

PHANES-HR Series

aSLC mini SATA III Module



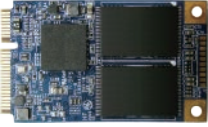
Product Feature

- aSLC - NAND type flash technology
- Bootable for O.S. Installation
- Supports DIPM/HIPM Mode
- S.M.A.R.T. supported
- RoHS & REACH compliant
- Capacity from 32GB up to 512GB

Product Specification

Compatibility	<ul style="list-style-type: none"> ■ SATA 1.0a, SATA 2.6 and SATA 3.0 Specification compliance 	Power consumption	<ul style="list-style-type: none"> ▶ +3.3 V \pm 5%
Form-factor	<ul style="list-style-type: none"> ■ Standard mSATA form factor Compliant with JEDEC MO-300A 	Power requirement Reading mode	<ul style="list-style-type: none"> ▶ 2010mW (Max.)
Flash technology	<ul style="list-style-type: none"> ■ aSLC-NAND type flash memory 	Writing mode Idle mode	<ul style="list-style-type: none"> ▶ 2300mW (Max.) ▶ 400mW (Max.)
Host Interface	<ul style="list-style-type: none"> ■ mini PCIe connector with 52 pins SATA pin out 	Reliability	Wear-leveling
Performance	<ul style="list-style-type: none"> ■ SATA 1.5Gb/s, 3.0Gb/s, 6.0Gb/s 	Wear-leveling	<ul style="list-style-type: none"> ▶ Static and Dynamic wear-leveling algorithms
Data transfer rate Sequential read Sequential write	<ul style="list-style-type: none"> ■ 550 MB/sec (Max.) ■ 510 MB/sec (Max.) 	ECC Physical specification Weight	<ul style="list-style-type: none"> ▶ 120 bits per 2K bytes block ▶ 8.0 g \pm 1 g / 0.3 oz.
Environmental specification	<ul style="list-style-type: none"> ■ STD. 0$^{\circ}$C~70$^{\circ}$C/W.T. -40$^{\circ}$C~+85$^{\circ}$C ■ STD. -20$^{\circ}$C~+80$^{\circ}$C/W.T. -50$^{\circ}$C~+95$^{\circ}$C 	Dimension(W x L x H)	<ul style="list-style-type: none"> ▶ 50.80 x 29.80 x 3.20 (mm)
Conformal coating.	<ul style="list-style-type: none"> ■ Option for wide temperature 	Warranty	<ul style="list-style-type: none"> ▶ aSLC(standard/wide temp.) ▶ 2 years or within 20k Erasing counts
Humidity Vibration Shock Altitude	<ul style="list-style-type: none"> ■ 10% ~ 95% non-condensing ■ 80 Hz to 2K Hz, 20G, 3 axes ■ 0.5ms, 1500G, 3 axes ■ 70,000 feet 		

Part Number List

Product Picture	Capacity	0°C ~ 70°C	- 40°C ~ + 85°C
	32GB	SBMSR032G-PHCTMBAS	WBMSR032G-PHCTMBASC
	64GB	SBMSR064G-PHCTMBAS	WBMSR064G-PHCTMBASC
	128GB	SBMSR128G-PHCTMBAS	WBMSR128G-PHCTMBASC
	256GB	SBMSR256G-PHCTMBAS	WBMSR256G-PHCTMBASC
	512GB	SBMSR512G-PHCTMBAS	WBMSR512G-PHCTMBASC

Part Number Decoder

X1 X2 X3 X4 X5 X6 X7 X8 X9 — X11 X12 X13 X14 X15 X16 X17 X18 X19 X20

Example ▶

W B M S R 5 1 2 G — P H C T M B 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

MSR : mSATA module with SDRAM cache

X6 X7 X8 X9 Capacity

032G : 32GB **256G** : 256GB
064G : 64GB **512G** : 512GB
128G : 128GB

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 : MLC-NAND flash IC

X16 MLC Technology

B : Toshiba 15nm MLC

X17 X18 aSLC Technology

AS : aSLC Technology extendeds MLC product's lifespan

X19 X20 Reserved for specific requirement

C : Conformal coating for wide temp.grade