



USB 2.0 Mobile Disk K21/K24/M24Series MD4 Type Specification

Version 1.0

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Revision History

Version	Date	Description
V1.0	2004/12/21	1.New release.

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A. General Description :

PC based mass storage product with the capability of file & directory read & write function through USB connection. Easy carry and transport final product with manual write protection function. Mobile Disk can be partitioned into public and/or security area by the application software . Only one partition (public or security area) can be seen at one time with a predefined password to switch areas.

Product Models :

Product Model	Capacity
FMH064M	64 MB
FMH128M	128MB
FMH256M	256MB
FMH512M	512MB

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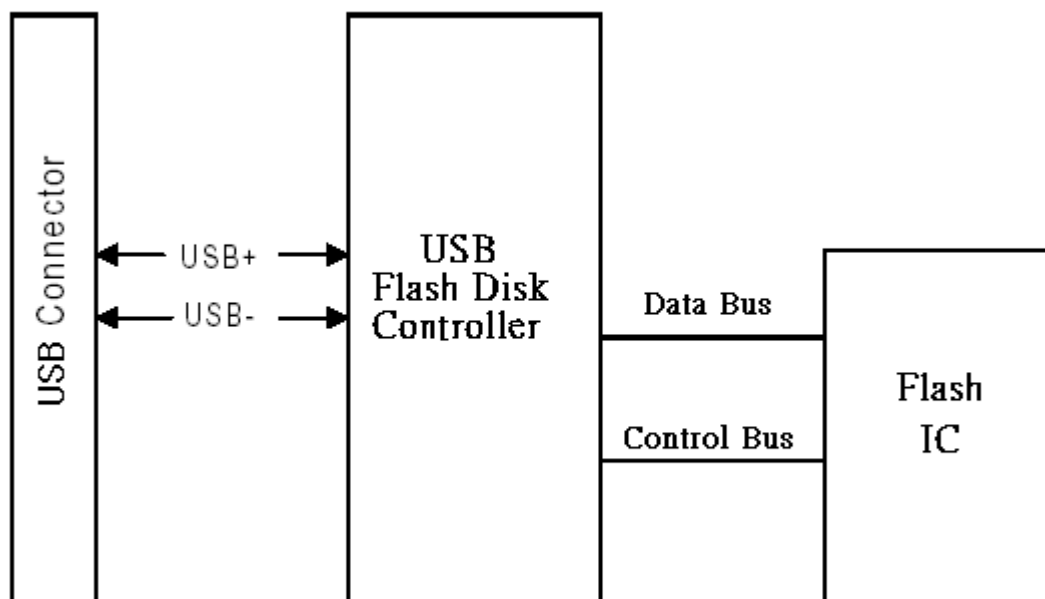
B. Product Feature :

- Mass storage class controller with Universal Serial Bus interface
- USB Specification Compliance
 - Conforms to high-speed (480Mb/s) USB Specification, Version 2.0
 - Meet bus power specification
- Write-protected ability
- Higher reliability: ECC on the fly
- Automatic bad block management
- Supported OS:
 - Win XP, Win2000, Windows ME, Linux 2.4 above, and MAC OS 9.0 & higher
 - Win 98/Win98SE driver available
 - Mac 8.6 mass storage driver available from Apple
- Multiple LUN Windows driver is available
- LED indication: Suspend, Active, Idle modes.
- Recommended operating temperature : 0 – 85°C
- Connector durability: Testing to 10000 cycles.

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C. Block Diagram



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D. Electrical Specifications

■ Absolute Maximum Ratings:

Symbol	Parameter	Rating	Units
V _{CC}	2.5V Power supply	-0.3 to 3.0	V
	3.3 Power supply	-0.3 to 3.9	V
V _{IN2}	Input voltage of 2.5V I/O	-0.3 to V _{CC21} +0.3	V
	Input voltage of 2.5V I/O with 3.3V Tolerance	-0.3 to 3.9	V
V _{IN3}	Input voltage of 3.3V I/O	-0.3 to V _{CC31} +0.3	V
	Input voltage of 3.3V I/O with 5V Tolerance	-0.3 to 5.5	V
T _{STG}	Storage temperature	-40 to 150	°C

■ Recommended Operating Conditions:

Symbol	Parameter	Min.	TYP	Max.	Unit
V _{CCK}	Core Power supply	2.25	2.5	2.75	V
V _{CC31}	Power Supply of 3.3V I/O	3.0	3.3	3.6	V
V _{CC30}	Power Supply of 3.3V I/O	3.0	3.3	3.6	V

■ General DC Characteristics:

Sym.	Parameter	Conditions	Min.	TYP	Max.	Unit
I _{IL}	Input leakage current	No pull up/down	-10		10	μA
I _{OZ}	Tri-state leakage current		-10		10	μA
C _{IN}	Input capacitance			3.1		pF
C _{OUT}	Output capacitance			3.1		pF
C _{BID}	Bi-directional Buffer capacitance			3.1		pF

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■ DC Electrical Characteristics:

Sym.	Parameter	Min.	TYP	Max.	Unit
V _{CCK}	Core power Supply	2.25	2.5	2.75	V
V _{CC2I}	Power Supply	3.0	3.3	3.6	V
V _{CC2O}	Power Supply	3.0	3.3	3.6	V
V _{IL}	Input Low Voltage			0.8	V
V _{IH}	Input High Voltage	2.0			V
V _{t-}	Schmitt input low voltage	0.8	1.1		V
V _{t+}	Schmitt input high voltage		1.6	2.0	V
V _{OL}	Output low voltage			0.4	V
V _{OH}	Output high voltage	2.4			V
R _{pu} /R _{pd}	Input pull up/down resistance		75		kΩ

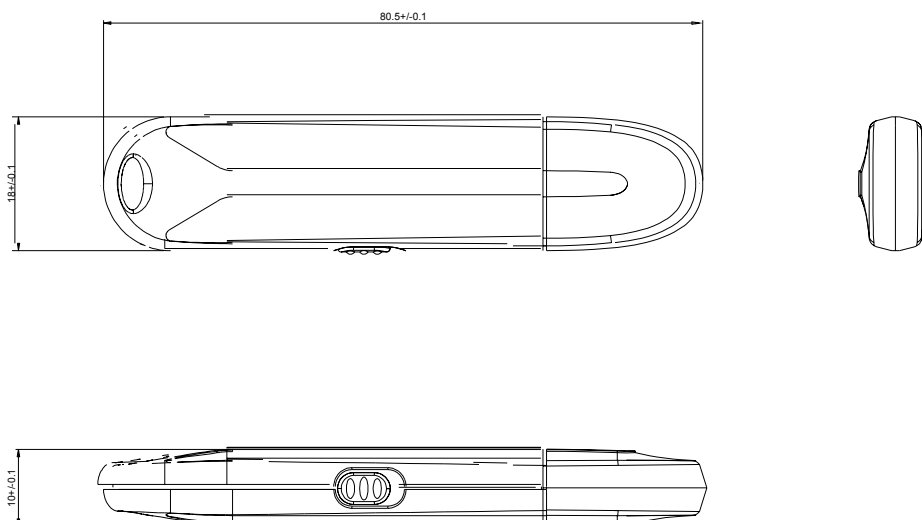
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F. Housing Dimension Diagram



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