

PHANES-F Series

MLC SDHC & SDXC Memory Card / SD Memory Card Specification 3.0



Product Feature

- MLC - NAND type flash technology
- Support SD mode and SPI mode
- Support UHS-1
- Support CPRM
- RoHS & REACH compliant
- SD card Capacity from 8GB to 256GB

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 supports from 4GB to 128GB, 9-pin contact pad, FAT32 file system Class 10 	
Flash technology	<ul style="list-style-type: none"> ■ MLC-NAND type flash memory 	Power consumption
Form-factor	<ul style="list-style-type: none"> ■ Standard MicroSD card form-factor 	Power requirement
Host Interface	<ul style="list-style-type: none"> ■ 9-pin connector 	Reading mode
Write Protection	<ul style="list-style-type: none"> ■ Mechanical switch 	Writing mode
Performance	<ul style="list-style-type: none"> ■ Class-10 	Standby mode
Sequential read	<ul style="list-style-type: none"> ■ 94.0 MB/sec 	Reliability
Sequential write	<ul style="list-style-type: none"> ■ 81.5 MB/sec 	Wear-leveling
Environmental specification		Wear-leveling
Operating temp.	<ul style="list-style-type: none"> ■ Wide Temp. -40°C~+85°C 	ECC
Non-operating temp.	<ul style="list-style-type: none"> ■ Wide Temp. -50°C~+95°C 	Physical specification
Humidity	<ul style="list-style-type: none"> ■ 10% ~ 95% non-condensing 	Weight
Vibration	<ul style="list-style-type: none"> ■ 20 Hz to 2K Hz, 20G, 3 axes 	Dimension(W x L x H)
Shock	<ul style="list-style-type: none"> ■ 0.5ms, 1500G, 3 axes 	Weight
Altitude	<ul style="list-style-type: none"> ■ 70,000 feet 	Dimension(W x L x H)
		Warranty
		MLC(wide temp.)


- +3.3V ± 10%
- 400 mA (Max.)
- 400 mA (Max.)
- 1000 uA (Max.)

- Static and Dynamic wear-leveling algorithms
- BCH ECC

- 2.5 g / 0.09 oz. (Max.)
- 32.0 x 24.0 x 2.1 (mm) / 1.26 x 0.95 x 0.08 (inch)

- 2 years or within 3K Erasing counts

Part Number List

Product Picture	Capacity	- 40°C ~ + 85°C
	8GB	WPSDH008G-PFITMB
	16GB	WPSDH016G-PFITMB
	32GB	WPSDH032G-PFITMB
	64GB	WPSDX064G-PFITMB
	128GB	WPSDX128G-PFITMB
	256GB	WPSDX256G-PFITMB

Part Number Decoder

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

Example ▶

W P S D X 2 5 6 G — P F I T M B —

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

SDX : SDXC memory card

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

I : Industrial grade

X14 Flash IC brand

T : Toshiba flash IC

X15 Flash IC type

M : MLC-NAND Flash

X16 MLC Technology

B : Toshiba 15nm MLC

X18 X19 X20 Reserved for specific requirement