M.2 2280 SATA SSD Series

M.2 2280 SATA 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 industrial M.2 2280 SATA SSD Series with SATA 6Gb/s interface and ultra-compact size makes it suitable for applications in embedded systems and industrial platforms. ADLINK's industrial M.2 2280 SATA SSD offers a wide operating temperature range of from -40°C to 85°C. Capacities of up to 1TB are available, and read/write speeds of up to 550MB/sec and 500MB/sec respectively are supported.

Ordering Information

- **SSO016GTTC7-SBA-1A**
  M.2 2280, SATA 6Gb/s, 16GB, PS3111-S11, 15nm MLC, 320MB/s read speed, 84MB/s write speed, 0°C to 70°C operating temperature
- **SSO032GTTC7-SBA-2A**
  M.2 2280, SATA 6Gb/s, 32GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 160MB/s write speed, 0°C to 70°C operating temperature
- **SSO064GTTC7-SBA-4A**
  M.2 2280, SATA 6Gb/s, 64GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 310MB/s write speed, 0°C to 70°C operating temperature
- **SSO128GTTC7-SBA-4A**
  M.2 2280, SATA 6Gb/s, 128GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 465MB/s write speed, 0°C to 70°C operating temperature
- **SSO256GTTC7-SBD-4A**
  M.2 2280, SATA 6Gb/s, 256GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, 0°C to 70°C operating temperature
- **SSO512GTTC7-SBD-4A**
  M.2 2280, SATA 6Gb/s, 512GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, 0°C to 70°C operating temperature
- **SSO016GTTS7-SBA-1A**
  M.2 2280, SATA 6Gb/s, 16GB, PS3111-S11, 15nm MLC, 320MB/s read speed, 84MB/s write speed, -15°C to 85°C operating temperature
- **SSO032GTTS7-SBA-2A**
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  M.2 2280, SATA 6Gb/s, 256GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -15°C to 85°C operating temperature
- **SSO512GTTS7-SBD-4A**
  M.2 2280, SATA 6Gb/s, 512GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -15°C to 85°C operating temperature
- **SSO064GTLC9-SBA-2A**
  M.2 2280, SATA 6Gb/s, 64GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 255MB/s write speed, 0°C to 70°C operating temperature
- **SSO128GTLC9-SBA-2A**
  M.2 2280, SATA 6Gb/s, 128GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 450MB/s write speed, 0°C to 70°C operating temperature
- **SSO256GTLC9-SBD-4A**
  M.2 2280, SATA 6Gb/s, 256GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 490MB/s write speed, 0°C to 70°C operating temperature
- **SSO512GTLC9-SBD-4A**
  M.2 2280, SATA 6Gb/s, 512GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 490MB/s write speed, 0°C to 70°C operating temperature
- **SSO01TBTLC9-SBD-4A**
  M.2 2280, SATA 6Gb/s, 1TB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 500MB/s write speed, 0°C to 70°C operating temperature
- **SSO016GTTG7-SB0-1A**
  M.2 2280, SATA 6Gb/s, 16GB, PS3111-S11, 15nm MLC, 320MB/s read speed, 84MB/s write speed, -25°C to 85°C operating temperature
- **SSO032GTTG7-SB0-2A**
  M.2 2280, SATA 6Gb/s, 32GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 160MB/s write speed, -25°C to 85°C operating temperature
- **SSO064GTTG7-SB0-4A**
  M.2 2280, SATA 6Gb/s, 64GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 310MB/s write speed, -25°C to 85°C operating temperature
- **SSO128GTTG7-SB2-4A**
  M.2 2280, SATA 6Gb/s, 128GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 465MB/s write speed, -25°C to 85°C operating temperature
- **SSO256GTTG7-SB2-4A**
  M.2 2280, SATA 6Gb/s, 256GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -25°C to 85°C operating temperature
- **SSO512GTTG7-SB2-4A**
  M.2 2280, SATA 6Gb/s, 512GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -25°C to 85°C operating temperature
- **SSO016GTTE7-SB0-1A**
  M.2 2280, SATA 6Gb/s, 16GB, PS3111-S11, 15nm MLC, 320MB/s read speed, 84MB/s write speed, -40°C to 85°C operating temperature
- **SSO032GTTE7-SB0-2A**
  M.2 2280, SATA 6Gb/s, 32GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 160MB/s write speed, -40°C to 85°C operating temperature
- **SSO064GTTE7-SB0-4A**
  M.2 2280, SATA 6Gb/s, 64GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 310MB/s write speed, -40°C to 85°C operating temperature
- **SSO128GTTE7-SB2-4A**
  M.2 2280, SATA 6Gb/s, 128GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 465MB/s write speed, -40°C to 85°C operating temperature
- **SSO256GTTE7-SB2-4A**
  M.2 2280, SATA 6Gb/s, 256GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -40°C to 85°C operating temperature
- **SSO512GTTE7-SB2-4A**
  M.2 2280, SATA 6Gb/s, 512GB, PS3111-S11, 15nm MLC, 550MB/s read speed, 490MB/s write speed, -40°C to 85°C operating temperature
- **SSO064GTLE9-SBA-2A**
  M.2 2280, SATA SSD 6GB/s, 64GB, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 225MB write speed, -40°C ~ 85°C operating temperature
- **SSO128GTLE9-SBA-2A**
  M.2 2280, SATA SSD 128GB 6GB/s, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 450MB/s write speed, -40°C ~ 85°C operating temperature
- **SSO256GTLE9-SBD-4A**
  M.2 2280, SATA SSD, 256GB 6GB/s, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 490MB/s write speed, -40°C ~ 85°C operating temperature
- **SSO512GTLE9-SBD-4A**
  M.2 2280, SATA SSD, 512GB 6GB/s, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 490MB/s write speed, -40°C ~ 85°C operating temperature
- **SSO01TBTLE9-SBD-4A**
  M.2 2280, SATA SSD, 1TB 6GB/s, PS3111-S11, BiCS3 3D TLC, 550MB/s read speed, 500MB/s write speed, -40°C ~ 85°C operating temperature

Specifications

Model Name		M.2 2280 SATA SSD Series	
Controller		PS3111-S11	
Capacity[1]		16GB to 512GB	16GB to 1TB
Form Factor		M.2 2280-D5-B-M 80±0.15mm (L) x 22±0.15mm (W) x 2.3±0.08mm (H)	
SATA Interface		SATA Revision 3.2 SATA 1.5Gb/s, 3Gb/s, and 6Gb/s interface	
Flash Type		15nm MLC	BiCS3 3D TLC
Performance[4]		Read: up to 550 MB/s Write: up to 490 MB/s	Read: up to 550 MB/s Write: up to 500 MB/s
Power Consumption		Active mode: < 2,650mW Idle mode: < 280 mW DEVSLP mode: < 5mW	Active mode: < 1,620 mW Idle mode: < 325 mW DEVSLP mode: < 5 mW
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	
Low Power Management		DEVSLP Mode (Optional) DIPM/HIPM Mode	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	
	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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