

P Series

SD Memory Card, Industrial MLC Model

Product Outline

P series are SDHC memory cards adopting built-in industrial MLC type NAND flash memory suitable for industrial applications. They are adequate for applications such as automotive use, security camera, factory automation, broadcast equipment, handy terminal, servers etc. They are formatted compliant with SD card specification.

■ Product Specification (specifications and appearances may be changed without notice.)

	(specifications and appearances	4GB	8GB	16GB
Image Part Number		Panasonic Panasonic Panasonic Calledon Panasonic P	Panasonic Panasonic	Panasonic Panasonic Panasonic Panasonic Panasonic Panasonic Panasonic Panasonic
Capacity	Available user data area capacity ¹	3,955,195,904 byte	7,998,504,960 byte	16,194,174,976 byte
Compliant Specification	SD Physical Specification	Ver. 3.01		
	SD Speed Class	CLASS (4)		
	UHS Speed Grade	not supported		
	Speed mode	High Speed, Default Speed		
Backside mark	Control code	D0BC		
Read/Write Performance (up to)	Read	22 MB/s (High Speed)		
	Write	12 MB/s (High Speed)		
Absolute Ratings	Supply Voltage	-0.3V to 4.6V (Min - Max)		
	Input Voltage	-0.3V to +0.3VDD (Min - Max)		
	Output Votlage	-0.3V to +0.3VDD (Min - Max)		
	Output Current	-24mA to 24 mA (Min - Max)		
Environmental Specification	Operating Temperature	-40°C to 85°C		
	Storage Temperature	-40°C to 85°C		
	Humidity	5% to 95%		
	Vibration	15 Gp ⁻ p		
	Shock	1000 G		
	Mating Cycles	10,000 cycles		

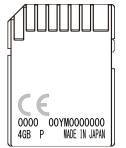
¹ Free area capacity after formatted.

Absolute maximum ratings are the values of limitation, which do not damage the card. Those values do not define the operational range.



■Products comply with EU RoHS directives.

Laser Mark on the Back-side (example; 4GB)



"0000" Control Code (Defined as product parts combination)
"00YM0000000" Serial Number
Y Last digit of Manufacture year
M Manufacture month (January->A, February->B,)
"4GB" Card Capacity
"P" Series name
"MADE IN JAPAN" Country of origin

System Reliability

- a. Powerful error detect and corrective function
- b. Static wear leveling
- c. Data recovery at power failure in writing
- d. Automatic refresh function to prevent uncorrectable error
- e. Bad block management

Notice and Caution

In applications where very unique product quality or reliability is and failure or malfunction of the products may directly threaten life or injury for the special usage (aeronautic or cosmic usage, military usage, combustion machine, life support applications or safety applications), please counsel with our contacts in advance. Write frequency and storage temperature will affect data retention time. Please make a backup for important data.

Warranty

If the product cannot be used because of failure which is determined as defect in design or in production of the product, it is replaced by same product or equivalent one within 12 months from the delivery date of product.