

PHANES-F Series

aSLC SDHC Memory Card / SD Memory Card Specification 3.0




Product Feature

- aSLC - NAND type flash technology
- Supports SD mode and SPI mode
- Supports UHS-1
- Supports CPRM
- RoHS & REACH compliant
- SD card capacities from 4GB to 32GB

Product Specification

Compatibility	<ul style="list-style-type: none"> ■ SD Memory Card Specifications, Part 1 Physical Layer Specification, version 3.1 Final ■ SD Memory Card Specifications, Part 3, Security Specification, Version 3.0 Final 		
SDHC Spec. Ver. 2.0	<ul style="list-style-type: none"> ■ Capacity available are 4GB, 8GB, 16GB and 32GB, 9-pin contact pad, FAT32 file system Class 10 		
Flash technology	<ul style="list-style-type: none"> ■ aSLC-NAND type flash memory 	Power consumption	
Form-factor	<ul style="list-style-type: none"> ■ Standard SD card form-factor 	Power requirement	<ul style="list-style-type: none"> ▶ +3.3V ± 10%
Host Interface	<ul style="list-style-type: none"> ■ 9-pin connector 	Reading mode	<ul style="list-style-type: none"> ▶ 400 mA (Max.)
Write Protection	<ul style="list-style-type: none"> ■ Mechanical switch 	Writing mode	<ul style="list-style-type: none"> ▶ 400 mA (Max.)
Performance	<ul style="list-style-type: none"> ■ Class-10 	Standby mode	<ul style="list-style-type: none"> ▶ 1000 uA (Max.)
Sequential read	<ul style="list-style-type: none"> ■ 99.51 MB/sec 	Reliability	
Sequential write	<ul style="list-style-type: none"> ■ 92.62 MB/sec 	Wear-leveling	<ul style="list-style-type: none"> ▶ Static and Dynamic wear-leveling algorithms ▶ BCH ECC
Environmental specification		ECC	<ul style="list-style-type: none"> ▶ BCH ECC
Operating temp.	<ul style="list-style-type: none"> ▶ Wide Temp. -40°C~+85°C 	Physical specification	
Non-operating temp.	<ul style="list-style-type: none"> ▶ Wide Temp. -50°C~+95°C 	Weight	<ul style="list-style-type: none"> ▶ 2.5 g / 0.09 oz. (Max.)
Humidity	<ul style="list-style-type: none"> ▶ 10% ~ 95% non-condensing 	Dimension(W x L x H)	<ul style="list-style-type: none"> ▶ 32.0 x 24.0 x 2.1 (mm) / 1.26 x 0.95 x 0.08 (inch)
Vibration	<ul style="list-style-type: none"> ▶ 20 Hz to 2K Hz, 20G, 3 axes 	Warranty	
Shock	<ul style="list-style-type: none"> ▶ 0.5ms, 1500G, 3 axes 	aSLC(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	- 40°C ~ + 85°C
	4GB	WPSDH004G-PFITMBAS
	8GB	WPSDH008G-PFITMBAS
	16GB	WPSDH016G-PFITMBAS
	32GB	WPSDH032G-PFITMBAS

Part Number Decoder

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

Example ▶

W P S D H 0 3 2 G — P F I T M B A S

X1 Grade

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

X2 The material of casing

P : Plastic casing

X3 X4 X5 Product category

SDH : SDHC memory card

X6 X7 X8 X9 Capacity

004G : 4GB

008G : 8GB

016G : 16GB

032G : 32GB

X11 Controller

P : PHANES Series

X12 Controller version

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

X13 Controller grade

I : Industrial 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 extends MLC product's lifespan

X19 X20 Reserved for specific requirement