

PHANES-F Series

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




Product Feature

- MLC - NAND type flash technology
- Supports SD mode and SPI mode
- Supports UHS-1
- Supports CPRM
- RoHS & REACH compliant
- SD card capacities from 8GB to 64GB

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	<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"> ■ 88.7 MB/sec 	Reliability	
Sequential write	<ul style="list-style-type: none"> ■ 41.6 MB/sec 	Wear-leveling	<ul style="list-style-type: none"> ■ Static and Dynamic wear-leveling algorithms
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 	MLC(wide temp.)	<ul style="list-style-type: none"> ■ 2 years or within 3k Erasing counts
Altitude	<ul style="list-style-type: none"> ■ 70,000 feet 		

Part Number List

Product Picture	Capacity	- 40°C ~ + 85°C
	8GB	WPSDH008G-PFITMB
	16GB	WPSDH016G-PFITMB
	32GB	WPSDH032G-PFITMB
	64GB	WPSDX064G-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 0 6 4 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 032G : 32GB

016G : 16GB 064G : 64GB

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