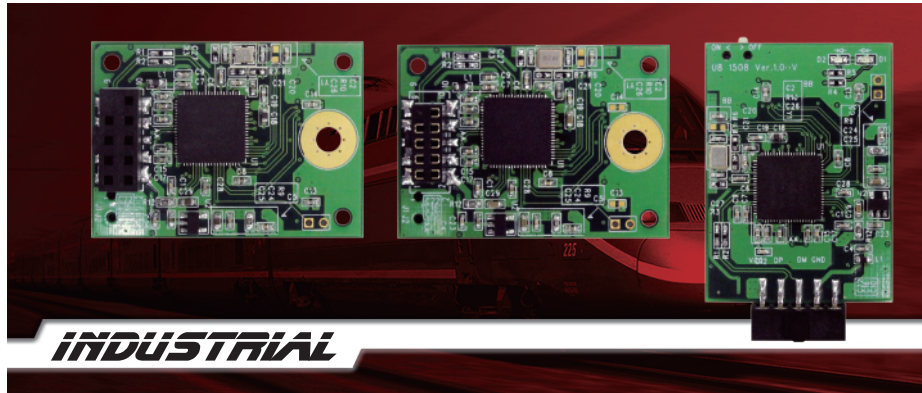


HERMIT-C Series

MLC micro USB 2.0 Module (MUM) w / Ultra high Random Speed



INDUSTRIAL

Product Feature


- MLC - NAND type flash technology
- 2x5 header, x86 internal USB standard
- Pin pitch 2.00 mm of USB 10 pins female connector
- Pin pitch 2.54 mm of USB 10 pins female connector
- USB2.0 High-Speed and USB1.1 FullSpeed compatible interface
- Support Vertical and horizontal form-factor
- Ultra high random read : 5.7MB/sec (max.)
- Ultra high random write : 3.7MB/sec (max.)
- Horizontal Type : Capacities from 4GB up to 64GB

Product Specification

Compatibility	➤ USB 2.0 and USB 1.1 backwards Compatible	OS supported	➤ Windows series Embedded O.S. Linux, VxWorks and DOS
Flash technology	➤ MLC-NAND type flash based	Power consumption	
Form-factor	➤ Horizontal Type bare w/mounting Standard - 2.54mm pin pitch Low-profile - 2.00mm pin pitch Vertical Type - 2.54mm pin pitch	Power requirement	➤ 5V±10% via on board USB port
Host Interface	➤ 10 pins 2.54mm pin pitch connector ➤ 10 pins 2.00mm pin pitch connector	Reading mode	➤ 75.5 mA(Max.)
Performance		Writing mode	➤ 92.6 mA(Max.)
Random read	➤ 5.7MB/sec (max.)	Idle mode	➤ 37.9 mA(Max.)
Random write	➤ 3.7MB/sec (max.)	Reliability	
Sequential read	➤ 29.2 MB/sec (max.)	Wear-leveling	➤ Static wear-leveling algorithms
Sequential write	➤ 19.0 MB/sec (max.)	ECC	➤ 96 Bit/1KB BCH ECC engine
Random access time	➤ 0.9ms (estimated)	Physical specification	
Environmental specification		Weight	➤ Vertical type : 10 g ± 1g / 0.35 oz. ➤ Horizontal type : 10 g ± 1g / 0.35 oz.
Operating temp.	➤ STD. 0 °C~70 °C/W.T.-40 °C~+85 °C	Dimension(W x L x H)	
Non-operating temp.	➤ STD. -20 °C~+80 °C/W.T.-50 °C~+95 °C	2.54mm pin pitch_Ver.	➤ 42.0 x 26.7 x 6.0 (mm)
Humidity	➤ 10% ~ 95% non-condensing	2.54mm pin pitch_Hor.	➤ 37.0 x 26.7 x 6.3 (mm)
Vibration	➤ 7 Hz to 2K Hz, 20G, 3 axes	2.00mm pin pitch_Hor.	➤ 37.0 x 26.7 x 5.7 (mm)
Shock	➤ 0.5ms, 1500G, 3 axes	Conformal coating	➤ Option
Altitude	➤ 70,000 feet	Warranty	
		MLC(standard/wide temp.)	➤ 2 years / Within 3k Erasing counts


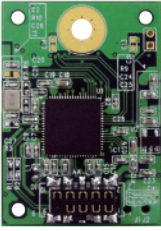
Operating temperature supports standard grade 0°C ~ 70°C and wide temp. grade -40°C ~ +85°C

Part number list - Vertical type standard form factor - 2.54mm pin pitch

Product Picture	Capacity	0°C ~ 70°C	- 40°C ~ + 85°C
	4GB	SBMUM004G-HCCTMB-VS	WBMUM004G-HCCTMB-VS/C
	8GB	SBMUM008G-HCCTMB-VS	WBMUM008G-HCCTMB-VS/C
	16GB	SBMUM016G-HCCTMB-VS	WBMUM016G-HCCTMB-VS/C
	32GB	SBMUM032G-HCCTMB-VS	WBMUM032G-HCCTMB-VS/C
	64GB	SBMUM064G-HCCTMB-VS	WBMUM064G-HCCTMB-VS/C

Operating temperature supports standard grade 0°C ~ 70°C and wide temp. grade -40°C ~ +85°C

Part number list - Horizontal type standard form factor - 2.54mm pin pitch / 2.00mm pin pitch

Product Picture			
2.54mm	Capacity	0°C ~ 70°C	- 40°C ~ + 85°C
	4GB	SBMUM004G-HCCTMB-HS	WBMUM004G-HCCTMB-HS/C
	8GB	SBMUM008G-HCCTMB-HS	WBMUM008G-HCCTMB-HS/C
	16GB	SBMUM016G-HCCTMB-HS	WBMUM016G-HCCTMB-HS/C
	32GB	SBMUM032G-HCCTMB-HS	WBMUM032G-HCCTMB-HS/C
	64GB	SBMUM064G-HCCTMB-HS	WBMUM064G-HCCTMB-HS/C
2.00mm	Capacity	0°C ~ 70°C	- 40°C ~ + 85°C
	4GB	SBMUM004G-HCCTMB-HL	WBMUM004G-HCCTMB-HL/C
	8GB	SBMUM008G-HCCTMB-HL	WBMUM008G-HCCTMB-HL/C
	16GB	SBMUM016G-HCCTMB-HL	WBMUM016G-HCCTMB-HL/C
	32GB	SBMUM032G-HCCTMB-HL	WBMUM032G-HCCTMB-HL/C
	64GB	SBMUM064G-HCCTMB-HL	WBMUM064G-HCCTMB-HL/C

Part Number Decoder

X1 X2 X3 X4 X5 X6 X7 X8 X9 — X11 X12 X13 X14 X15 X16 — Z1 Z2 / C

Example

W B M U M 0 6 4 G — H C C T M B — H S / C

X1 Grade

S : Standard grade operating temp. 0° C ~ 70 ° C

W : Wide temp. grade operating temp. -40° C ~ +85 ° C

X2 The material of casing

B : Bare

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

MUM : micro USB 2,0 Flash Module

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

004G : 4GB

032G : 32GB

008G : 8GB

064G : 64GB

016G : 16GB

X11 Controller

H : HERMIT Series

X12 Controller version

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

X13 Controller grade

C : Commercial grade

X14 Flash IC

T : Toshiba Flash IC

X15 Flash IC grade

M : MLC - NAND Flash IC

X16 Generation

B : 15 nm

Z1 **Z2** MUM orient only

VS : Vertical type standard form factor pin pitch 2.54 mm

HS : Horizontal type standard form factor pin pitch 2.54 mm

HL : Horizontal type low profile form factor pin pitch 2.0 mm

C Reserved for specific requirement

C : Conformal-coating