



# Commercial MLC mSATA SSD

## Product Highlights

- SATA III Interface
- mSATA MO-300B Form Factor
- MLC NAND Flash
- Locked Bill of Materials
- Extended Life Cycle Management
- SMART Feature
- Available in Capacities from 32GB to 512GB
- Read / Write Speeds
  - Utility: up to 515/180 MB/s\*
  - Utility+: up to 555/465 MB/s\*
- Operating Temp
  - Utility: 0° to +70°C
  - Utility+: -40° to +85°C

## Product Description

mSATA SSD Industrial Temperature. Delkin's Utility and Utility+ Industrial mSATA Solid State Drives utilize cost-effective MLC NAND flash and are available in commercial or industrial operating temperature options. Like other Delkin Utility products, the Utility and Utility+ Industrial mSATA SSD features a locked bill of materials with extended life cycle management, protecting you from surprise compatibility issues with your host in the future. They support the SATA III interface with full backwards compatibility, and include standard flash management features such as static and dynamic wear leveling and bad block management. TRIM and NCQ are supported, with options for over-provisioned configurations and field firmware update capability. Utility and Utility+ Industrial mSATA SSD is fully compliant with the JEDEC MO-300B form factor standard, and is RoHS compliant.

For SATA applications that require small size, low power consumption, and light weight embedded storage, but do not require industrial temperature range or features, Utility and Utility+ Industrial mSATA is the ideal solution. Both varieties are available in capacities from 32GB to 512GB, and feature read speeds between 515-555MB/s and write speeds between 180-465MB/s, with the Utility+ version featuring the faster speed capabilities.

Delkin Commercial MLC mSATA SSD Part Numbers:

Capacity	Utility	Utility+
32GB	MD32APS4R-3N000-2	ME32APT5U-3N000-2
64GB	MD64APB4R-3N000-2	ME64APR5U-3N000-2
128GB	MD1HAPC5X-3N000-2	ME1HAPC5U-3N000-2
256GB	MD2HAPW5X-3N000-2	ME2HAPW5U-3N000-2
512GB	MD5HAPX5X-3N000-2	ME5HAPXBN-3N000-2
1TB	MD1TAQL7W-3N000-2	na



Technical Specifications:

Environment

**Operating Temp**

Utility mSATA: 0 to +70°C

Utility+ mSATA: -40 to +85°C

**Storage Temp**

-40 to +85°C

**Shock<sup>1</sup>**

1500G, 0.5ms duration, 3 axes

## **Vibration<sup>2</sup>**

20Hz ~80Hz/1.52mm displacement  
80Hz~2000Hz / 20G acceleration, 3 axes

## **Reliability / Endurance**

### **TBW<sup>3</sup>**

Utility mSATA: 1028 TBW

Utility+ mSATA: 544 TBW

### **MTBF**

More than 2 million hours

## **Capacity Range**

Utility mSATA: 32GB – 1TB

Utility+ mSATA: 32GB – 512GB

## **Performance<sup>4</sup>**

### **Utility+ mSATA**

Read up to 540MB/s

Write up to 510MB/s

### **Utility+ mSATA**

Read up to 555MB/s

Write up to 465MB/s

## **Features:**

- Locked & Controlled Bill of Materials
- Extended Lifecycle Management with Planned EOL Notices
- Economical alternative to SLC Industrial mSATA
- Compliant with JEDEC MO-300B form factor
- Compliant with SATA Revision 3.0 specification (6Gbps/3Gbps/1.5Gbps interface)
- 32GB, 64GB, 128GB, 256GB & 512GB capacities available
- MLC NAND Flash
- Commercial 0 to +70°C Operating Temp Available as Utility option
- Industrial -40 to +85°C Operating Temp Available as Utility+ Option
- Supports TRIM & Native Command Queuing (NCQ) up to 32 commands
- Supports ATA Security Erase
- Advanced wear-leveling and ECC
- SMART enabled for monitoring performance and managing product life in application
- Protection against data and firmware corruption during power loss
- Compliant with European Union Directive 2011/65/EU (RoHS)