The Photon series M.2 SSD device presents NVMe 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, TCG OPAL on TLC, 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, 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
Features

- Highest quality pSLC, MLC & TLC Flash technology
- 120GB to 1000GB at MLC, from 60GB up to 1000GB pSLC (22110 2000GB pSLC) and 240GB to 1920GB at TLC of non-volatile Flash memory at M.2 type D5-M
- Interface PCIe NVMe Gen2 5Gbps for pSLC & MLC and Gen3 for TLC, X4 lanes
- NVMe specification revision 1.1a compliant
- Fast sanitize erase for entire media (few seconds typical) capacity dependent
- Operating temperature – Commercial 0°C to +70°C and Industrial -40°C to 85°C
- Storage temperature -55°C to +95°C
- Humidity 5% to 95%, non-condensing
- Altitude – operating -1000 ft. to 100,000 ft.
- High data sustained transfer rate: TLC Read up to 2700MB/S, Write up to 1600MB/Sec ; pSLC Read up to 1200MB/S, Write up to 700MB/Sec ; MLC Read up to 1000MB/Sec and Write 350MB/Sec. any capacity
- IOPS 4KB up to 80K pSLC & 70K MLC;280K TLC random R/W capacity dependent
- Reliability – MTBF 1,500,000 hours
  ▪ Embedded EDC/ECC Bad Block Mapping and Management
  ▪ Built-in power-up self test and automatic self-diagnostics
  ▪ Wear-Leveling Algorithm: Dynamic & Static wear leveling
- Power: pSLC/MLC 1.5W on Idle. max. 7W ; TLC max 1.5W
- TBW by JESD218 standard with 4KB random write workload –
  - MLC - 60TBW for 240GB SSD, 120TBW for 500GB SSD
  - pSLC - 340TBW for 120GB SSD, 680GB for 240GB SSD
  - TLC – 800TBW for 1TB
- No special drivers - uses compliant NVMe Windows, Linux, VxWorks® drivers
- SSD unit sustain environmental – Operating and non-operating:
  ▪ Shock (operating and non-operating) 1,000 G/0.5ms
  ▪ Vibration - Operating: 2.17Grms (5-700 Hz)
  ▪ Non-operating: 3.1 Grms (5-800Hz)

Physical dimensions:
2280: 80 L X 22 W X 3.8max mm H
22110: 110 L X 22 W X 3.8max mm H

Ordering Information:
P/N Structure: ASM2NVMe[ff]-[cap][t][f][m]

![Image](https://via.placeholder.com/150)

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