mSATA

mSATA, which is compliant with the JEDEC MO300/MO300B standard, was announced by the Serial ATA International Organization on September 21, 2009. Applications include netbooks, portable devices and other devices that require a smaller solid-state drive. The connector is similar in appearance to a PCI Express Mini Card interface and is electrically compatible; however, the data signals need a connection to the SATA host controller instead of the PCI-express host controller. Innodisk's mSATA supports high-performance data transfer rates of 1.5 Gb/s, 3.0 Gb/s and 6.0 Gb/s.

Model Name	mSATA 3TE7	mSATA 3TG6-P
Key Features	1. Industrial-grade firmware with 3D NAND 2. Advanced LDPC ECC engine 3. Internal RAID Technology 4. DRAM-less, high-level data integrity 5. Excellent data transfer speed	1. Extreme seq. and random performance with 3D NAND solution 2. Advanced LDPC ECC engine 3. RAID engine offers additional level of data protection 4. AES 256-bit key, end-to-end data path protection
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	3D TLC	3D TLC
Capacity	32GB~1TB	32GB~1TB
Max. Channel	4	4
Sequential R/W (MB/sec, max.)	560/525	540/470
Max. Power Consumption	2.2 W (3.3V x 674 mA)	2.2 W (3.3V x 674 mA)
Thermal Sensor	Y	Y
External DRAM Buffer	N	Y
iData Guard	Y	Y
iCell	N	N
TRIM	Y	Y
ATA Security	Y	Y
S.M.A.R.T	Y	Y
Dimension (WxLxH/mm)	29.8 x 50.8 x 3.7	29.8 x 50.8 x 3.7
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours***	
Standard Temp. OP (0°C~+70°C)	DEMSR-XXXDK1EC***	DGMSR-XXXM71EC***
Wide Temp. OP (-40°C~+85°C)	DEMSR-XXXDK1EW***	DGMSR-XXXM71EW***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G) ***= flash configuration (internal control code)%=Flash Type	





Model Name	mSATA 3SE4	mSATA 3SE-P	mSATA 3IE4	mSATA 3MG2-P	mSATA 3ME4
Key Features	1. High quality SLC-based solution 2. DRAM-less, high-level data integrity 3. LDPC technology secures SSD reliability 4. Excellent data transfer speed	1. Excellent data transfer speed and IOPS 2. Support TRIM command 3. Built-in DRAM buffer	1. Cost-effective industrial Flash with iSLC 2. Lifespan 7 times longer than MLC 3. Performance and data quality congruent to SLC 4. Excellent data transfer speed 5. LDPC technology secures SSD reliability	1. High IOPS by on-board DRAM design 2. Featuring L^2 architecture, expanding the lifespan 3. DEVSLP supported	1. LDPC technology secures SSD reliability 2. DRAM-less, high-level data integrity
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	SLC	SLC	iSLC	MLC	MLC
Capacity	8GB~64GB *For 4GB/ 128GB, please check mSATA 3SE3	8GB~64GB	8GB~128GB	8GB~512GB	8GB~256GB *For 512 GB, please check mSATA 3ME3
Max. Channel	2	4	2	4	2
Sequential R/W (MB/sec, max.)	525/350	490/260	530/365	520/450	535/210
Max. Power Consumption	1.32W(3.3V x 400mA)	1.2 W(3.3V x 360mA)	0.6W(3.3V x 200mA)	2.2 W(3.3 V x 660 mA)	0.6W (3.3V x 205mA)
Thermal Sensor	Y	STD : N , W/T : Y	Y	Y	Y
External DRAM Buffer	N	Y	N	Y	N
iData Guard	Y	Y	Y	Y	Y
iCell	N	N	N	N	N
TRIM	Y	Y	Y	Y	Y
ATA Security	Y	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y	Y
Dimension (WxLxH/mm)	29.8 x 50.8 x 3.7	29.8 x 50.8 x 3.7	29.8 x 50.8 x 3.7	29.8 x 50.8 x 3.7	29.8 x 50.8 x 3.7
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours***				
Standard Temp. OP (0°C~+70°C)	DEMSR-XXXM41SC***	DEMSR-XXXD67SC***	DHMSR-XXXM41BC***	DGMSR-XXXD81SC***	DEMSR-XXXM41BC***
Wide Temp. OP (-40°C~+85°C)	DEMSR-XXXM41SW***	DEMSR-XXXD67SW***	DHMSR-XXXM41BW***	DGMSR-XXXD81SW***	DEMSR-XXXM41BW***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G) ***= flash configuration (internal control code)%=Flash Type				




Model Name	mSATA mini 3TE7	mSATA mini 3SE4	mSATA mini 3IE4	mSATA mini 3ME4
Key Features	1. Truly industrial designed firmware with 3D NAND 2. Advanced LDPC ECC engine 3. Internal RAID Technology 4. DRAM-less, high-level data integrity 5. Excellent data transfer speed	1. High quality SLC-based solution 2. DRAM-less, high-level data integrity 3. LDPC technology secures SSD reliability 4. Excellent data transfer speed	1. Cost-effective industrial Flash with iSLC 2. Lifespan 7 times longer than MLC 3. Performance and data quality congruent to SLC 4. Excellent data transfer speed 5. LDPC technology secures SSD reliability	1. LDPC technology secures SSD reliability 2. DRAM-less, high-level data integrity
Interface	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s	SATA III 6.0Gb/s
Flash Type	3D TLC	SLC	iSLC	MLC
Capacity	32GB~256GB	8GB~64GB *For 4GB, please check mSATA mini 3SE3	8GB~64GB	8GB~128GB
Max. Channel	4	2	2	2
Sequential R/W (MB/sec, max.)	560/520	525/360	530/340	430/125
Max. Power Consumption	0.6W (3.3V x 190 mA)	1.3W (3.3 V x 400 mA)	0.6W (3.3V x 200 mA)	0.6W (3.3V x 190 mA)
Thermal Sensor	Y	Y	Y	Y
External DRAM Buffer	N	N	N	N
iData Guard	Y	Y	Y	Y
iCell	N	N	N	N
TRIM	Y	Y	Y	Y
ATA Security	Y	Y	Y	Y
S.M.A.R.T	Y	Y	Y	Y
Dimension (WxLxH/mm)	30 x 26.8 x 3.6	30 x 26.8 x 3.4	30 x 26.8 x 3.4	30 x 26.8 x 3.4
Environment	Vibration: 20G@7~2000Hz/Shock: 1500G@0.5ms/Storage Temperature: -55°C ~ +95°C/MTBF: >3 million hours***			
Standard Temp. OP (0°C~+70°C)	DEMSM-XXXDK1EC***	DEMSM-XXXM41SC***	DHMSM-XXXM41BC***	DEMSM-XXXM41BC***
Wide Temp. OP (-40°C~+85°C)	DEMSM-XXXDK1EW***	DEMSM-XXXM41SW***	DHMSM-XXXM41BW**	DEMSM-XXXM41BW***
Note	XXX = density (02GB=02G, 04GB=04G, 08GB=08G, 16GB=16G, 32GB=32G, 64GB=64G) ***= flash configuration (internal control code)%=Flash Type			