

PHANES-K Series

aSLC mini SATA III Module



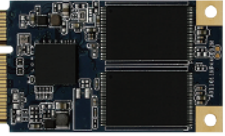
Product Feature

- aSLC - NAND type flash technology
- Bootable for O.S. Installation
- S.M.A.R.T. supported
- RoHS & REACH compliant
- Capacity from 8GB up to 256GB

Product Specification

Compatibility	<ul style="list-style-type: none"> ■ SATA 1.0a, SATA 2.6 and SATA 3.2 Specification compliance 	Power consumption	
Flash technology	<ul style="list-style-type: none"> ■ aSLC-NAND type flash memory 	Power requirement	<ul style="list-style-type: none"> ▶ +3.3 V ± 5%
Form-factor	<ul style="list-style-type: none"> ■ Standard mSATA form factor Compliant with JEDEC MO-300A 	Reading mode	<ul style="list-style-type: none"> ▶ 1615mW (Max.)
Host Interface	<ul style="list-style-type: none"> ■ mini PCIe connector with 52 pins SATA pin out 	Writing mode	<ul style="list-style-type: none"> ▶ 1960mW (Max.)
Performance		Idle mode	<ul style="list-style-type: none"> ▶ 275mW (Max.)
Data transfer rate	<ul style="list-style-type: none"> ■ SATA 1.5Gb/s, 3.0Gb/s, 6.0Gb/s 	Reliability	
Sequential read	<ul style="list-style-type: none"> ■ 550 MB/sec (Max.) 	Wear-leveling	<ul style="list-style-type: none"> ▶ Static and Dynamic wear-leveling algorithms
Sequential write	<ul style="list-style-type: none"> ■ 490 MB/sec (Max.) 	TBW	<ul style="list-style-type: none"> ▶ Up to 1510 TBW at 256GB Capacity, (Client workload by JESD-219A)
Environmental specification		Erase counts	<ul style="list-style-type: none"> ▶ Up to 20,000 times
Operating temp.	<ul style="list-style-type: none"> ■ STD. 0°C~70°C/W.T. -40°C~+85°C 	ECC	<ul style="list-style-type: none"> ▶ Hardware design LDPC (Low Density Parity Check)
Non-operating temp	<ul style="list-style-type: none"> ■ STD. -20°C~+80°C/W.T. -50°C~+95°C 	Physical specification	
Conformal coating.	<ul style="list-style-type: none"> ■ For wide temperature 	Weight	<ul style="list-style-type: none"> ▶ 8.0 g ± 1 g / 0.28 oz.
Humidity	<ul style="list-style-type: none"> ■ 10% ~ 95% non-condensing 	Dimension(W x L x H)	<ul style="list-style-type: none"> ▶ 29.85 x 50.80 x 3.70 (mm)
Vibration	<ul style="list-style-type: none"> ■ 80 Hz to 2K Hz, 20G, 3 axes 	Warranty	
Shock	<ul style="list-style-type: none"> ■ 0.5ms, 1500G, 3 axes 	aSLC(standard/wide temp.)	<ul style="list-style-type: none"> ▶ 2 years or within 20K Erasing counts
Altitude	<ul style="list-style-type: none"> ■ 70,000 feet 		

Part Number List

Product Picture	Capacity	0°C ~ 70°C	- 40°C ~ + 85°C
	8GB	SBMSM008G-PKCTMAS-(T)	WBMSM008G-PKCTMAS-(T)C
	16GB	SBMSM016G-PKCTMAS-(T)	WBMSM016G-PKCTMAS-(T)C
	32GB	SBMSM032G-PKCTMAS-(T)	WBMSM032G-PKCTMAS-(T)C
	64GB	SBMSM064G-PKCTMAS-(T)	WBMSM064G-PKCTMAS-(T)C
	128GB	SBMSM128G-PKCTMAS-(T)	WBMSM128G-PKCTMAS-(T)C
	256GB	SBMSM256G-PKCTMAS-(T)	WBMSM256G-PKCTMAS-(T)C

Notes :

C : Special conformal coating treated on whole PCBA which may support wide temp. grade operating temperature -40°C ~ +85°C

Part Number Decoder

X1 X2 X3 X4 X5 X6 X7 X8 X9 — X11 X12 X13 X14 X15 X16 X17 — X19 X20

Example ▶

W B M S M 2 5 6 G — P K C T M A S — C

X1 Grade

S : Standard grade operating temp. 0° C~70 ° C

W : Wide temp. grade operating temp.-40° C~+85 ° C

X2 The material of casing

B : Bare (without casing)

X3 X4 X5 Product category

MSM : mSATA module

X6 X7 X8 X9 Capacity

008G : 8GB **064G** : 64GB

016G : 16GB **128G** : 128GB

032G : 32GB **256G** : 256GB

X11 Controller

P : PHANES Series

X12 Controller version

A, B, C, D,....

X13 Controller grade

C : Commercial grade

X14 Flash IC brand

T : Toshiba flash IC

X15 Flash IC type

M : 15nm MLC-NAND flash IC

X16 X17 aSLC Technology

AS : aSLC Technology extends MLC product's lifespan

X19 X20 Reserved for specific requirement

Blank : Standard product w/o thermal sensor and conformal-coating

T : Thermal Sensor.

C : Conformal coating (optional)