



## 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
<b>SanDisk Extreme III 1GB</b>	Sequential Read	<b>19856</b>	19677	4100	16505
	Sequential Write	<b>18510</b>	18354	4439	16179
	Random Read	<b>18775</b>	17106	4100	16060
	Random Write	<b>5037</b>	5097	2029	4718
<b>APACER 150X 2GB</b>	Sequential Read	<b>19445</b>	18723	4241	16100
	Sequential Write	<b>16886</b>	16259	4225	15712
	Random Read	<b>18560</b>	17471	4230	12723
	Random Write	<b>1220</b>	1203	859	1138

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# The Best Read/Write Performance (Vista)

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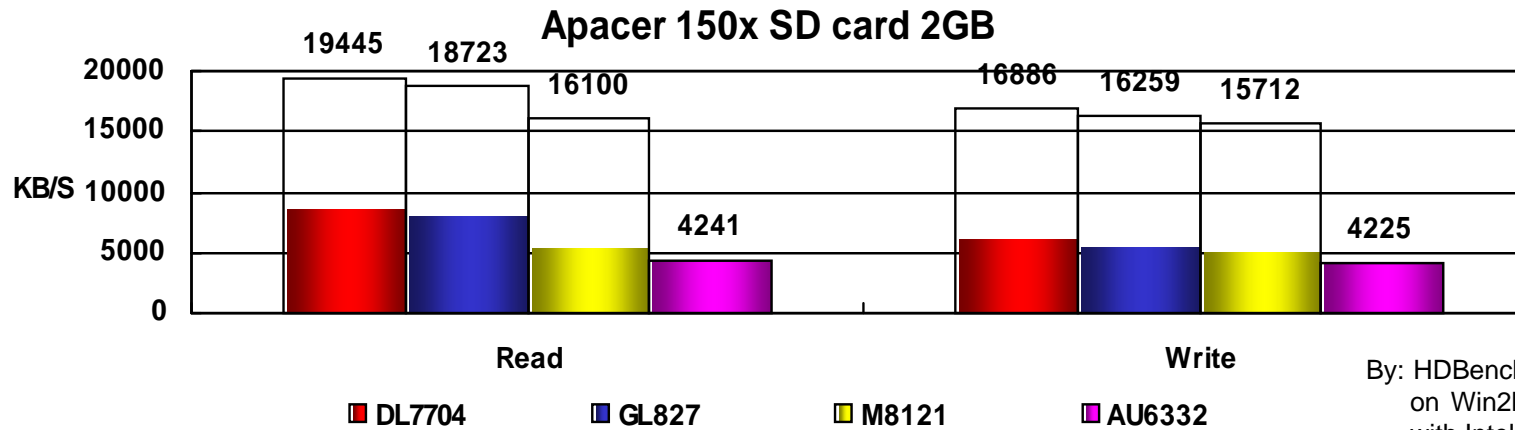
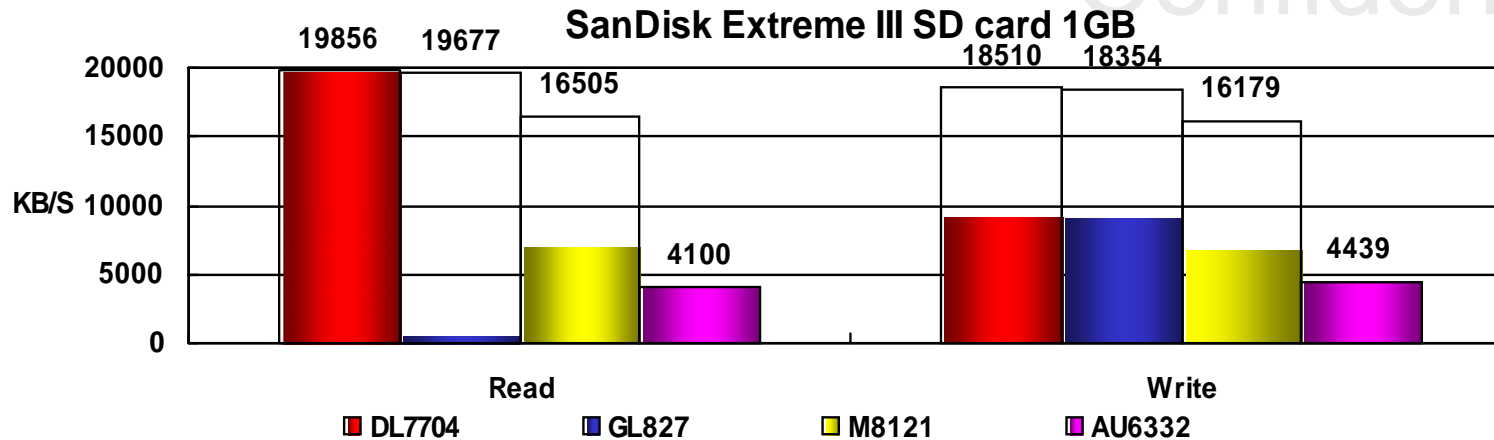
WinSAT with Windows Vista Ultimate

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

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# The Best Read/Write Performance\* (Comparison)

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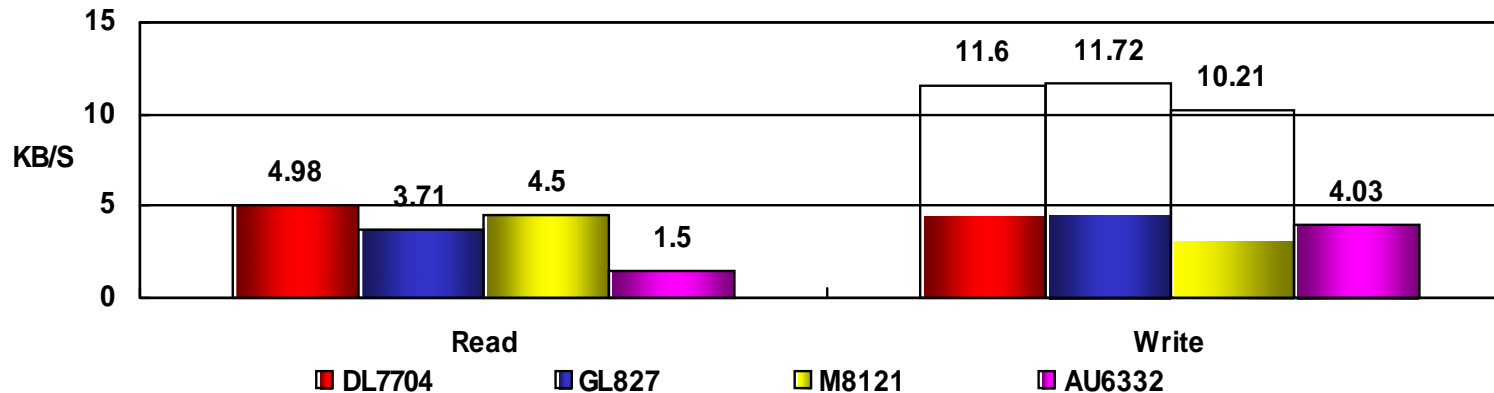


By: HDBench v3.4  
on Win2k SP4  
with Intel ICH6

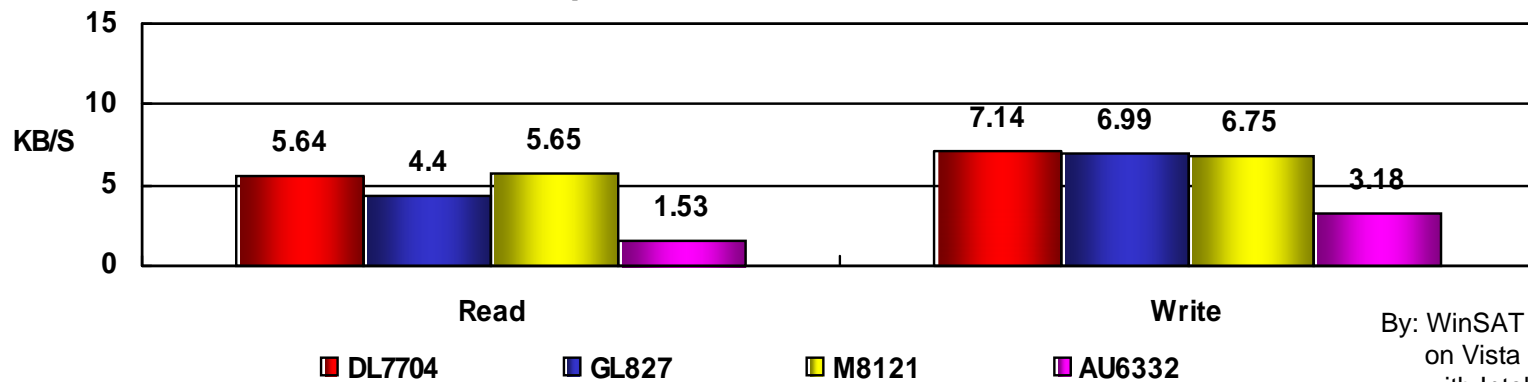
# The Best Read/Write Performance\* (Comparison)

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### SanDisk Extreme III SD card 1GB

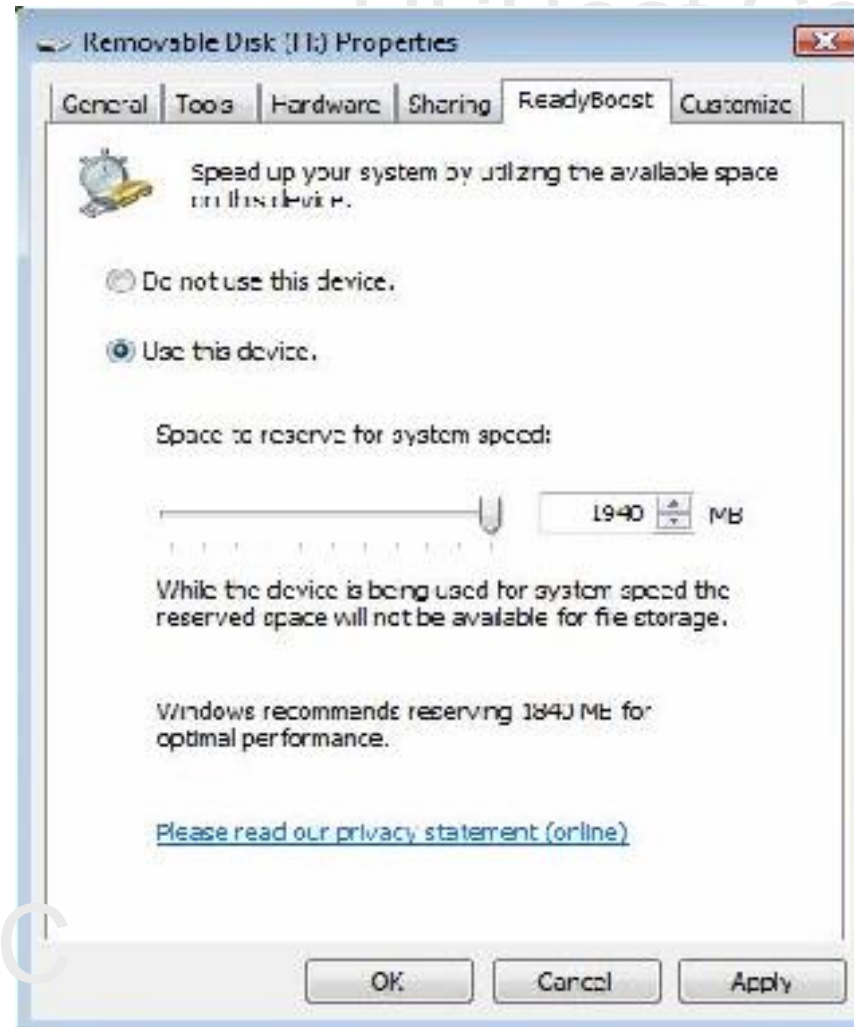


### Apacer 150x SD card 2GB



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	J6in1	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	1SJD 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