ATP Industrial Grade Endura Specification

Revision 1.4

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Revision History

Date	Version	Changes compared to previous issue
Dec. 16th, 2011	1.0	- 1st version
Feb. 8th, 2012	1.1	- Revised dimensions
May. 22nd, 2012	1.2	- Add 8GB product
Aug. 3rd, 2012	1.3	- Revised 2GB P/N and Performance
Aug. 20th, 2012	1.4	- Revised 512MB P/N and Performance

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Images

Laser engraving logo and letters.

Capacities

ATP UFD P/N	CAPACITY	COLOR
AF512UFEDBK(I)-AABXX	512MB	Black
AF1GUFEDBK(I)-8AAXX	1GB	Black
AF2GUFEDBK(I)- JABXX	2GB	Black
AF4GUFEDBK(I)-JABXX	4GB	Black
AF8GUFEDBK(I)-9AAXX	8GB	Black

Features

USB Interface	UFD Feature
• High Speed USB 2.0 (480Mbps) compliant and backward compatible with USB1.1 (12Mbps) • True "Plug and play" connection support hot swap.	• SIP technology with SLC NAND Flash • Color - Black

System Support
• No driver needed for Windows 7 / Vista / 2000 / ME / XP, Mac. OS 9.x or above. Linux Kernel 2.4.0 or above • Device driver is needed for Windows 98SE

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Electrical Specifications

Symbol	Parameter	Min.	Typ.	Max.	Unit
Vcc	Recommend Supply Voltage	4.5	5.0	5.5	V
Vpeak	Peak Voltage on any pin	-0.3		5.5	V
Icc	Operating Current (read & write)		100		mA
I_{SB}	Standby Current		50		mA

Environment Specifications:

Parameter		Value
Temperature	Operating	-40°C to 85°C
	Non-Operating	-40°C to 85°C
Humidity	Operating	25 ^{o}C, 95% RH
	Non-Operating	40 ^{o}C, 93% RH
ESD *(IEC61000-4-2)*	Non contact pads	+/- 15KV (Air discharge)
	Contact pads	+/- 8KV (Coupling plane discharge)
	Contact pads	+/- 4KV
Salt Water Spray	Non-Operating	3%NaCI/35, Over 85%RH, 24hours
Drop Test	Non-Operating	150cm/free fall, total 6 drops
Random Vibration	Non-Operating	10~2000Hz, 6 Grms, 30 mins per axis
UV Light Exposure Test	Non-Operating	254nm, 15Ws/cm2

Reliability:

MTBF@25°C: >5,000,000 hours (Telcordia/Bellcore SR-332)

Dynamic and Static wear leveling algorithm to improve the endurance

Endurance :   SLC flash block >60,000 Program/Erase cycles

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Performance:

Type	Parameter	Value
512MB	Sequential read	up to 18MByte/s
	Sequential write	up to 12MByte/s
1GB	Sequential read	up to 35MByte/s
	Sequential write	up to 17MByte/s
2GB	Sequential read	up to 31MByte/s
	Sequential write	up to 14MByte/s
4GB	Sequential read	up to 33MByte/s
	Sequential write	up to 22MByte/s
8GB	Sequential read	up to 20MByte/s
	Sequential write	up to 19MByte/s

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Extra Features:

Type	Value
Water Proof	Yes
Dust Proof	Yes
ESD Proof	Yes
Shock Resistant	Yes

Certifications

- RoHS compliant

- CE certification

- FCC certification

Physical Dimension Specifications (Units in MM):

Type	Value
Length*	33.7mm +/- 0.3mm
Width	17.5mm +/- 0.25mm
Thickness	9.4mm +/- 0.25mm
Weight*	8 g Max.

Mechanical Form Factor (Units in MM)