Product Overview

The Photon series M.2 SSD device presents SATA interface small package pSLC/MLC/TLC Flash Disk. Asine M.2 flash drive delivers performance and proven reliability for data and mission critical systems. Added benefits of flexibility are built into Asine’s M.2 storage systems, including easy field firmware upgrades and expandable storage capacity as flash disk capacities increase. The M.2 drives support OEM application specific features such as AES-256 bit hardware encryption (MLC & pSLC), fast sanitize erase, high grade industrial certified metal & workmanship, optional conduction cooling (no air flow required), BOM configuration awareness, and more. Product is compliant to JGPSSI-JIG, REACH and RoHS.

Applications

- Industrial & Commercial PC/Tablet Systems
- ATM, Gaming, Lottery
- Automotive, Navigation, Infotainment, ECU
- Point Of Sale- POS / Kiosk, Smart Terminals
- Medical
- Industrial & Airborne Systems
- Rugged Computer
- Security, HLS-Home Land Security
- High-Speed Data Recording
- Video Surveillance, JPEG2000 Capture
- Factory Automation
- JBOD, NAS, SAN, RAID
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URL: www.asinegroup.com

S u p e r i o r  F l a s h  M e m o r i e s

Features

- Highest quality pSLC, MLC & TLC Flash technology
- 120GB to 1000GB at MLC, from 60GB to 500GB at pSLC and 256GB to 1TB at TLC of non-volatile Flash memory at M.2 type D5-BM
- I/F SATA1/2/3, Protocol SATA 3.1 AHCI, All modes & PIO, UDMA6, ATA8 STD.
- Fast sanitize erase for entire media (few seconds typical) capacity dependent
- Operating temperature – Commercial 0°C to 70°C, Industrial -40°C to +85°C
- Storage temperature -55°C to +95°C
- Humidity 5% to 95% relative, non-condensing
- Altitude (operating & non-operating) -1000 ft. to 100,000 ft.
- High data transfer rate: pSLC & TLC sustained Read up to 520MB/S, Write up to 520MB/Sec. MLC sustained Read up to 520MB/Sec and Write 300MB/Sec. (capacity, technology & file system dependent)
- IOPS 4KB to 50K pSLC; 70K MLC; 80K TLC random R & W (capacity dependent)
- 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
- Power: 0.7 W on Idle. Operation max. 4.7 W for MLC/pSLC, max. 1.5W for TLC
- TBW by JESD218 standard with 4KB random write workload –
  - MLC – 60TBW for 240GB SSD, 120TBW for 500GB SSD
  - pSLC – 320TBW for 120GB SSD, 640TBW (@128KB-4800TBW) for 240GB SSD
  - TLC – 800TBW for 1TB
- No special drivers - uses existing Windows, Linux, VxWorks®, and SATA drivers
- Heat dissipation balancing for demanding applications
- SSD unit sustain environmental
  - Shock - Half Sine, 1000G peak / 0.5ms (3 axes)
  - Vibration – Operating 2.17 G RMS (Random, 5-700Hz, 3 axes)
  - Non-operating: 3.13 G RMS (5-800Hz)

Ordering Information:  
P/N Structure: ASM2SATA[ff]-[cap]-[t][f][h][m]

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Net formatted capacity is operating system dependent

The Asine M.2 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 M.2 component is designed to withstand extreme shocks, vibrations and harsh environmental conditions, while operating without compromising on data integrity.

Photos for ref. only

Physical dimensions:
2280: 80 L X 22 W X 3.6 max mm H
22110: 110 L X 22 W X 3.6 max mm H

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