

Description

Microflash 2.5" SATA Solid State Disk (SSD) delivers all the advantages of Flash Disk technology with Serial ATA III interface, fully compliant with standard 2.5-inch form factor. The SATA SSD is based on a standard 7-pin interface for data segment and 15-pin for power segment, designed to operate at a maximum operating frequency of 200MHz with 50MHz external crystal. Its capacity could provide a wide range from 64GB to up to 1TB. Also it can reach more than 400MB/s read as well as write high performance based on TLC flash (with Build-in SLC cache technology and measured by CrystalDiskMark v5.0 1000MB test unit). The power consumption of Flash Disk is much lower than traditional Hard Drive. In addition, Microflash SSD provides hot-swapping abilities when removing, replacing or upgrading flash disks.

Features

- SATAIII Compatible with SATA 1.5Gbps and 3Gbps interface
- Support Dynamic Power Management
- Build-in hardware ECC circuit
- Support all types of 3D TLC NAND Flash
- Build-in high rate cache (SLC cache technology)
- Build-in 32 bits micro-controller with LDPC
- Support Global Wear Leveling
- Support TRIM command
- Support SMART command
- Support dep. Sleep

Capacity

- 120GB(Optional)
- 128GB(Optional)

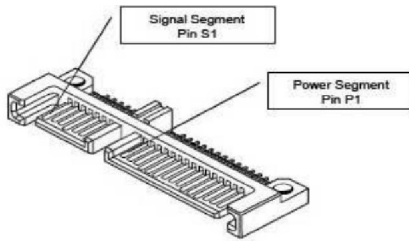
Figure



Dimensions

Side	Millimeters
L	100.1
W	69.8
H	7.1

Pin and Signal assignment



Signal Segment Pinout

Pin No.	Pin Name	Function
S1	GND	2nd mate
S2	A+	Differential signal pair A
S3	A-	
S4	GND	2nd mate
S5	B-	Differential signal pair B
S6	B+	
S7	GND	2nd mate

Power Segment Pinout

Pin No.	Pin Name
P1	Not used(3.3V)
P2	Not used(3.3V)
P3	Not used(3.3V Pre-charge)
P4	GND
P5	GND
P6	GND
P7	5V Pre-charge
P8	5V
P9	5V
P10	GND
P11	Reserved
P12	GND
P13	Not used(3.3V Pre-charge)
P14	Not used(12V)
P15	Not used(12V)

Supply voltage

Parameter	Rating
OP. voltage	5V +/- 5%
Max. Ripple	100mV , 0~30MHz

Power Consumption

Parameter	Value
Standby	0.1W
Read Operating	0.75W*1
Write Operating	1.0W*1

*1
: This data are measured by Fluke 287 multimeter and the capacity is 64GB with 2 flashes.

Temperature

Working temperature	0°C to +70°C
Storage temperature	-40°C to +85°C
Noise Level	0dB

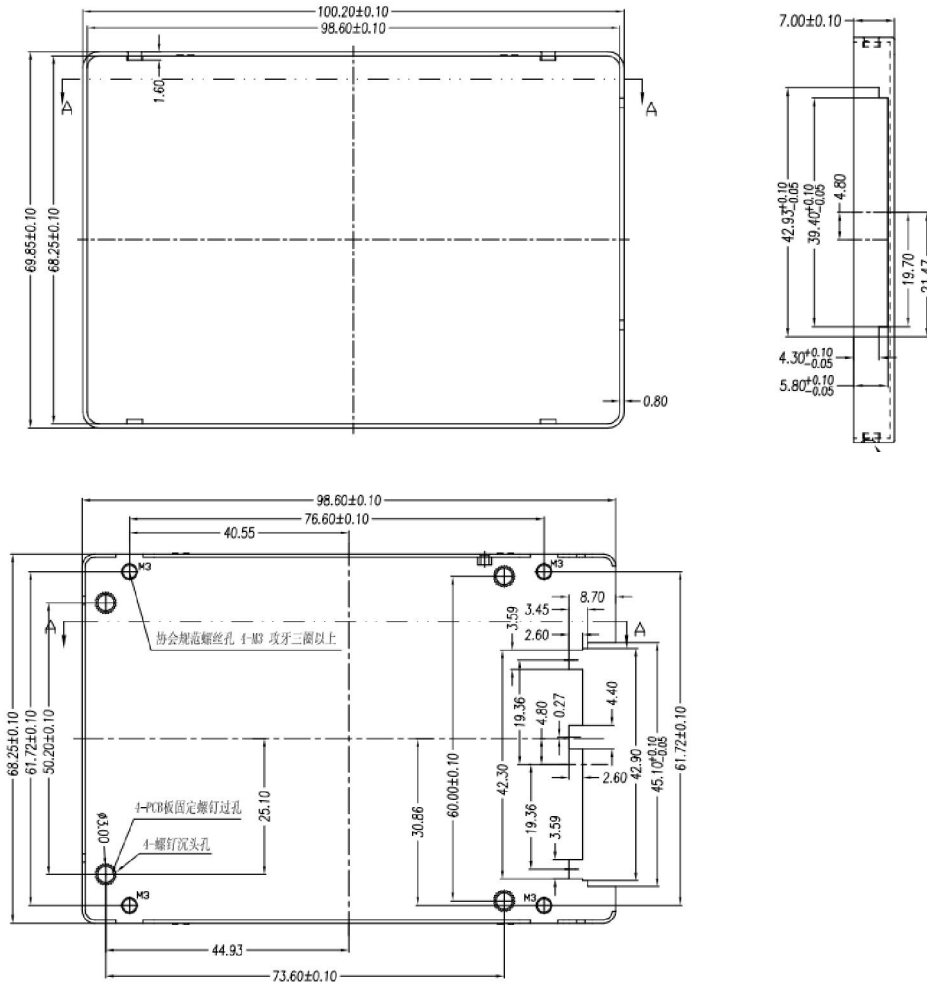
Performance list

	Capacity	120GB (128GB)
Sequential (MB/S)	Read: Up to	500
	Write: Up to	400
Random 4K (IOPS)	Read: Up to	34000
	Write: Up to	58800

(Measured by CrystalDiskMark v5.0 1000MB test unit)

Physical Dimension

Dimension: 100.1mm(L) x 69.8mm(W) x 7.1mm(H)



Microflash reserves the right to make changes in specifications at any time without prior notice.