

# HERMES-D Series

## Industrial mini SATA Flash (MSM) Module supports Write Protect Function



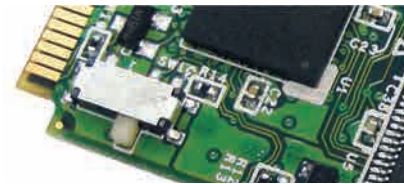
### Product features

- ❖ SLC - NAND type flash technology
- ❖ mSATA module compatible with JEDEC Standard : MO-300 specification
- ❖ Compliant with SATA 1.0a and SATA 2.6 specification
- ❖ Supports write protect function by switch
- ❖ Bootable for O.S. installation
- ❖ Maximum sequential read speed 132.5 MB/sec
- ❖ Maximum sequential write speed 117.9 MB/sec
- ❖ Capacity from 2GB up to 32GB

### Product specifications


<b>Compatibility</b>	❖ SATA 1.0a and SATA 2.6 specification compliance	<b>Write protect function</b>	Mechanism design ❖ By switch
<b>Form-factor</b>	❖ Compliant with ATA/ATAPI-7	<b>Power consumption</b>	Power requirement ❖ +3.3 V ± 5%
<b>Flash technology</b>	❖ Standard mSATA form factor compliant with JEDEC MO-300 specification	Reading mode	❖ 290 mA (Max.)
<b>Host Interface</b>	❖ SLC-NAND type flash based	Writing mode	❖ 350 mA (Max.)
<b>Performance</b>	❖ mini PCI-e connector with pure 52 pins SATA-II pin out	Sleeping mode	❖ 180 mA (Max.)
<b>Data transfer mode</b>	❖ Serial ATA Gen-I (1.5Gbits) and Gen-II (3.0Gbits)	<b>Reliability</b>	Wear-leveling ❖ Static wear-leveling algorithms
<b>Sequential read</b>	❖ 132.5 MB/sec (Max.)	MTBF	❖ > 4,000,000 hours
<b>Sequential write</b>	❖ 117.9 MB/sec (Max.)	ECC	❖ 8 bits per 512 bytes
<b>Random access time</b>	❖ 0.1 ms	Data retention	❖ 10 years
<b>Environmental specification</b>		<b>Physical specification</b>	
<b>Operating temp.</b>	❖ STD. 0°C ~ 70°C / IND. -40°C ~ +85°C	Weight (max.)	❖ 8.0 g ± 1 g / 0.3 oz.
<b>Non-operating temp.</b>	❖ STD. -20°C ~ +80°C / IND. -50°C ~ +95°C	Dimension(W x L x H)	❖ 51.10 x 30.10 x 3.20 (mm)
<b>Humidity</b>	❖ 10% ~ 95% non-condensing	Conformal coating	❖ Option for special request
<b>Vibration</b>	❖ 15G compliance to MIL-STD-810F	<b>Warranty</b>	
<b>Shock</b>	❖ 1500G compliance to MIL-STD-810F	Standard grade	❖ 3 years
<b>Altitude</b>	❖ 70,000 feet	Industrial grade	❖ 5 years

### Write-protect switch



Operating temperature supports Standard grade 0°C ~ 70°C and Industrial grade -40°C ~ +85°C

Part number list - Industrial mini SATA flash module supports write protection

Product picture	Capacity	0°C ~ 70°C	-40°C ~ +85°C
	<b>2GB</b>	SBMSM002G-JDCSC	WBMSM002G-JDISI
	<b>4GB</b>	SBMSM004G-JDCSC	WBMSM004G-JDISI
	<b>8GB</b>	SBMSM008G-JDCSC	WBMSM008G-JDISI
	<b>16GB</b>	SBMSM016G-JDCMC	WBMSM016G-JDIMI
	<b>32GB</b>	SBMSM032G-JDCMC	WBMSM032G-JDIMI

### Part number decoder

X1	X2	X3	X4	X5	X6	X7	X8	X9	—	X11	X12	X13	X14	X15	—	C			
W	B	M	S	M	0	3	2	G	—	J	D	I	M	I					

### Example

**X1** ❖ Grade

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

**X2** ❖ The material of frame kit

**B** : Bare (without casing)

**X3 X4 X5** ❖ Product category

**MSM** : mini SATA flash module

**X6 X7 X8 X9** ❖ Capacity

**002G** : 2GB

**004G** : 4GB

**008G** : 8GB

**016G** : 16GB

**032G** : 32GB

**X11** ❖ Controller

**J** : JMicon (HERMES Series)

**X12** ❖ Controller version

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

**X13** ❖ Controller grade

**C** : Commercial grade  
**I** : Industrial grade

**X14** ❖ Flash IC

**S** : Samsung SLC-NAND flash IC

**M** : Micron SLC-NAND flash IC

**X15** ❖ Flash IC grade

**C** : Commercial grade  
**I** : Industrial grade

**C** ❖ Reserved for specific requirement

**C** : Conformal-coating

CF Industrial CompactFlash Card

CFast Industrial CFast Card

ATA Industrial PCMCIA ATA Card

MIF Industrial micro IDE Flash Module

MSE Industrial micro SATA Flash Module

MUM Industrial micro USB Flash Module

MPM Industrial mini PCIe Flash Module

MSM Industrial mini SATA Flash Module

SSD Industrial Solid State Disk

UED Industrial Rugged Metal USB Flash Disk

SD Industrial SD & SDHC Memory Card

AD Industrial Adapter Card-Drive

CF Industrial CompactFlash Card

CFast Industrial CFast Card

ATA Industrial PCMCIA ATA Card

MIF Industrial micro IDE Flash Module

MSE Industrial micro SATA Flash Module

MUM Industrial micro USB Flash Module

MPM Industrial mini PCIe Flash Module

MSM Industrial mini SATA Flash Module

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