					
S.M.A.R.T.	●	●	●	●	●	●	
Security Commands	●	●	●	●	●	●	●
Hardware Purge		○	○	○	○	○ (STM500)	
Industrial Temperature*		○	○	○	○	○	

Custom orders welcome!

Please feel free to contact us with any special requests you might have. Our skilled team of expert engineers will gladly work with you to create a customized solution tailored to your specific application.

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