HAMMER-D Series

Industrial Semi-Metal USB Flash Disk Generation 3

Product features

- Tiny and semi-metal casing design
- USB 2.0 interface downwards compatible to USB 1.1
- Supports Ready Boost for Microsoft Vista O.S.
- USB 2.0 Mass Storage compliant
- Capacities from 128MB up to 8GB
- Performance up to 20.1 MB/sec

Product specifications

Compatibility
- USB 2.0 and USB 1.1 backwards

Flash technology
- SLC-NAND type flash based

Performance

Data transfer rate	USB 2.0 supports transfer rates up to 480 Mb/s (60MB/s)
Sequential read	20.1 MB/sec (Max.)
Sequential write	20.0 MB/sec (Max.)
Average access time	0.6 ms (estimated)

Environmental specification

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	15 G compliance to MIL-STD-810F
Shock	1,500 G compliance to MIL-STD-810F
Altitude	70,000 feet

LED Indicator
- Operating with blue light LED

OS supported
- Windows ME / 2000 / XP / Vista / Win 7
  Mac9.x , Mac OS X / Win98SE need driver

Functionality
- Supports auto-run function
- Supports partition management, password and security

Power consumption

Power requirement	5V ± 10% via USB port
Reading mode	78.2 mA (Max.)
Writing mode	80.5 mA (Max.)
Idle mode	68.3 mA (Max.)

Reliability

Wear-leveling	Dynamic wear-leveling algorithms
MTBF	> 1,000,000 hours
ECC	8 bits or 15 bits per 512 bytes block
Endurance	> 2,000,000 cycles

Physical specification

Weight (max.)	15 g ± 1 g / 0.53 oz.
Dimension(W x L x T)	47.30 x 17.60 x 8.40 (mm)

Conformal coating
- Option for special request

Warranty
- Standard grade : 3 years
- Industrial grade : 5 years

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

Part number list - Industrial semi-metal USB flash disk - Generation 3

Product Picture	Capacity	0˚C ~ 70˚ C	-40˚C ~ +85˚ C
	128MB	SMUFD128M-ADCSC-3	WMUFD128M-ADISI-3
	256MB	SMUFD256M-ADCSC-3	WMUFD256M-ADISI-3
	512MB	SMUFD512M-ADCSC-3	WMUFD512M-ADISI-3
	1GB	SMUFD001G-ADCSC-3	WMUFD001G-ADISI-3
	2GB	SMUFD002G-ADCSC-3	WMUFD002G-ADISI-3
	4GB	SMUFD004G-ADCSC-3	WMUFD004G-ADISI-3
	8GB	SMUFD008G-ADCSC-3	WMUFD008G-ADISI-3

Part number decoder

X1	X2	X3	X4	X5	X6	X7	X8	X9	—	X11	X12	X13	X14	X15	—	3	C		

Example

W	M	U	F	D	1	2	8	M	—	A	D	I	S	I	—	3	C		

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

M : Semi-metal / metal casing

X3 X4 X5 Product category

UFD : USB flash disk

X6 X7 X8 X9 Capacity

128M :	128MB	**001G :**	1GB
256M :	256MB	**002G :**	2GB
512M :	512MB	**004G :**	4GB
		008G :	8GB

X11 Controller

A : Alcor (HAMMER 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

X15 Flash IC grade

C : Commercial grade
I : Industrial grade

3 Generation of housing design

3 : Generation 3

C Reserved for specific requirement

C : Option for Conformal-coating on PCBA