

THEMIS-A Series

Secure Digital High Capacity (SDHC) Memory Card
Support Wide Temp. -20°C ~ +85°C



Product features

- MLC - NAND type flash technology
- Supports SD mode and SPI mode
- Write Protect feature using mechanical switch
- Interface: 9 pins SD standard interface
- Fully compatible to the SDA Specifications V1.01 / V1.1 / V2.0
- Supports CPRM
- RoHS & REACH compliant
- SDHC card capacity from 4GB up to 32GB
- Built-in ECC corrects up to 24 bits per 1 KB.

Product specifications

Compatibility	<ul style="list-style-type: none"> SD Memory Card Specifications, Part 1 Physical Layer Specification, version 2.0 SD Memory Card Specifications, Part 2, File System Specification, Version 2.0 SD Memory Card Specifications, Part 3, Security Specification, Version 2.0
SDHC Spec. Ver. 2.0	Capacity supports from 4GB up to 32GB, 9-pin contact pad, FAT32 file system, Class 10
Flash technology	MLC-NAND type flash based
Form-factor	Standard SD card form-factor
Host Interface	9-pin connector
Write Protection	Mechanical switch
Performance	
Data Transfer Rate (Sequential Read/Write, Max.)	
Class-10: 16GB, 32GB	16GB, 32GB : R17/W10 MB/Sec
Class-6: 4GB, 8GB	8GB : R16/W9 MB/Sec 4GB : R15/W6 MB/Sec
Random access time	1ms (estimated)
Environmental specification	
Operating temp.	STD. 0°C~70°C/W.T. -20°C~+85°C
Non-operating temp.	STD. -20°C~+80°C/W.T. -50°C~+95°C
Humidity	10% ~ 95% non-condensing
Vibration	15G compliance to MIL-STD-810F
Shock	1,500G compliance to MIL-STD-810F
Altitude	70,000 feet
Power consumption	
Power requirement	+3.3V ± 10%
Reading mode	40 mA (Max.)
Writing mode	60 mA (Max.)
Standby mode	180 uA (Max.)
Reliability	
Durability	10,000 insertion cycles
Torque	0.15N ± 2.5 deg.
W.P. Switch Cycle	1,000 cycle @ slide force 0.4N to 5N
Wear-leveling	Global wear-leveling algorithms
ECC	24 bits per 1 KB
Data retention	10 Years
Physical specification	
Weight	2.5 g / 0.09 oz. (Max.)
Dimension(W x L x H)	32.0 x 24.0 x 2.1 (mm) / 1.26 x 0.95 x 0.08 (inch)
Warranty	2 years

Operating temperature supports wide temp. grade -20°C ~ +85°C

Part number list - Wide Temp. Secure Digital High Capacity (SDHC) Memory Card

Product Picture	Capacity	-40°C ~ +85°C
	4GB	WPSDH004G-EA1MM
	8GB	WPSDH008G-EA1MM
	16GB	WPSDH016G-EA1MM
	32GB	WPSDH032G-EA1MM

Part number decoder

X1 X2 X3 X4 X5 X6 X7 X8 X9 — X11 X12 X13 X14 X15

Example

W P S D H 0 1 6 G — E A I M M

- X1** Grade
W : Wide Temp. Grade operating temp. -20°C ~ +85°C
- X2** The material of casing
P : Plastic casing
- X3 X4 X5** Product category
SDH : Secure Digital High Capacity (SDHC) card
- X6 X7 X8 X9** Capacity
4GB : 4GB 32GB : 32GB
8GB : 8GB
16GB : 16GB
- X11** Controller
E : ITE (THEMIS Series)
- X12** Controller version
A,B,C.....
- X13** Controller grade
I : Industrial grade
- X14** Flash IC
M : Micron flash IC
- X15** Flash IC grade
M : MLC-NAND flash IC

CFC CompactFlash Card

CFA CFast Card

AFC PCMCIA ATA Card

MIF micro IDE Flash Module

MSF micro SATA Flash Module

MUM micro USB Flash Module

MPM mini PCIe Flash Module

MSM mini SATA Flash Module

SSD Solid State Disk

UFD Rugged Metal USB Flash Disk

SDC/H SD & SDHC Memory Card

AD Adapter Card-Drive

CFC CompactFlash Card

CFA CFast Card

AFC PCMCIA ATA Card

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