

M.2 High Capacity to 8TB  
3D Q-NAND NVMe Gen3  
PCIexpress Flash Disk

UP TO  
8TB  
M2-  
2280

Photon series  
NVMe

## Product Overview

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

M.2



Photos for ref. only

## Applications

- Industrial & Commercial PC/Tablet systems
- Server and IT storage
- Enterprise storage
- Infrastructure fabric storage over copper / fiber
- JBOD, NAS, SAN, RAID
- Navigation, Infotainment
- Autonomous car
- Security, HLS-Home Land Security



## Features

- Highest quality 3D QLC Flash technology
- 960GB to 7.68TB at QLC of non-volatile Flash memory at M.2 type D2-M, S2-M (Single side population, up to 2TB)
- Interface PCIe Gen3 x4 lanes NVMe 1.3 compliant
- Security: AES256; compliant NVMe Secure Erase support
- Operating temperature: Commercial 0°C ~ +70°C
- Storage temperature -40°C to +85°C
- Humidity 5% to 95% relative, non-condensing
- High data sustained transfer rate: QLC Sequential Read up to 3400MB/Sec sequential Write up to 3000MB/Sec
- Random 4KB block size - Read: Up to 600K IOPS. Write: Up to 660K IOPS
- Reliability – MTBF 1,800,000 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
  - Moderate SPOR / PLP
- Power Consumption: up to 6.5 (Active), 0.03W (Idle)
- TBW by JESD218 standard 4KB random write workload – up to 840TBW @ 8TB; DWPD 0.2 to 1.1 (usage profile dependant).
- No special drivers - uses compliant NVMe Windows, Linux drivers
- SSD unit sustain environmental – Operating and non-operating:
  - Shock (non-operating) 1,500 G/0.5ms
  - Vibration - Operating: 2-700Hz, 3.1G
  - Non-operating: 3.1 Grms (5-800Hz)

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, 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 harsh environmental conditions, while operating without compromising on data integrity.



Photos for ref. only

### Physical dimensions:

2280: 80 L X 22 W X 3.8 max mm H  
Weight-max: 8 gr.

**Ordering Information:** P/N Structure: ASCN8M28-[cccc]NAEQ2nnn

nnn  
nnn Factory code

P/N	Description
ASCN8M28-0960NAEQ2	M.2-2280-S2-M QLC 960GB AES256 NVMe Gen3 Commercial temperature
ASCN8M28-1920NAEQ2	M.2-2280-S2-M QLC 1.9TB AES256 NVMe Gen3 Commercial temperature
ASCN8M28-3840NAEQ2	M.2-2280-D2-M QLC 3.84TB AES256 NVMe Gen3 Commercial temperature
ASCN8M28-7680NAEQ2	M.2-2280-D2-M QLC 7.68TB AES256 NVMe Gen3 Commercial temperature

**Options for M.2-2280:**  
Conformal coated (-00F)

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