



### Features

- MLC-NAND flash technology
- Support SD mode and SPI mode
- Support CPRM
- Support UHS-1
- Write Protect switch
- Support S.M.A.R.T. command set and utility
- Capacities from 8GB up to 128GB

### Specification

■ <b>Compatibility</b>	SDA3.0
➤ <b>SDHC</b>	8GB to 32GB: FAT16 file system
➤ <b>SDXC</b>	64GB to 256GB: exFAT
■ <b>Declaration</b>	RoHS & REACH compliant
■ <b>Flash technology</b>	MLC-NAND flash technology
■ <b>Form-factor</b>	Standard SD card form-factor
■ <b>Host interface</b>	9-pin connector
■ <b>Write Protection</b>	Mechanical switch
■ <b>Performance</b>	
➤ <b>Data transfer rate</b>	Class-10
➤ <b>Sequential read</b>	SDHC: 94.6 MB/sec (Max.) SDXC: 95.9 MB/sec (Max.)
➤ <b>Sequential write</b>	SDHC: 32.9 MB/sec (Max.) SDXC: 76.7 MB/sec (Max.)
■ <b>Environmental</b>	
➤ <b>Operating temp.</b>	Wide Temp. -40°C~+85°C
➤ <b>Non-operating temp.</b>	Wide Temp. -50°C~+95°C

➤ <b>Humidity</b>	10% ~ 95% non-condensing
➤ <b>Vibration</b>	80 Hz to 2K Hz, 20G, 3axes
➤ <b>Shock</b>	0.5ms, 1500G, 3 axes
➤ <b>Altitude</b>	70,000 feet
■ <b>Power consumption</b>	
➤ <b>Power requirement</b>	+3.3V ± 10%
➤ <b>Reading mode</b>	400 mA (Max.)
➤ <b>Writing mode</b>	400 mA (Max.)
➤ <b>Idle (Standby) mode</b>	1000 uA (Max.)
■ <b>Reliability</b>	
➤ <b>Wear-leveling</b>	Static and Dynamic wear-leveling algorithms
➤ <b>Erase counts</b>	Up to 3,000 times
➤ <b>ECC</b>	BCH ECC
■ <b>Physical specification</b>	
➤ <b>Weight (Max.)</b>	2.5g
➤ <b>Dimension (WxLxH)</b>	24.0 x 32.0 x 2.1 (mm)
■ <b>Warranty</b>	2 years or within 3,000 erasing counts

### Part Number List

SDHC memory card			SDXC memory card		
Capacity	-40°C~+ 85°C		Capacity	-40°C~+ 85°C	
8GB	WPSDH008G-PFITMB		64GB	WPSDX064G-PFITMB	
16GB	WPSDH016G-PFITMB		128GB	WPSDX128G-PFITMB	
32GB	WPSDH032G-PFITMB				

### Part Number Decoder

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20
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#### Example 1

W	P	S	D	H	0	3	2	G	-	P	F	I	T	M	B	-			
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#### Example 2

W	P	S	D	X	2	5	6	G	-	P	F	I	T	M	B	-			
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#### 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

#### X11 Controller

P : PHANES Series

#### X12 Controller version

A, B, C, D....

#### X13 Controller grade

I : Industrial grade

#### X14 Flash IC brand

T : Toshiba NAND flash IC

#### X15 Flash IC type

M : MLC-NAND Flash

#### X16 MLC Technology

B : Toshiba 15nm MLC

#### X18 X19 X20 Reserved for specific requirements