

M Series M.2 2280 PCIe NVMe SSD

READ 1550MB/s*
WRITE 780MB/s*
READ 90K IOPS*
WRITE 94K IOPS*



120 GB

240 GB

480 GB

INTRODUCTION

M Series M.2 2280 PCIe Gen3x2 NVMe SSD

The M.2 NVMe Solid State Drive can meet your most demanding gaming, graphic design, and video workflow needs. Delivering super-fast speeds of up to 1550MB/s read and 780MB/s write, with IOPS of up to 94K.

PRODUCT OVERVIEW

- M.2 PCIe NVMe SSDs are up to four times faster in performance when compared to SATA SSDs and are compatible with most computing hardware and software that support the NVME standard, including small form factor machines (e.g Intel NUC), Ultrabooks and enthusiast desktops
- Choose the M.2 PCIe NVMe SSD to break through the 6Gbps SATA limitation for your performance needs. Specifically engineered to compliment high-specification machines and provide the best gaming and multimedia application performance that is ultra-responsive

KEY BENEFITS:

- Good balanced high performance PCIe Gen3x2 conforming to the NVMe 1.2 standard. Achieving up to 1550MB/s* read and 780MB/s* write, the Integral M.2 PCIe SSDs break through the 6Gbps SATA limitation that takes computing performance to the next level
- Random IOPS up to 94K
- Gamers will benefit from faster loading times, exceptional performance and a more enjoyable gaming experience
- Power-users, content editors, graphic designers and general multi-taskers will all benefit from an ultra-responsive system and super-fast boot
- Improved video workflow when used in machines that work with: Digital film recording, live broadcast, video editing, colour correction and visual effects
- Supports SSD enhanced set of S.M.A.R.T. attributes

BENEFITS:

- Performance up to four times faster than a conventional SATA SSD
- Sequential Read up to 1550MB/s*, Write up to 780MB/s*, Random 94K IOPS*
- No mechanical parts
- Highest reliability; less likely to fail than HDD
- Extreme shock resistance
- Zero noise
- No heat generation
- Low power consumption - improved battery life on laptops/netbooks

*Up to performance may vary depending on host device. (480GB model performance)

FEATURES

- PCIe Gen3x2
- Compliant with PCI Express Base Specification Rev 3.
- Compliant with NVMe 1.2
- Non-volatile Flash Memory for outstanding data retention
- Ultra-efficient Block Management and Wear Levelling
- Supports S.M.A.R.T. - Self-Monitoring, Analysis and Reporting Technology
- 3 Year Warranty

CAPACITIES & INTERFACE	
Capacities available	120GB, 240GB, 480GB
Controller Technology	Marvell 1160
NAND	3D TLC
Form Factor	M.2 2280
Interface	PCIe (Gen 3x2)
Compliance	Compliant with PCI Express Base Specification Rev 3.1 NVMe 1.2
Sequential Performance up to ¹	120GB = READ 1480MB/s WRITE 500MB/s 240GB = READ 1500MB/s WRITE 520MB/s 480GB = READ 1550MB/s WRITE 780MB/s
Random Performance up to ¹	120GB = READ 81K IOPS, WRITE 89K IOPS 240GB = READ 83K IOPS, WRITE 92K IOPS 480GB = READ 91K IOPS, WRITE 95K IOPS
DIMENSIONS	
Length mm	80
Width mm	22
Height mm (MAX)	2.25
Weight	10g
Packaged Weight	58g
Packaged Dimensions (mm)	L = 11.5, W = 13.2, D = 5.7

POWER CONSUMPTION			
Power Management	+3.3V (-+5%)		
Power Consumption (mW) ⁵	READ	WRITE	IDLE
	120GB - 3030	2030	990
	240GB - 3118	2046	995
	480GB - 3150	2700	995
ENVIRONMENTAL			
Operating Temp ²	0° - +70°C		
Storage Temp	-40° - +85°C		
Humidity ⁶	RH 85% 85°C ±3°C		
Linear Shock (non-operating)	1500G		
Vibration (non-operational)	Frequency 700Hz~800Hz 3.08g 30min/axis X,Y,Z		
FEATURES			
Supports SMART Software	Yes		
Supports TRIM	Yes (OS support required)		
MTBF ³	1.5 Million Hours		
Endurance (TBW ⁴)	120GB - 60TB 240GB - 120TB 480GB - 240TB		
Compliance	CE, FCC, RoHS		
WARRANTY			
3 years or TBW			

CAPACITY	PART CODE	BARCODE (EAN)
120GB	INSSD120GM280NM1	5055288442610
240GB	INSSD240GM280NM1	5055288442627
480GB	INSSD480GM280NM1	5055288442634

Notes:

1. Actual performance may vary and depends on use conditions, host and environment
2. Operating temperature is the drive case temperature as measured by the SMART temperature attribute
3. Mean Time Between Failures is estimated based on JEDEC-218/219 standard methodology
4. TBW (Terabytes Written) DWPD (Drive Write Per Day). TBW and DWPD is a measurement of SSDs expected lifespan, which represents the amount of data written to the device. This is only an estimate and can differ based in user usage behaviour, platform and estimates provided by the flash vendor
5. Power Consumption may differ according to flash configuration and platform
6. Humidity test was for 4 hours

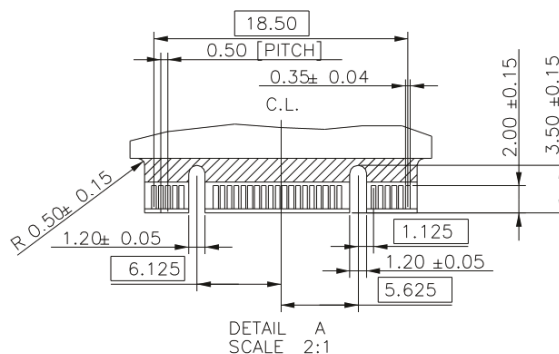
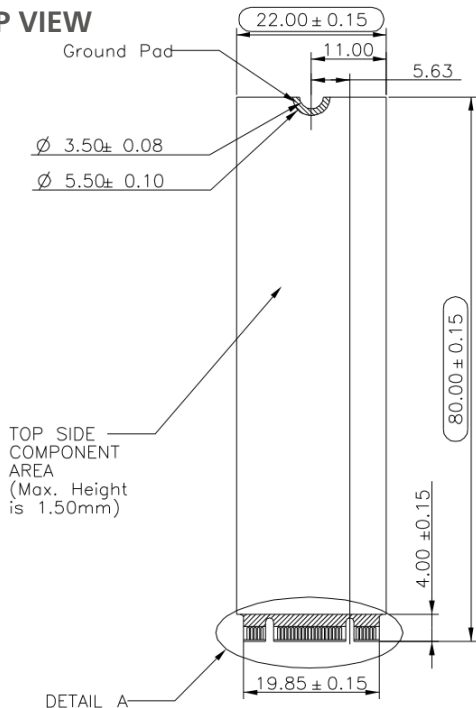
All Specifications are subject to change without notice

1GB = 1,000,000,000 Bytes, 1TB = 1,000,000,000,000 Bytes; 1 sector = 512 Bytes.

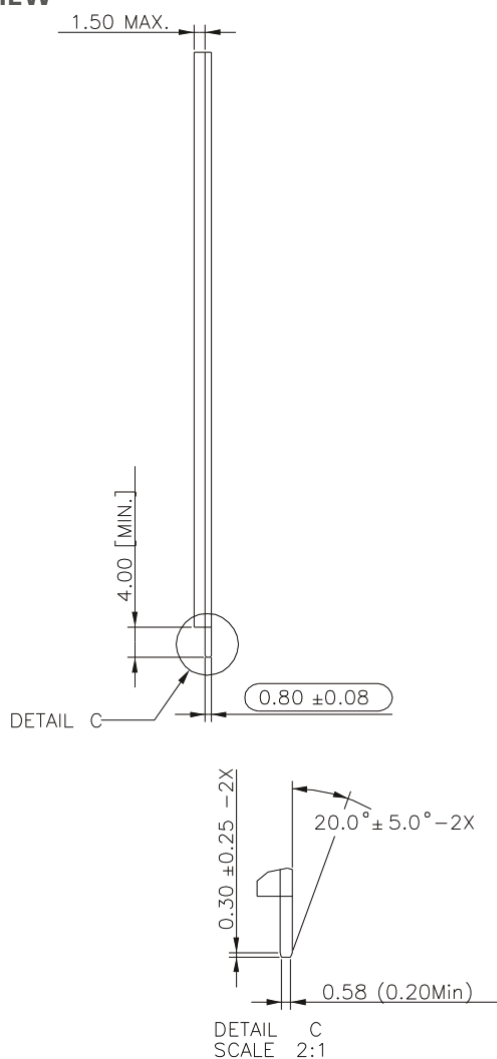
The total usable capacity of the SSD may be less than the total physical capacity because a small portion of the capacity is used for NAND flash management and maintenance purposes.

PHYSICAL DIMENSION: M.2 2280 S3 : 80.00mm (L) x 22.00mm (W) x1.50mm (H)

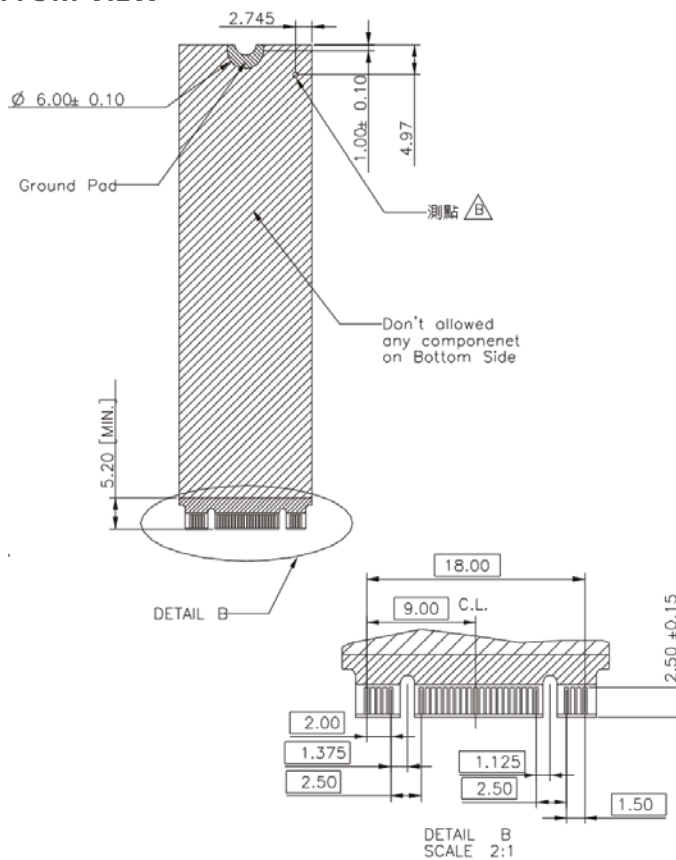
TOP VIEW



SIDE VIEW



BOTTOM VIEW



Notes :

1. = Max Component Height
2. = No Component
3. = No Component / Signal Vias / Signal Copper / Printing
4. General Tolerance ± 0.15 mm
5. is IQC inspection dimension