



Memory and Storage solutions for today's world
Accelerated Memory Production, Inc.

70mm mini PCI-e SATA III SSD SATAQuest Series-Industrial Class MLC, 3.3V

amp inc's 70mm mini PCI-e SATA III SSD is a high performance and high reliability storage device based on NAND Flash technology, designed to solve "bottlenecking" of a computing system caused by traditional hard disk drives. With zero moving parts and small form factor, the 70mm mini PCI-e SATA III SSD is ideal for embedded and mobile applications at industrial temperatures. The combination of high performance, low power and high capacity make amp inc's 70mm mini PCI-e SATA III SSD a perfect choice for Solid State Drive storage.

Form Factor

mini PCI-e (70.00 x 30.0 x 7.72max) mm

Capacity

64GB, 240GB, 480GB

Host interface

SATA 3.0 Compliant, 6 GB/s, 3 GB/s and 1.5 GB/s support
Native Command Queuing (up to 32 commands)
SMART Command Transport (basic)
Spread Spectrum signaling support

Performance

Sequential Read transfer: Up to 480MB/s (@128K blocks)
Sequential Write transfer: Up to 450MB/s (@128K blocks)
Random Read IOPS: 60,000 (@4K blocks)
Random Write IOPS: 60,000 burst/20,000 sustained (@4K blocks)
PCMark05: 62,000 (HDD test suite score)
PCMark Vantage: 250MB/s (Video Edit score)

Reliability

Technology

DuraClass technology represents a set of NAND flash management features that work in tandem to deliver world class SSD reliability, performance and power efficiency that differentiate **amp inc's** SSD's from competitive solutions. Of particular importance in the use of processing elements to optimally overcome a number of the inherent issues associated with commodity NAND flash memory. Duraclass features includes:

- **DuraWrite**
- **RAISE (Redundant Array of Independent Silicon Elements)**
- **Advanced Wear Leveling and Monitoring**
- **Advanced Read/Program Disturb Management,**
- **Recycler,**

MTBF: 2M hours (MAX), True MTBF calculations must be based on configuration and usage requirements.

ECC Recovery: Up to 55 bytes correctable per 512-byte sector.

Unrecoverable Read Errors: Read unrecoverable bit error rate (UBER) 10e-17

Data Encryption: 128-bit AES-compliant / Optional disk password

Protect Health Monitoring: Self-Monitoring, Analysis and Reporting Technology (SMART) w/ enterprise attributes

Operating System: Windows XP 32-Bit and 64-Bit; Windows Vista 32-Bit & 64Bit; Window 7 32-Bit & 64-Bit; Linux; Solaris 10

Power Requirements: +3.3V

Performance Optimization: TRIM (requires OS support)



Power consumption

Input voltage: + 3.3VDC, 5 % (3.13V ~ 3.46V)
2W in operation
0.5W in standby

Environmental

Temperature

Operating: 0°C ~ 70°C (Commercial)
-40°C ~ 85°C (Industrial)

Shock

Operating: 1500G, duration 11ms, Half Sine Wave
Non-Operating: 1500G, duration 0.5ms, Half Sine Wave

Vibration

Operating: 16.4G Peak, 10~2000Hz, x3 Axis

RoHS

RoHS Compliant (Lead Free)

Part Number	Capacity
AMPM7T064-NM97BC(I,M)	64GB
AMPM7T240-NM27BC(I,M)	240GB
AMPM7T480-NM37BC(I,M)	480GB

***C = Commercial Temperature**

***I = Industrial Temperature**

***M= Commercial NAND tested to -20°C to +85°C**