The **Photon series** M.2 & 2.5” SSD device TLC SATA3 interface at small package Flash Disk. Asine flash drive delivers performance and proven reliability. Added benefits of flexibility are built into Asine’s storage systems and expandable storage capacity as flash disk capacities increase. The drives support also other specific features such as AES-256 bit hardware encryption, TCG OPAL, fast sanitize erase, high grade industrial certified metal & workmanship.

**Applications**

- Industrial & Commercial PC/Tablet Systems
- Gaming,
- Navigation, Infotainment,
- Smart Terminals
- Airborne Systems
- Rugged Computer
- Security, HLS-Home Land Security
- High-Speed Data Recording
- Video Surveillance, JPEG2000 Capture
- JBOD, NAS, SAN, RAID
The Asine M.2 and 2.5" is a top reliable high performance storage Solid-State Disk with no moving parts, ideal to meet the reliability requirements for defense, aerospace, video and audio applications, as well as bootloader or Firmware / BIOS and embedded high reliability storage. The Asine component is designed to withstand extreme shocks, vibrations and harsh environmental conditions, while operating without compromising on data integrity.

### Features

- **Highest quality 3D eNAND Flash technology**
- **240GB to 2TB @ 2.5"; 16GB-500GB @ M.2-2242; 120-2000GB M.2-2280 and M.2 type DS-BM**
- **I/F SATA1/2/3, Protocol SATA 3.2**
- **Security: AES256; Secure Erase support; ATA8 security feature set (2.5"); User selectable ATA password support (M.2); Optional OPAL**
- **Operating temperature – Commercial 0°C to 70°C, Industrial -40°C to +85°C**
- **Storage temperature -40°C to +85°C**
- **Humidity 5% to 95% relative, non-condensing**
- **High data transfer rate: Sustained Read up to 560MB/S, Write up to 520MB/Sec. (capacity & file system dependent)**
- **Random 4KB block size –**
  - 2.5" - Read: Up to 100K IOPS. Write: Up to 91 IOPS
  - M.2 - Read: Up to 80K IOPS. Write: Up to 81 IOPS
- **Reliability - MTBF - 1,500,000 hours**
  - Embedded EDC/ECC, support up to 64-bit BCH Algorithm for Error
  - Built-in power-up self test and automatic self-diagnostics
  - Wear-Leveling Algorithm: Dynamic & Static wear leveling
  - PLP – Power lost Protection - SPOR
- **Power: 0.1W on Idle. Operation max. 2.1W**
- **TBW by JESD218 standard with 4KB random write workload – 2.5"/M.2-2280 2TB: TBW up to 1360. M.2-2242 500GB: TBW up to 500**
  - Enterprise (option V): 12000 @ 1TB; 3000 @ 240GB 128K sustain write
  - M.2-2242 Enterprise: (option V) 6000 @ 500GB 128K sustain write
- **No special drivers - uses existing Windows, Linux, VxWorks®, and SATA drivers**
- **Heat dissipation balancing for demanding applications**
- **SSD unit sustain environmental**
  - Shock (operating and non-operating) 1,500 G/0.5ms
  - Vibration - Operating: 2-500Hz, 3.1G
  - Non-operating: 3.1 Grms (5-800Hz)
  - Non-operating: 3.13 GRMS (5-800Hz)

### Physical properties:

- **M.2-2242 Ordering Information:**
  - P/N Structure: AS[C/Z]SM24-[ccc]NAET2
  - P/N Description
    - ASZSM24-0016NAET2 M.2-2242-DS-BM TLC 16GB SATA3 Industrial temp.
    - ASZSM24-0032NAET2 M.2-2242-DS-BM TLC 32GB SATA3 Industrial temp.
    - ASZSM24-0064NAET2 M.2-2242-DS-BM TLC 64GB SATA3 Industrial temp.
    - ASZSM24-0120NAET2 M.2-2242-DS-BM TLC 120GB SATA3 Industrial temp.
    - ASZSM24-0240NAET2 M.2-2242-DS-BM TLC 240GB SATA3 Industrial temp.
    - ASZSM24-0500NAET2 M.2-2242-DS-BM TLC 500GB SATA3 Industrial temp.
  - **Options* for M.2-2242:** Conformal coated (<00F), Enterprise(T>)(up to 240GB)
- **M.2-2280 Ordering Information:**
  - P/N Structure: AS[C/Z]S9M28-[ccc]NAET2
  - P/N Description
    - ASCS9M28-0240NAET2 M.2-2280-DS-BM TLC 240GB SATA3 Commercial temp.
    - ASCS9M28-0500NAET2 M.2-2280-DS-BM TLC 500GB SATA3 Commercial temp.
    - ASCS9M28-0960NAET2 M.2-2280-DS-BM TLC 960GB SATA3 Commercial temp.
  - **Options* for M.2-2280:** Operating Industrial temperature (C>Z)(240GB to 1920GB), OPAL(A>O), conformal coated (<00F), Enterprise(T>)(up to 960GB)
  - *Bound to certain combinations

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*The information contained in this document is subject to change without notice*