

SATAIII M.2 2280

1. General Description

The AXLE SSD(Solid State Drive) fully consists of semiconductor devices using NAND Flash Memory which provide high reliability and high performance for a storage media. The SSD doesn't have any moving parts such as platter (disk) and head media, which provides a better solution in a notebook PC, Tablet PC and industrial PC for a storage device providing higher performance, reduced latencies, and a low power consumption in a small form factor. SSD has the same host interface with Hard Disk Drives and has a same physical dimension.

●Capacity

–128/256/512GB is available

●Form Factor

– M.2 2280

●Host interface

- Serial ATA interface of 6.0Gbps
- Complies with ATA/ATAPI-8
- Supports NCQ
- Supports TRIM

●Performance

- 128GB
- Read: Up to 540MB/s
- Write: Up to 450MB/s

●Power Consumption

- Active write:771mW (128GB)
- Active read: 732mW (128GB)

●Temperature

- Operating : 0°C to 70°C
- Non-Operating : -40°C to 85°C

●Shock

- Shock : 1500G, duration 0.5ms, Half Sine Wave
- Vibration : 7~800Hz, 3.08Grms, 30min/axis(X,Y,Z)
- * Applicable only for cased product

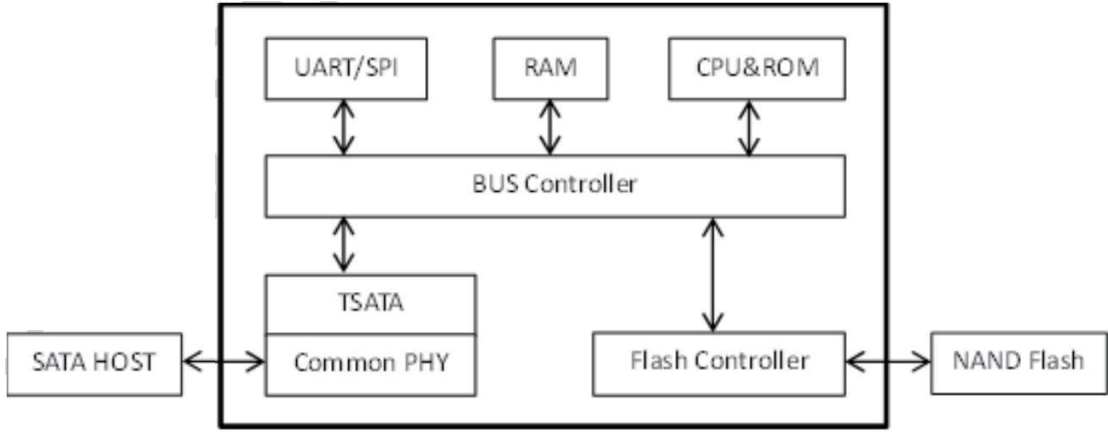
●MTBF

- 1,500,000 Hours

●Weight

- 128GBGB
- Max 9g

●SSD Functional Block Diagram

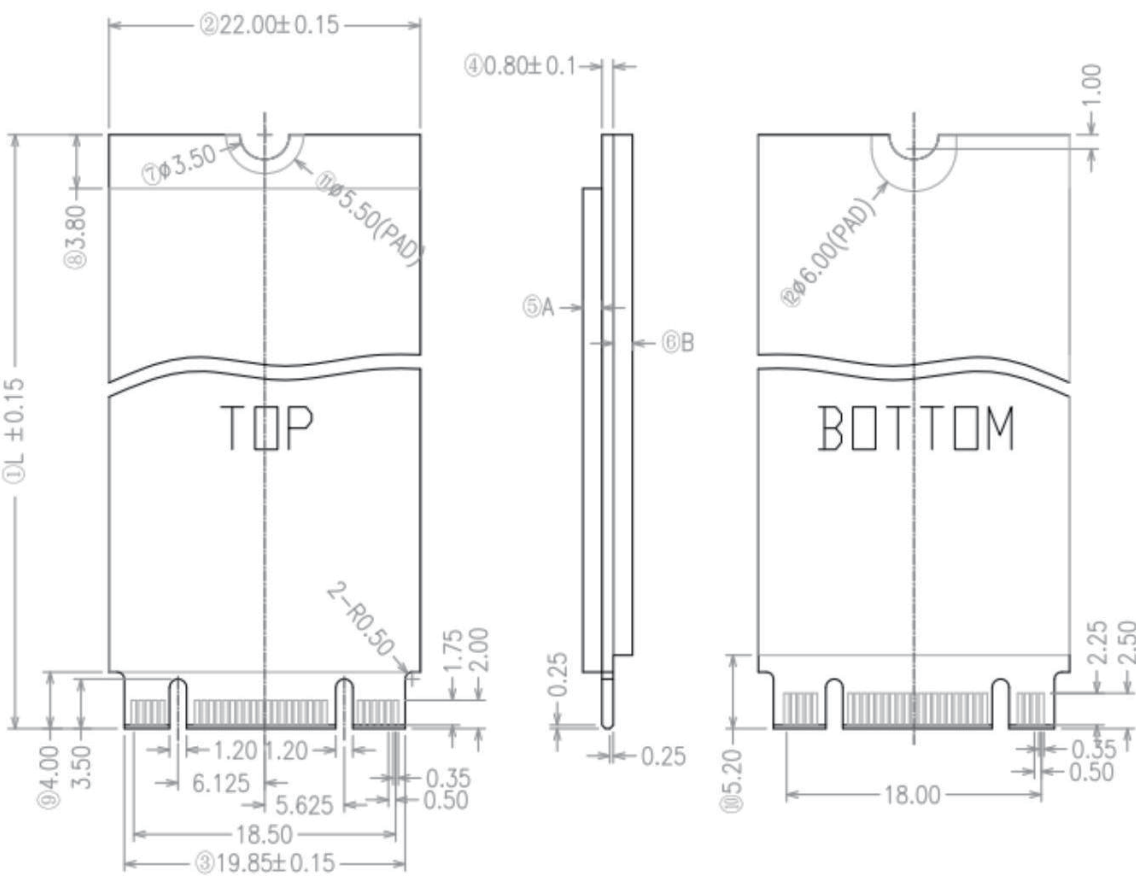


[Figure 1-1] SSD Functional Block Diagram

2. Mechanical Specification

2.1 M.2 2280 SSD physical dimensions and Weight

Capacity(GB)	Height (mm)	Width (mm)	Length (mm)	Weight (gram)
128	MAX 2.25	22.00±0.15	80.00±0.15	MAX 9g



L	A (MAX)	B (MAX)
80	1.35	0

Figure 2-1] M.2 2280 Physical dimension

3. Product Specifications

3.1 System Interface and Configuration

Burst read/write rate is 600 MB/sec (6.0 Gb/sec).

3.2 System Performance

SATA 6Gb/s host interface			
Parameter	Unit	128/256/512GB	
Sequential Read (Max)	MB/S	540	
Sequential Write (Max)	MB/S	450	
Random Read (4K) QD=32 (Max)	IOPS	43520	
Random Write (4K) QD=32 (Max)	IOPS	56320	

* Actual performance may vary depending on use conditions and environment

* Note

- Performance measured using CrystalDiskMark 5.1.0 x64
- Write cache enabled
- 1MB/sec = 1,048,576 bytes/sec was used in sequential performance
 - System: Intel Z170 Chipset, Intel Core i5-6600K@3.5GHz, 4GB DDR4
 - OS: Windows 7 x64

3.3 Drive Capacity

Nominal Capacity	128/256/512GB
Unformatted Capacity	119.24GB
User-Addressable Sectors	250069680
Bytes per Sector	512 Bytes

NOTE:

1 Megabyte (MB) = 1 Million bytes; 1 Gigabyte (GB) =1 Billion bytes

*Actual usable capacity may be less (due to formatting, partitioning, operating system, applications or otherwise)

3.4 Supply Voltage

Item	Requirements
Allowable voltage	3.3V ± 5%
Allowable noise/ripple	100mV p-p or less

