



**Features**

- SLC-NAND flash technology
- 40-pin MIF with 5V power cable
- Master / Slave selectable
- Support True IDE mode
- Support S.M.A.R.T. command set and utility
- Support C.H.S./LBA customization
- Capacities from 16MB up to 8GB

**Specification**

- **Compatibility** ATAPI-6 and True IDE mode
- **Declarations** RoHS & REACH compliant
- **Flash technology** SLC-NAND flash technology
- **Form-factor** Vertical Type  
Horizontal-Right and Horizontal-Left Types
- **Host Interface** Female 40 or 44 pins
- **Master/Slave** By switch
- **Performance**
- **Data transfer rate** PIO 0~6, MWDMA 0~2, UDMA 0~4
- **Sequential read** 39.5 MB/sec (Max.)
- **Sequential write** 28 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, 20G, 3 axes
- **Shock** 0.5ms, 1,500 G, 3 axes
- **Altitude** 70,000 feet
- **Power consumption**
- **Power requirement** +5V ± 10% / +3.3V ± 10%
- **Reading mode** 178 mA (Max.)

- **Writing mode** 142.5 mA(Max.)
- **Idle mode** 0.9 mA (Max.)
- **Reliability**
- **Wear-leveling** Static wear-leveling algorithms
- **TBW** Up to 421.8 TBW at 8GB Capacity (Sequential Write)
- **MTBF** > 3,000,000 hours
- **Erase counts** Up to 60,000 times
- **ECC** 4 bits per 512 bytes block
- **Physical specification**
- **Weight (Max.)** 40 V : 20g / 44 V : 15g  
40 H : 15g / 44 H : 12g  
40 V : 60.20 x 27.79 x 6.40 (mm)  
40 H : 55.00 x 32.40 (mm)  
44 V : 50.25 x 27.27 x 5.80 (mm)  
44 H : 48.00 x 32.40 (mm)
- **Dimension (WxLxH)**
- **Conformal coating** Optional for horizontal type (w/o casing)
- **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**

40-pin IDE DOM (MIF)			
Capacity	Form-factor	0°C~+70°C	- 40°C~+85°C
16MB	Vertical	SPMIF016M-HACTCN-0V(P)(U)(A)	WPMIF016M-HAITIN-0V(P)(U)(A)
	Right	SBMIF016M-HACTCN-0R(P)(U)(A)	WBMIF016M-HAITIN-0R(P)(U)(A)
	Left	SBMIF016M-HACTCN-0L(P)(U)(A)	WBMIF016M-HAITIN-0L(P)(U)(A)
32MB	Vertical	SPMIF032M-HACTCN-0V(P)(U)(A)	WPMIF032M-HAITIN-0V(P)(U)(A)
	Right	SBMIF032M-HACTCN-0R(P)(U)(A)	WBMIF032M-HAITIN-0R(P)(U)(A)
	Left	SBMIF032M-HACTCN-0L(P)(U)(A)	WBMIF032M-HAITIN-0L(P)(U)(A)
64MB	Vertical	SPMIF064M-HACTCN-0V(P)(U)(A)	WPMIF064M-HAITIN-0V(P)(U)(A)
	Right	SBMIF064M-HACTCN-0R(P)(U)(A)	WBMIF064M-HAITIN-0R(P)(U)(A)
	Left	SBMIF064M-HACTCN-0L(P)(U)(A)	WBMIF064M-HAITIN-0L(P)(U)(A)
128MB	Vertical	SPMIF128M-HACTCN-0V(P)(U)(A)	WPMIF128M-HAITIN-0V(P)(U)(A)
	Right	SBMIF128M-HACTCN-0R(P)(U)(A)	WBMIF128M-HAITIN-0R(P)(U)(A)
	Left	SBMIF128M-HACTCN-0L(P)(U)(A)	WBMIF128M-HAITIN-0L(P)(U)(A)
256MB	Vertical	SPMIF256M-HACTCN-0V(P)(U)(A)	WPMIF256M-HAITIN-0V(P)(U)(A)
	Right	SBMIF256M-HACTCN-0R(P)(U)(A)	WBMIF256M-HAITIN-0R(P)(U)(A)
	Left	SBMIF256M-HACTCN-0L(P)(U)(A)	WBMIF256M-HAITIN-0L(P)(U)(A)
512MB	Vertical	SPMIF512M-HACTCN-0V(P)(U)(A)	WPMIF512M-HAITIN-0V(P)(U)(A)
	Right	SBMIF512M-HACTCN-0R(P)(U)(A)	WBMIF512M-HAITIN-0R(P)(U)(A)
	Left	SBMIF512M-HACTCN-0L(P)(U)(A)	WBMIF512M-HAITIN-0L(P)(U)(A)
1GB	Vertical	SPMIF001G-HACTC-0V(P)(U)(A)	WPMIF001G-HAITI-0V(P)(U)(A)
	Right	SBMIF001G-HACTC-0R(P)(U)(A)	WBMIF001G-HAITI-0R(P)(U)(A)
	Left	SBMIF001G-HACTC-0L(P)(U)(A)	WBMIF001G-HAITI-0L(P)(U)(A)
2GB	Vertical	SPMIF002G-HACTC-0V(P)(U)(A)	WPMIF002G-HAITI-0V(P)(U)(A)
	Right	SBMIF002G-HACTC-0R(P)(U)(A)	WBMIF002G-HAITI-0R(P)(U)(A)
	Left	SBMIF002G-HACTC-0L(P)(U)(A)	WBMIF002G-HAITI-0L(P)(U)(A)
4GB	Vertical	SPMIF004G-HACTC-0V(P)(U)(A)	WPMIF004G-HAITI-0V(P)(U)(A)
	Right	SBMIF004G-HACTC-0R(P)(U)(A)	WBMIF004G-HAITI-0R(P)(U)(A)
	Left	SBMIF004G-HACTC-0L(P)(U)(A)	WBMIF004G-HAITI-0L(P)(U)(A)
8GB	Vertical	Do not support	Do not support
	Right	SBMIF008G-HACTC-0R(P)(U)(A)	WBMIF008G-HAITI-0R(P)(U)(A)
	Left	SBMIF008G-HACTC-0L(P)(U)(A)	WBMIF008G-HAITI-0L(P)(U)(A)

SLC  
oSLC  
MLC  
3D-NAND  
DRAM Module  
Adapter  
Card-drive

❖ Part Number List

44-pin IDE DOM (MIF)			
Capacity	Form-factor	0°C~+70°C	- 40°C~+85°C
16MB	Vertical	SPMIF016M-HACTCN-4V(P)(U)(A)	WPMIF016M-HAITIN-4V(P)(U)(A)
	Right	SBMIF016M-HACTCN-4R(P)(U)(A)	WBMIF016M-HAITIN-4R(P)(U)(A)
	Left	SBMIF016M-HACTCN-4L(P)(U)(A)	WBMIF016M-HAITIN-4L(P)(U)(A)
32MB	Vertical	SPMIF032M-HACTCN-4V(P)(U)(A)	WPMIF032M-HAITIN-4V(P)(U)(A)
	Right	SBMIF032M-HACTCN-4R(P)(U)(A)	WBMIF032M-HAITIN-4R(P)(U)(A)
	Left	SBMIF032M-HACTCN-4L(P)(U)(A)	WBMIF032M-HAITIN-4L(P)(U)(A)
64MB	Vertical	SPMIF064M-HACTCN-4V(P)(U)(A)	WPMIF064M-HAITIN-4V(P)(U)(A)
	Right	SBMIF064M-HACTCN-4R(P)(U)(A)	WBMIF064M-HAITIN-4R(P)(U)(A)
	Left	SBMIF064M-HACTCN-4L(P)(U)(A)	WBMIF064M-HAITIN-4L(P)(U)(A)
128MB	Vertical	SPMIF128M-HACTCN-4V(P)(U)(A)	WPMIF128M-HAITIN-4V(P)(U)(A)
	Right	SBMIF128M-HACTCN-4R(P)(U)(A)	WBMIF128M-HAITIN-4R(P)(U)(A)
	Left	SBMIF128M-HACTCN-4L(P)(U)(A)	WBMIF128M-HAITIN-4L(P)(U)(A)
256MB	Vertical	SPMIF256M-HACTCN-4V(P)(U)(A)	WPMIF256M-HAITIN-4V(P)(U)(A)
	Right	SBMIF256M-HACTCN-4R(P)(U)(A)	WBMIF256M-HAITIN-4R(P)(U)(A)
	Left	SBMIF256M-HACTCN-4L(P)(U)(A)	WBMIF256M-HAITIN-4L(P)(U)(A)
512MB	Vertical	SPMIF512M-HACTCN-4V(P)(U)(A)	WPMIF512M-HAITIN-4V(P)(U)(A)
	Right	SBMIF512M-HACTCN-4R(P)(U)(A)	WBMIF512M-HAITIN-4R(P)(U)(A)
	Left	SBMIF512M-HACTCN-4L(P)(U)(A)	WBMIF512M-HAITIN-4L(P)(U)(A)
1GB	Vertical	SPMIF001G-HACTC-4V(P)(U)(A)	WPMIF001G-HAITI-4V(P)(U)(A)
	Right	SBMIF001G-HACTC-4R(P)(U)(A)	WBMIF001G-HAITI-4R(P)(U)(A)
	Left	SBMIF001G-HACTC-4L(P)(U)(A)	WBMIF001G-HAITI-4L(P)(U)(A)
2GB	Vertical	SPMIF002G-HACTC-4V(P)(U)(A)	WPMIF002G-HAITI-4V(P)(U)(A)
	Right	SBMIF002G-HACTC-4R(P)(U)(A)	WBMIF002G-HAITI-4R(P)(U)(A)
	Left	SBMIF002G-HACTC-4L(P)(U)(A)	WBMIF002G-HAITI-4L(P)(U)(A)
4GB	Vertical	SPMIF004G-HACTC-4V(P)(U)(A)	WPMIF004G-HAITI-4V(P)(U)(A)
	Right	SBMIF004G-HACTC-4R(P)(U)(A)	WBMIF004G-HAITI-4R(P)(U)(A)
	Left	SBMIF004G-HACTC-4L(P)(U)(A)	WBMIF004G-HAITI-4L(P)(U)(A)
8GB	Vertical	Do not support	Do not support
	Right	SBMIF008G-HACTC-4R(P)(U)(A)	WBMIF008G-HAITI-4R(P)(U)(A)
	Left	SBMIF008G-HACTC-4L(P)(U)(A)	WBMIF008G-HAITI-4L(P)(U)(A)

❖ 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	B	M	I	F	0	0	8	G	-	H	A	I	T	I	-	0	R	U	
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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

B : Bare (without casing) for horizontal type  
 P : Plastic casing for vertical type

**X3** **X4** **X5** Product category

MIF : Micro IDE Flash module (IDE DOM)

**X6** **X7** **X8** **X9** Capacity

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

**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** **X16** Flash IC grade

C : Commercial grade  
 I : Industrial grade  
 N : 24nm SLC NAND Flash

**X17** **X18** MIF oriented only

0V : 40-pin IDE Vertical MIF  
 0R : 40-pin IDE Rightward-oriented MIF  
 0L : 40-pin IDE Leftward-oriented MIF  
 4V : 44-pin IDE Vertical MIF  
 4R : 44-pin IDE Rightward-oriented MIF  
 4L : 44-pin IDE Leftward-oriented MIF

**X19** Data transfer rate / Disk type

IDE interface is always Fixed Disk Mode  
 P : PIO-6 mode / Fixed disk type  
 U : Defaulted as UDMA-4 mode / Fixed disk type  
 A : Autosense UDMA or PIO mode

**X20** Reserved for specific requirements

C : Conformal coating optional for H-type MIF w/o casing  
 Note : 40/44-pin MIF with casing do not support conformal coating

SLC

aSLC

MLC

3D-NAND

DRAM Module

Adapter

Card-drive