

Product Features

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- Compliant with USB Spec. Rev. 2.0 for bus power operation
- Compliant with USB MSC Bulk-Only Transport Spec. Rev. 1.0
- Integrates 1T 8051 MCU @ 30 MHz high speed operation
- Supports all type of SD/MMC card including SDHC, MMC4.2
- Build-in 5V to 3.3V LDO and MOSFET for BOM saving
- High efficient DMA engine to enhance transfer performance
- Top performance to enable Vista EMD Ready Boost function
- 48-pin LQFP for dual SD/MMC
- 32-pin QFN for 8-bit SD/MMC
- 28-pin for 4-bit SD/MMC

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The Best Read/Write Performance* (Condition)

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Test Environment:

Test Platform List				
NO.	Motherboard/Chipset Model	CPU/DRAM:	USB Host	OS
13	P5GD2-X/Intel 915P+ICH6	Intel P4 3.0G/512MB	USB 2.0	Win2k SP4
54	GA-965P-S3/Intel P965+ICH8	Intel Core2 Duo E6399	USB 2.0	Vista

Test Tools:

- HDBench Ver.3.4 Beta 6 on Win2k SP4

Test condition: (Test size = 100MB)

- WinSAT (Only for Windows Vista)

Test condition:

For random read test command :

Winsat disk -read -ran -ransize 4096 -drive "disk drive"

For random write test command :

insat disk -write -ran -ransize 524288 -drive "disk drive"

* The test result is possible to be different depends on test environment and condition

The Best Read/Write Performance(Win2k)

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HDBench with Windows 2K XP

SD Card Brand/Size	R/W Mode	USBest DL7704	GL 827	Au6332	MOAI M8121
SanDisk Extreme III 1GB	Sequential Read	19856	19677	4100	16505
	Sequential Write	18510	18354	4439	16179
	Random Read	18775	17106	4100	16060
	Random Write	5037	5097	2029	4718
APACER 150X 2GB	Sequential Read	19445	18723	4241	16100
	Sequential Write	16886	16259	4225	15712
	Random Read	18560	17471	4230	12723
	Random Write	1220	1203	859	1138

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The Best Read/Write Performance (Vista)

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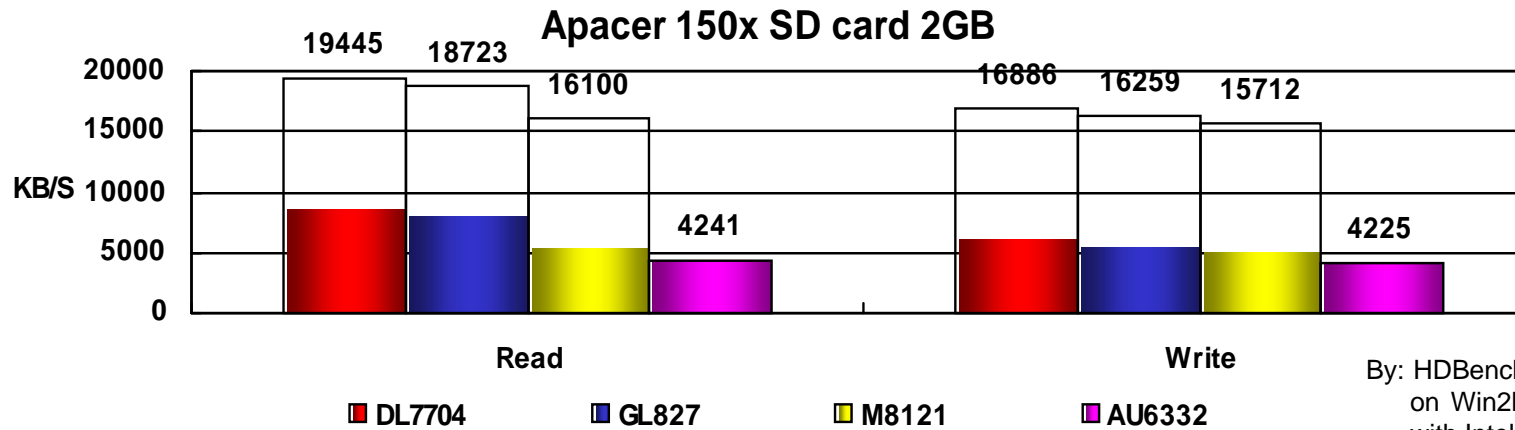
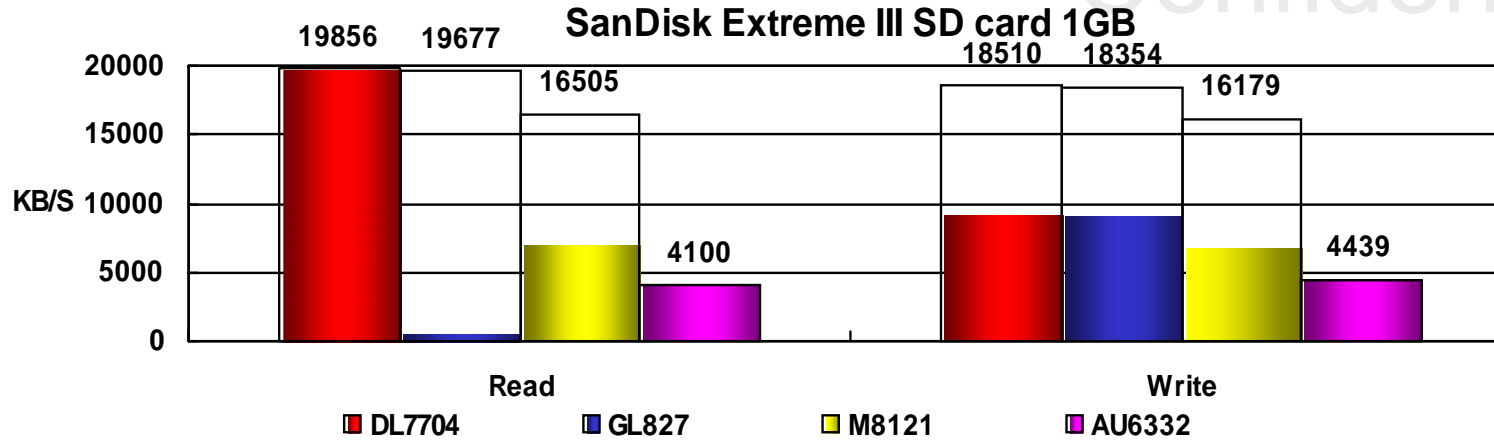
WinSAT with Windows Vista Ultimate

Card Brand/Size	R/W Mode	USBestDL7704-S2	GL 827	Au6332	MOAI M8121	Premium criteria
SanDisk Extreme III 1GB	Random Read	4.89	3.71	1.5	4.50	5
	Random Write	11.66	11.72	4.03	10.21	3
APACER 150X 2GB	Random Read	5.64	4.40	1.53	5.65	5
	Random Write	7.14	6.99	3.18	6.75	3

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The Best Read/Write Performance* (Comparison)

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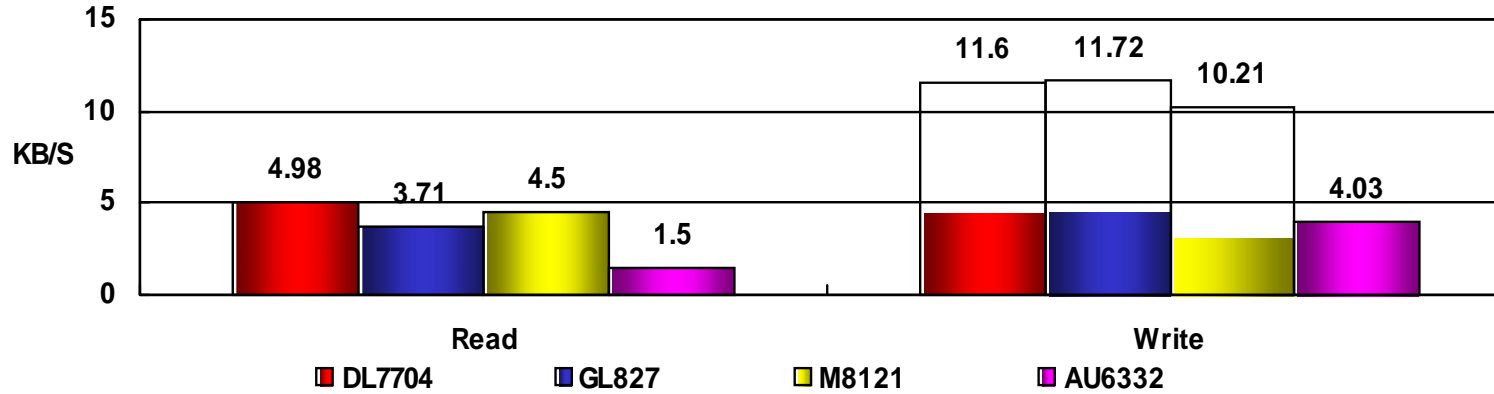


By: HDBench v3.4
on Win2k SP4
with Intel ICH6

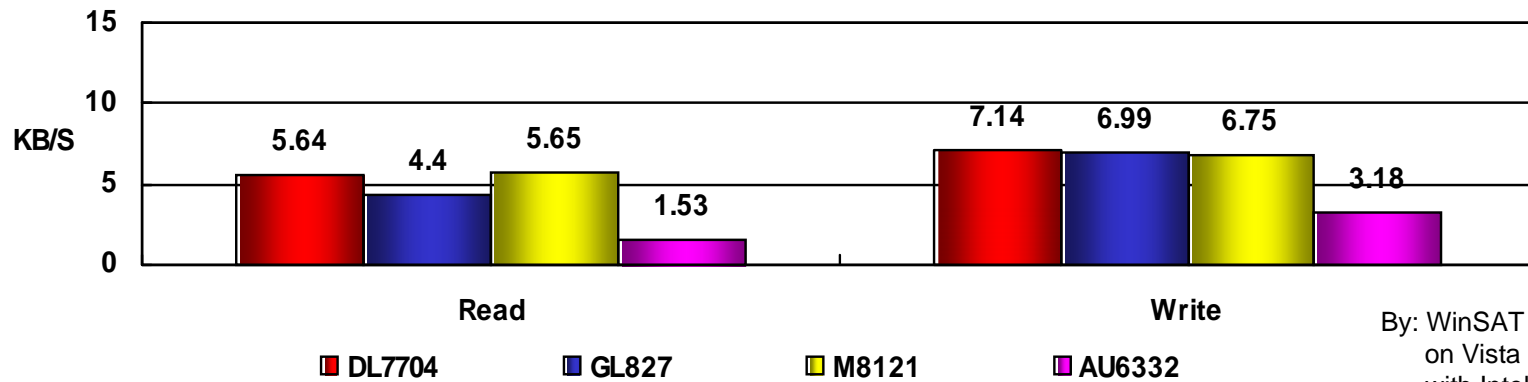
The Best Read/Write Performance* (Comparison)

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SanDisk Extreme III SD card 1GB

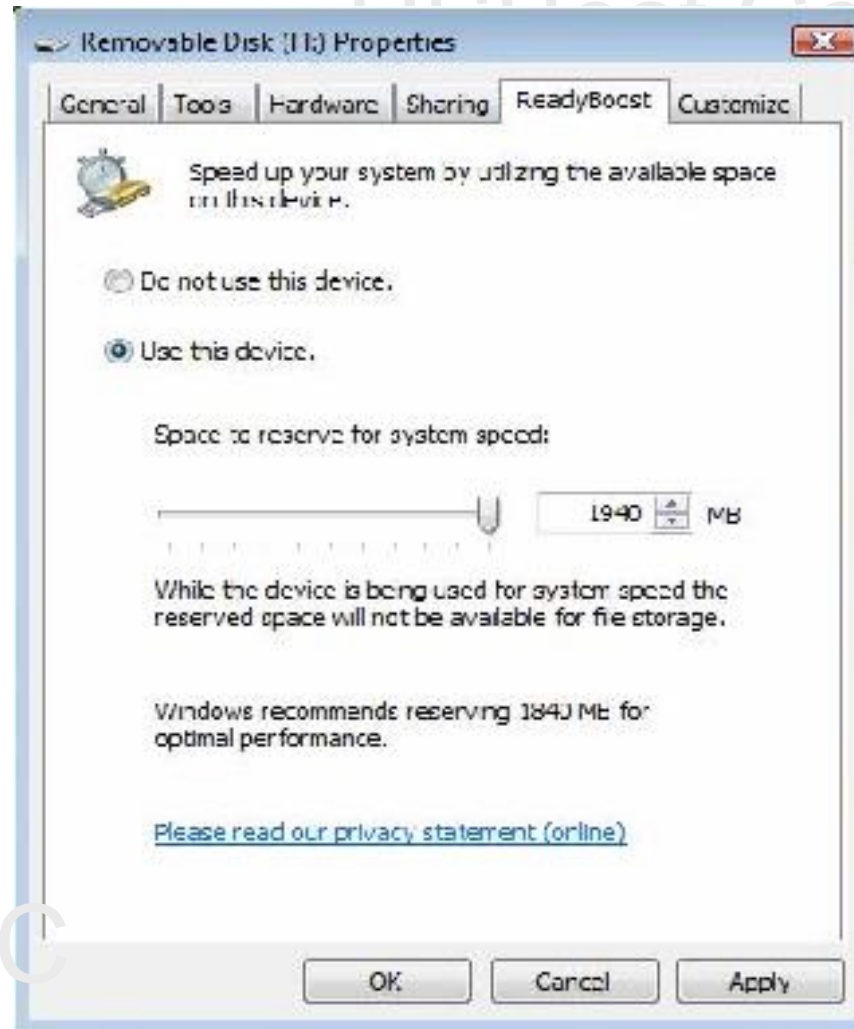


Apacer 150x SD card 2GB



By: WinSAT
on Vista Ultimate
with Intel ICH8

Outstanding Vista Ready Boost Support (Result: EMD ReadyBoost Enable)



The Least BOM list with 2L PCB (w/o EMI)

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👁 R/C: only 4 ea capacitors and 2 ea resistors for simple lowest cost BOM

Item	Qty	Description	Pattern	Reference	Part Value
1	1	Connector	∫6in1	CN1	SDMM-X0-0X11
2	2	Capacitor	0603 / NPO / 6.3V	C3,C4	22pF
3	2	Capacitor	0805 / X5R / 6.3V	C1,C2	1.0uF
4	1	LED	SMD/0603	LED1	LED GREEN
5	1	Resistor	0603 / +-5% / 6.3V	R1	1M
6	1	Resistor	0603 / +-5% / 6.3V	R2	470
7	1	Connector	USB-A-Male	USB1	USB-A-Male
8	1	DL7704	SSOP-28	U1	DL7704-S2
9	1	Crystal	49U-SMD	U2	12MHz

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The Least BOM Cost with 2L PCB (w/o EMI)

*UFN	2UZ	1BUUFSO	3FGFSFODF	1BSU7BMVF	1SIDF 3_#
		4% 4PDLFU	\$/	□4% 4PDLFU	
		110 7	\$	Q'	
		93 7	\$	IV'	
		¢ 3FE-&%	\$	-&% 3FE	
		7	\$		
		7	-&%		
		64# " .BMF	3	64# " .BMF	
		4401	3	65 4 %JF	
		6 %*1	64#	.>[
		1\$#	6	1\$#	
		1MBTUJ \$BTF	6		
		#POEJOH XISFT	1\$#		
		4.5 #BDL4PMIE			
		package			
				蔡Υ	

CE/FCC BOM list provide with 2L PCB (w/ EMI)

Item	Qty	Description	Pattern	Reference	Part Value
1	1	Connector	Simple SD	CN1	SDCN-00-0015
2	0*	Capacitor	0603 / NPO / 6.3V	C13	5pF
3	2	Capacitor	0603 / NPO / 6.3V	C8,C10	22pF
4	0*	Capacitor	0603 / NPO / 6.3V	C15,C16,C17,C18	27pF
5	5*	Capacitor	0805 / X5R / 6.3V	C4,C6,C7,C9,C11,C14	0.1uF
6	2	Capacitor	0805 / X5R / 6.3V	C3,C5	1uF
7	3	Capacitor	0805 / X5R / 6.3V	C1,C2,C12	4.7uF
8	1	LED	SMD/0603	LED1	LED GREEN
9	3	Ferrite Bead	0603 / +-25% / 300mA	L1,L2,L3	SB221 / 300mA / 6.3V
10	1	Resistor	0603 / +-5% / 6.3V	R1	30K
11	1	Resistor	0603 / +-5% / 6.3V	R2	1M
12	1	Resistor	0603 / +-5% / 6.3V	R3	470
13	1	Connector	USB-A-Male	USB1	USB-A-Male
14	1	USB IC	SSOP-28	U1	DL7704-S2
		Crystal	49U-SMD	U2	12MHz
16	1*	EEPROM	SOIC-8	U3	X24C02/SOIC

* : Optional for EMI or Customized setting