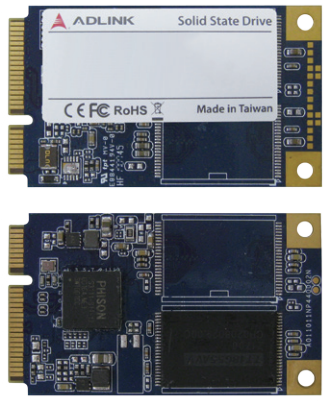
mSATA SSD Series

mSATA SSD for Industrial Embedded Applications

Features

- Advanced Flash Management including static and dynamic wear leveling, bad block management, TRIM, SMART, over-provision, and firmware update
- Low Power Management including DEVSLP mode (optional) and DIPM/HIPM mode
- Operating temperature range: up to -40°C to 85°C
- MTBF of more than 2,000,000 hours
- Vibration and shock resistance
- RoHS compliant



Introduction

ADLINK's mSATA SSD Series with the SATA 6Gb/s interface is fully compliant with the standard mSATA form factor, also known as JEDEC MO300. Utilizing Toggle 2.0 MLC flash technology, capacities of up to 1TB are available with support for read/write speeds of up to 550MB/sec and 500MB/sec respectively . Additionally, the power consumption of the ADLINK's mSATA modules is much lower than that of traditional hard drives.

Ordering Information

- **SSE064GTLCG-SBA-2A**
  mSATA, SATA III 6.0Gbps, 64GB, PS3111-S11, Toshiba 3D TLC Bics4 TSOP, 540MB/s read speed, 245MB/s write speed, 0°C ~ 70°C operating temperature
- **SSE128GTLCG-SBD-2A**
  mSATA, SATA III 6.0Gbps, 128GB, PS3111-S11, Toshiba 3D TLC Bics4 BGA, 550MB/s read speed, 440MB/s write speed, 0°C ~ 70°C operating temperature
- **SSE256GTLCG-SBD-2A**
  mSATA, SATA III 6.0Gbps, 256GB, PS3111-S11, Toshiba 3D TLC Bics4 BGA, 550MB/s read speed, 500MB/s write speed, 0°C ~ 70°C operating temperature
- **SSE512GTLCG-SBD-4A**
  mSATA, SATA III 6.0Gbps, 512GB, PS3111-S11, Toshiba 3D TLC Bics4 BGA, 540MB/s read speed, 485MB/s write speed, 0°C ~ 70°C operating temperature
- **SSE01TBTLCG-SBD-4A**
  mSATA, SATA III 6.0Gbps, 1TB, PS3111-S11, Toshiba 3D TLC Bics4 BGA, 520MB/s read speed, 485MB/s write speed, 0°C ~ 70°C operating temperature
- **SSE032GTTC7-SBA-2A**
  mSATA, SATA 6Gb/s, 32GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 160MB/s write speed, 0°C to 70°C operating temperature
- **SSE064GTTS7-SBA-4A**
  mSATA, SATA 6Gb/s, 64GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 310MB/s write speed, -15°C to 85°C operating temperature
- **SSE128GTTS7-SBA-4A**
  mSATA, SATA 6Gb/s, 128GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 465MB/s write speed, -15°C to 85°C operating temperature
- **SSE256GTTS7-SBD-4A**
  mSATA, SATA 6Gb/s, 256GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -15°C to 85°C operating temperature
- **SSE512GTTS7-SBD-4A**
  mSATA, SATA 6Gb/s, 512GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -15°C to 85°C operating temperature

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- **SSE064GTLC9-SBA-2A**
  mSATA, SATA 6Gb/s, 64GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 255MB/s write speed, 0°C to 70°C operating temperature
- **SSE128GTLC9-SBA-2A**
  mSATA, SATA 6Gb/s, 128GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 450MB/s write speed, 0°C to 70°C operating temperature
- **SSE256GTLC9-SBA-4A**
  mSATA, SATA 6Gb/s,256GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 490MB/s write speed, 0°C to 70°C operating temperature
- **SSE512GTLC9-SBA-4A**
  mSATA, SATA 6Gb/s, 512GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 490MB/s write speed, 0°C to 70°C operating temperature
- **SSE01TBTLC9-SBD-4A**
  mSATA, SATA 6Gb/s, 1TB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 500MB/s write speed, 0°C to 70°C operating temperature
- **SSE064GTTE7-SB0-4A**
  mSATA, SATA 6Gb/s, 64GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 310MB/s write speed, -40°C to 85°C operating temperature
- **SSE128GTTE7-SB2-4A**
  mSATA, SATA 6Gb/s, 128GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 465MB/s write speed, -40°C to 85°C operating temperature
- **SSE256GTTE7-SB2-4A**
  mSATA, SATA 6Gb/s, 256GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -40°C to 85°C operating temperature
- **SSE512GTTE7-SB2-4A**
  mSATA, SATA 6Gb/s, 512GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -40°C to 85°C operating temperature
- **SSE01TBTTE7-SB2-4A**
  mSATA, SSD 6Gb/s, 1TB, PS3111-S11, 15nm MLC, 530MB/s read speed, 435MB/s write speed, -40°C ~ 85°C" operating temperature
- **SSE064GTLE9-SB0-2A**
  mSATA, SSD 6Gb/s, 64GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 225MB/s write speed, -40°C ~ 85°C" operating temperature
- **SSE128GTLE9-SB2-2A**
  mSATA, SSD 6Gb/s, 128GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 450MB/s write speed, -40°C ~ 85°C" operating temperature
- **SSE256GTLE9-SB2-2A**
  mSATA, SSD 6Gb/s, 256GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 490MB/s write speed, -40°C ~ 85°C" operating temperature
- **SSE512GTLE9-SB2-4A**
  mSATA, SSD 6Gb/s, 512GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 490MB/s write speed, -40°C ~ 85°C" operating temperature
- **SSE01TBTLE9-SB2-4A**
  mSATA, SSD 6Gb/s, 1TB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 500MB/s write speed, -40°C ~ 85°C" operating temperature

Specifications

Model Name		mSATA SSD Series			
Controller		PS3111-S11	PS3110-S10	PS3111-S11	
Capacity[1]		64GB to 512GB	1TB	64GB up to 1TB	
Form Factor		mSATA 50.8mm (L) x 29.85mm (W) x 4mm (H)			
SATA Interface		SATA Revision 3.2 SATA 1.5Gb/s, 3Gb/s, and 6Gb/s interface			
Flash Type		15nm MLC		BiCS3 3D TLC	BiCS4 3D TLC
Performance[4]		Read: up to 550 MB/s Write: up to 490 MB/s	Read: up to 540 MB/s Write: up to 510 MB/s	Read: up to 550 MB/s Write: up to 510 MB/s	Read: up to 550 MB/s Write: up to 500 MB/s
Power Consumption		Active mode: < 2,690 mW Idle mode: < 285 mW DEVSLP mode: < 5mW	Active mode: < 4,160 mW Idle mode: < 1,450 mW	Active mode: < 1,620 mW Idle mode: < 325 mW DEVSLP mode: < 5 mW	Active mode: TBD Idle mode: TBD DEVSLP mode: TBD
MTBF		More than 2,000,000 hours			
Advanced Flash Management		Static and Dynamic Wear Leveling Bad Block Management TRIM SMART NCQ Over-Provision Firmware Update	Static and Dynamic Wear Leveling Bad Block Management TRIM SMART Over-Provision Firmware Update	Static and Dynamic Wear Leveling Bad Block Management TRIM SMART Over-Provision Firmware Update	
Low Power Management		DEVSLP Mode (Optional) DIPM/HIPM Mode	DIPM/HIPM Mode	DEVSLP Mode (Optional) DIPM/HIPM Mode	
Temperature Range[2]	Operating[3]	Diamond: -40°C to 85°C Gold: -25°C to 85°C Silver: -15°C to 85°C C-TEMP: 0°C to 70°C			C-TEMP: 0°C to 70°C
	Storage	-40°C to 85°C			
Environment		Vibration: 80Hz to 2000Hz @20G Shock (operation/non-operating): 1500G @0.5ms			
RoHS compliant		Yes			

Notes:
1. Other capacities may be supported in the future.
2. As measured by SMART temperature. Active airflow is recommended within the system for maintaining proper device operating temperature on heavier workloads.
3. Actual operating temperature specification may vary by model.
4. Performance benchmarked by CrystalDiskMark.

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