



**Features**

- SLC-NAND flash technology
- Support PC Card Memory mode or True IDE mode
- Optional rugged metal frame
- Ultra-high random read/write speed
- Support S.M.A.R.T. command set and utility
- Support C.H.S./LBA customization
- Support Power Loss Protection
- Capacities from 128MB up to 64GB

**Specification**

- **Compatibility** PC card standard, PCMCIA V.2.1  
Compatible with ATA/ATAPI-7
- **Declarations** RoHS & REACH compliant
- **Flash technology** SLC-NAND flash technology
- **Form-factor** PCMCIA Type II
- **Host Interface** Female 68 pins
- **Performance**
  - **Data transfer rate** PIO 2~6, MWDMA 0~4, UDMA 0~6
  - **Sequential read** 64.2 MB/sec (Max.)
  - **Sequential write** 62.2 MB/sec (Max.)
  - **4KB random read** 10.2 MB/sec (Max.)
  - **4KB random write** 8.6 MB/sec (Max.)
- **Environmental**
  - **Operating temp.** STD. 0°C~+70°C/IND. -40°C~+85°C
  - **Non-operating temp.** STD. -20°C~+80°C/IND. -50°C~+95°C
  - **Humidity** 10% ~ 95% non-condensing
  - **Vibration** 70 Hz to 2K Hz, 15G, 3 axes
  - **Shock** 0.5ms, 1500 G, 3 axes
  - **Altitude** 70,000 feet

- **Power consumption**
  - **Power requirement** +5V ± 10% / +3.3V ± 10%
  - **Reading mode** 144 mA (Max.)
  - **Writing mode** 126 mA(Max.)
  - **Idle mode** 4.4 mA (Max.)
- **Reliability**
  - **Wear-leveling** Static, Dynamic and Global Wear Leveling algorithms
  - **TBW** Up to 451.7 TBW at 64GB Capacity  
(Client workload by JESD-219A)
  - **MTBF** > 3,000,000 hours
  - **Erase counts** Up to 60,000 times
  - **ECC** 96 bits per 1024 bytes block
- **Physical specification**
  - **Weight (Max.)** Plastic frame : 30g  
Rugged metal frame : 35g
  - **Dimension (WxLxH)** 54.0 x 85.6 x 5.0 (mm)
- **Conformal coating** Optional
- **Warranty**
  - **SLC STD. grade** 3 years or within 60,000 erasing counts
  - **SLC IND. grade** 5 years or within 60,000 erasing counts

**Part Number List**

Standard plastic frame AFC			Optional rugged metal AFC		
Capacity	0°C~+70°C	-40°C~+85°C	Capacity	0°C~+70°C	-40°C~+85°C
128MB	SPAFC128M-HFCTC-UF	WPAFC128M-HFITI-UF	128MB	SRAFC128M-HFCTC-UF	WRAFC128M-HFITI-UF
256MB	SPAFC256M-HFCTC-UF	WPAFC256M-HFITI-UF	256MB	SRAFC256M-HFCTC-UF	WRAFC256M-HFITI-UF
512MB	SPAFC512M-HFCTC-UF	WPAFC512M-HFITI-UF	512MB	SRAFC512M-HFCTC-UF	WRAFC512M-HFITI-UF
1GB	SPAFC001G-HFCTC-UF	WPAFC001G-HFITI-UF	1GB	SRAFC001G-HFCTC-UF	WRAFC001G-HFITI-UF
2GB	SPAFC002G-HFCTC-UF	WPAFC002G-HFITI-UF	2GB	SRAFC002G-HFCTC-UF	WRAFC002G-HFITI-UF
4GB	SPAFC004G-HFCTC-UF	WPAFC004G-HFITI-UF	4GB	SRAFC004G-HFCTC-UF	WRAFC004G-HFITI-UF
8GB	SPAFC008G-HFCTC-UF	WPAFC008G-HFITI-UF	8GB	SRAFC008G-HFCTC-UF	WRAFC008G-HFITI-UF
16GB	SPAFC016G-HFCTC-UF	WPAFC016G-HFITI-UF	16GB	SRAFC016G-HFCTC-UF	WRAFC016G-HFITI-UF
32GB	SPAFC032G-HFCTC-UF	WPAFC032G-HFITI-UF	32GB	SRAFC032G-HFCTC-UF	WRAFC032G-HFITI-UF
64GB	SPAFC064G-HFCTC-UF	WPAFC064G-HFITI-UF	64GB	SRAFC064G-HFCTC-UF	WRAFC064G-HFITI-UF

**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**

W	P	A	F	C	0	6	4	G	-	H	F	I	T	I	-	U	F	C	
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**X1 Grade**

S : Standard grade operating temp. 0°C~+70°C  
W: Industrial grade operating temp. -40°C~+85°C

**X2 The material of casing**

P : Plastic frame  
R : Rugged metal frame

**X3 X4 X5 Product category**

AFC : PCMCIA ATA Flash Card

**X6 X7 X8 X9 Capacity**

128M : 128MB    002G : 2GB    032G : 32GB  
256M : 256MB    004G : 4GB    064G : 64GB  
512M : 512MB    008G : 8GB  
001G : 1GB    016G : 16GB

**X11 Controller**

H : HERMIT Series

**X12 Controller version**

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

**X13 Controller grade**

C : Commercial grade  
I : Industrial grade

**X14 Flash IC brand**

T : Toshiba SLC-NAND flash IC

**X15 Flash IC grade**

C : Commercial grade  
I : Industrial grade

**X17 X18 Data transfer rate / Disk types**

PF : Optional as PIO-6 mode / Fixed disk type  
PR : Optional as PIO-6 mode / Removable disk type  
UF : Defaulted as UDMA-6 mode / Fixed disk type  
UR : Optional as UDMA-6 mode / Removable disk type  
AA : Optional as Autosense UDMA or PIO mode / Autosense removable disk type or fixed disk type

**X19 X20 Reserved for specific requirements**

C : Conformal coating (optional)

SLC

aSLC

MLC

3D-NAND

DRAM Module

Adapter

Card-drive