

A COMPARISON OF 3 EXTERNAL "USB 3" HARD DRIVE ENCLOSURES

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SUMMARY

We compared three popular external "USB 3.0" 3.5-inch hard drive enclosures:

The Thermaltake and Rosewill enclosures had similar "read" and "write" performance benchmarks.

The Sabrent enclosure performed worst relative to the Thermaltake and Rosewill enclosures.³

METHODOLOGY FOR COMPARING EXTERNAL "USB" 3 HARD DRIVES:

METHODOLOGY

- We used the free "FlashBench" software program to put the three models of hard drive enclosures through "Writes" and "Reads" of files to a Seagate "Barracuda" 1-Terabyte mechanical hard drive.

METHODOLOGY (continued)

- The "FlashBench" software program runs in "Windows 8.1" (and all other versions of "Windows..".) It runs a **USB-connected** flash drive, SSD, or mechanical hard drive through a series of real world tests consisting of writes and reads of files of different sizes.

METHODOLOGY (continued)

- To download "FlashBench", go to <http://usbflashspeed.com/>
- To learn more about "FlashBench", go to <http://www.pcworld.com/article/2455205/test-the-speed-of-your-usb-drives.html>

"THERMALTAKE" MAX 5G HARD DRIVE ENCLOSURE

- See http://www.thermaltakeusa.com/Storage/3_5_Solutions/_/C_00001666/Max_5G/design.htm



Thermaltake
COOL ALL YOUR LIFE

Max 5G

Active Cooling

3.5" External Hard Drive Enclosure

Features:

- The world's first 3.5" enclosure with dual 80mm silent fans.
- Fascinating blue LEDs fans with built-in switch.
- Rotatable stand for added overall enclosure stability.
 - Maximum Transfer Rate up to 5.0 Gbps.
 - Backward-Compatible with USB 2.0 & 1.1.
 - Premium Shielded USB 3.0 Cable.



USB 3.0

**SUPER
SPEED**

SATA 3.0

Compatible



8cm LED Fan
x 2

3 Thermaltake
YEAR
WARRANTY

*Hard Drive Not Included

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COOL YOUR LIFE

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Features:

- The world's first 3.5" enclosure with dual 80mm silent fans.
 - Fascinating blue LEDs fans with built-in switch.
- Rotatable stand for added overall enclosure stability.
 - Maximum Transfer Rate up to 5.0 Gbps.
- Backward-Compatible with USB 2.0 & 1.1.
 - Premium Shielded USB 3.0 Cable.

Specification

Model	Max 5G
Case Type	3.5" SATA HDD
Weight	405g
Dimension (H x W x D)	145 x 207 x 47 mm
Material	Metal Mesh & Plastic
Interface	SATA to USB 3.0
SATA compatibility	SATA III, SATAII, SATAI
Transfer Rate	USB3.0: up to 5Gbps
Power Source	a. Power Adapter
	b. CE, FCC, GOST R Certified
Accessories	USB 3.0 Cable Power Adapter Hexagon tool
Note	Supports SATA III (6Gbps) Hard Drives with maximum speed up to 6Gbps (maximum theoretical speed offered by USB 3.0)
Fan Dimension	80 x 80 x 15mm
Current	0.15A
Voltage	12V
Fan Speed	1200 RPM
Noise	12 dBA

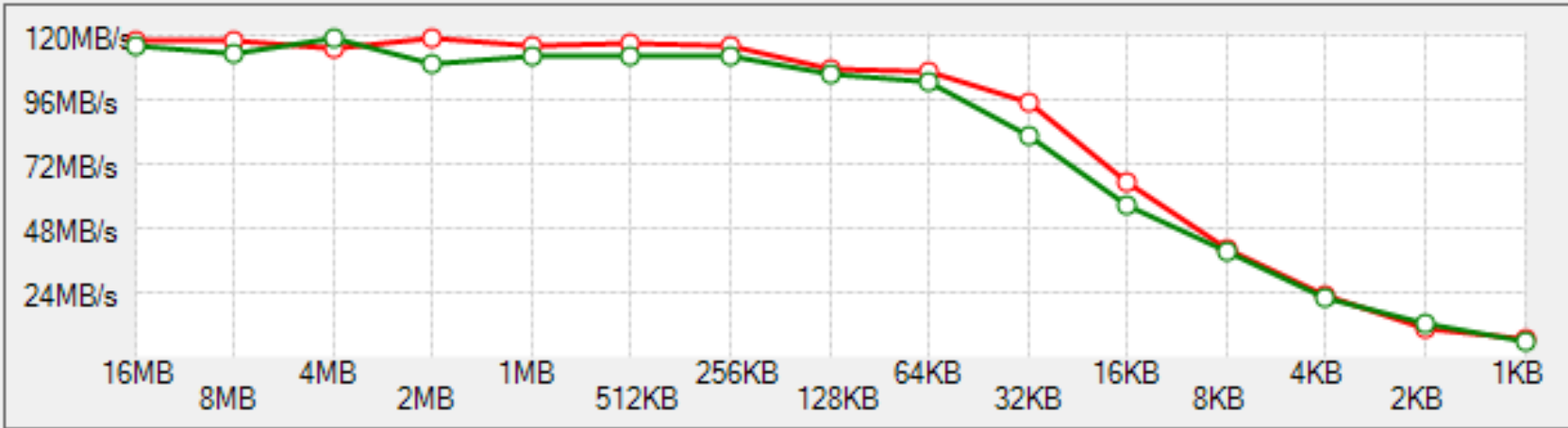
USB Flash Benchmark

Drive: [USB] W:\

Info
 S/N: 201310180B7D
 Vendor: ST310003
 Product: 33AS
 Model: ST310003 33AS
 VID: 152D PID: 2567
 Size: 953867 Mb

Send Report

2k:2560 Write Speed:12.29MB/s
 2k:2560 Write Speed:8.85MB/s
 2k:2560 Write Speed:11.91MB/s
 2k:2560 Average Write Speed:10.78MB/s
 2k:2560 Read Speed:11.68MB/s
 2k:2560 Read Speed:12.32MB/s
 2k:2560 Read Speed:12.34MB/s
 2k:2560 Average Read Speed:12.11MB/s
 1k:5120 Write Speed:6.30MB/s
 1k:5120 Write Speed:6.37MB/s
 1k:5120 Write Speed:6.23MB/s
 1k:5120 Average Write Speed:6.30MB/s
 1k:5120 Read Speed:6.12MB/s
 1k:5120 Read Speed:6.32MB/s
 1k:5120 Read Speed:5.11MB/s
 1k:5120 Average Read Speed:5.80MB/s
 Deleting file.
 Benchmark done.
 Ended at 4/17/2015 10:57:13 PM



"ROSEWILL" "RX-358 U3C" HARD DRIVE ENCLOSURE

- See http://www.rosewill.com/products/1886/ProductDetail_Overview.htm

Rosewill

Super Speed
USB3.0

Super Speed
eSATA



RX-358 U3C

**3.5" SATA to
USB 3.0 & eSATA External Enclosure**

3.5" SATA vers USB 3.0 & eSATA Boîtier Externe



3.5" SATA to USB 3.0 & eSATA External Enclosure

3.5" SATA vers USB 3.0 & eSATA Boîtier Externe

FEATURES

- Supports up to 2 TB
- Fan ON/OFF switch for internal Cooling
- OS Supports Win2000/ME/XP/VISTA/7 and Mac OS 8.6/9.x/10.x and above and Linux kernel after 2.4.1.0
- Power : 100-240 AC Adapter with 12V/DC output
- SATA to USB 3.0, Backward compatible to USB 2.0/1.1
- Plug & Play and Hot-Swappable
- Support SATA III to eSATA interface
- Material : Rigid Aluminum Body and ABS plastic panel
- Dimension : (LxWxH) 229x124x33mm

NOTICE

Enable Hot-Swap function:
In order to enable HOT-SWAP function, please check to make sure the motherboard supports HOT-SWAP function. Otherwise, the hot swappable function won't be work as well. (Please refer back to motherboard user guide)

EIGENSCHAFTEN

- Unterstützt bis zu 2 TB
- Fan ON / OFF Schalter für interne Kühlung
- Betriebssystem unterstützt Win2000/ME/XP/VISTA/7 und Mac OS 8.6/9.x/10.x und oben und Linux Kern nach 2.4.1.0
- Energie : 100-240 AC Adapter mit der 12V/DC Ausgang
- SATA zu USB 3.0, abwärtskompatibel zu USB 2.0/1.1
- Sofort betriebsbereit und Hot-Swappable
- Unterstützt SATA III bis eSATA Schnittstelle
- Material : Starrer Aluminiumkörper und ABS 94V0 Schale Plastik
- Dimension : (L x B x H) 229*124*33 mm

BEMERKUNG

Die Hot-Swap Funktion Ermöglichen:
Um die Hot-Swap Funktion zu ermöglichen, überprüfen Sie bitte, um sicher zu sein, dass die Hauptplatine Hot-Swap Funktion unterstützt. Andernfalls wird die Hot-Swap Funktion nicht funktionieren. (Bitte beziehen Sie sich zurück auf dem Hauptplatine-Bedienungsanleitung)

CARACTERISTIQUES

- Supporter jusqu'à 2 TB
- Fan ON / OFF de refroidissement interne
- OS supporte Win2000/ME/XP/VISTA/7, et Mac OS 8.6/9.x/10.x et supérieur et Linux kernel après 2.4.1.0
- Puissance : adaptateur 100-240 AC (courant alternatif) avec la sortie 12V/DC
- SATA à USB 3.0, Arrière compatible à USB 2.0/1.1
- Prise & Affichage et Remplaçable à chaud
- Supporter SATA III sur l'interface eSATA
- Matériel : Corps Aluminium Rigide et plastique en forme de coquillage ABS 94V0
- Dimension : (LxWxH) 229*124*33mm

NOTE

Activer la fonction de remplacement à chaud:
Pour activer la fonction de Remplacement à chaud, merci de vérifier pour s'assurer que la carte mère supporte le Remplacement à chaud. Autrement, la fonction de remplacement à chaud ne marche pas aussi. (Veuillez consulter le guide d'utilisateur)

CARACTERÍSTICAS

- Apoya a 2 TB
- Fan interruptor ON / OFF para refrigeración interior
- OS apoya Win2000/ME/XP/VISTA/7, y Mac OS 8.6/9.x/10.x y superiores y Linux kernel después de 2.4.1.0
- Potencia : 100-240 AC adaptador con salida 12V/DC
- SATA a USB 3.0, Compatible hacia atrás a USB 2.0/1.1
- Enchufar & Reproducir y Caliente-Alternativo
- Apoya SATA III a eSATA interface
- Material : Cuerpo de Aluminio Rígido y ABS 94V0 concha plástica
- Dimensión : (LxWxH) 229*124*33mm

NOTICIA

Activar la función de Intercambio Caliente:
Para activar la función de INTERCAMBIO CALIENTE, asegúrese de que la Placa Principal soporta la función de INTERCAMBIO CALIENTE. De lo contrario, la función de intercambio caliente no puede trabajar bien. (Refiérase a la guía del usuario de la placa principal)

产品特点

- 支持 2 TB 各式品牌
- 内置风扇电源开关
- OS supports Win2000/ME/XP/VISTA/7, and Mac OS 8.6/9.x/10.x and above and Linux kernel after 2.4.1.0
- 电源供应器: 100-240 AC adapter with 12V/DC output
- SATA to USB 3.0, 并向下兼容 USB 2.0/1.1
- 支援热插拔
- 支援SATA III 硬盘
- 产品原料: 铝镁合金和ABS 94V0 塑料材料
- 体积: (长x宽x高) 229*124*33mm

注意

eSATA 热插拔功能:
在使用eSATA热插拔功能前,请务必确认主机板有支援此热插拔功能.如不支援,eSATA将无法正常使用(请参阅主机板使用说明书)



17152248

SN:

Enclosure

Model NO.

RX-358 U3C SLV



8 98745 03722 7

MADE IN CHINA

www.rosewill.com



RX-358 U3C BLK

RX-358 U3C SLV



- Built-in 80mm Cooling Fan
- Built-in 80mm Lüfter
- Construit en 80mm ventilateur de refroidissement
- Built-in 80mm Cooling Fan
- 内建80mm风扇



- Aluminum Body
- Aluminiumgehäuse
- Corps en aluminium
- Cuerpo de aluminio
- 铝镁合金外壳



- Fan ON/OFF switch for internal Cooling
- Fan ON / OFF Schalter für interne Kühlung
- Fan ON / OFF de refroidissement interne
- Fan interruptor ON / OFF para refrigeración interior
- 内建风扇电源开关



- Dual Interfaces
- Dual-Schnittstellen
- Dual Interfaces
- Dual Interfaces
- 双介面

USB Flash Benchmark

Drive: [USB] W:\ Refresh list

Info

S/N: 9TE0EY5G

Vendor: ST310003

Product: 33AS

Model: ST310003 33AS

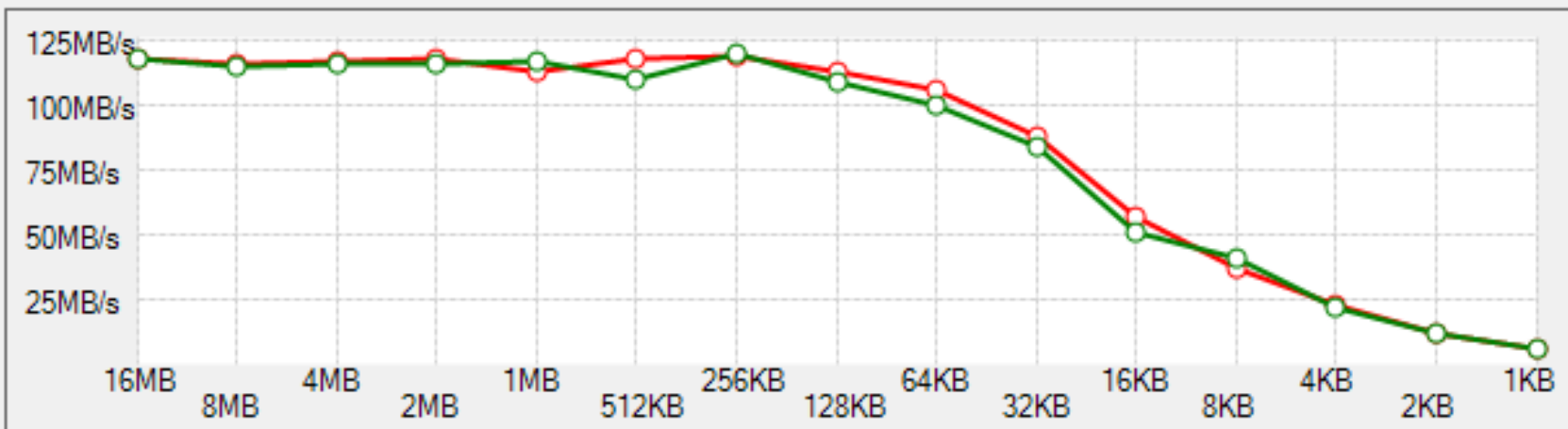
VID: 174C PID: 5106

Size: 953867 Mb

Send Report

Restart benchmark

2k:2560 Write Speed:12.65MB/s
 2k:2560 Write Speed:11.89MB/s
 2k:2560 Write Speed:11.65MB/s
 2k:2560 Average Write Speed:12.05MB/s
 2k:2560 Read Speed:11.37MB/s
 2k:2560 Read Speed:12.32MB/s
 2k:2560 Read Speed:12.49MB/s
 2k:2560 Average Read Speed:12.04MB/s
 1k:5120 Write Speed:5.86MB/s
 1k:5120 Write Speed:6.10MB/s
 1k:5120 Write Speed:6.30MB/s
 1k:5120 Average Write Speed:6.08MB/s
 1k:5120 Read Speed:6.35MB/s
 1k:5120 Read Speed:6.27MB/s
 1k:5120 Read Speed:6.37MB/s
 1k:5120 Average Read Speed:6.33MB/s
 Deleting file.
 Benchmark done.
 Ended at 4/17/2015 10:53:11 PM



"SABRENT" "EC-7F83" HARD DRIVE ENCLOSURE

- See <http://www.sabrent.com/category/hard-drive-enclosures/EC-7F83/>

SABRENT

Connecting Differently™

HDD ENCLOSURE
GABINETE PARA DISCO DURO
BOÎTIER DE DISQUE DUR

USB 3.0 ENCLOSURE WITH COOLING FAN FOR 3.5" SATA HARD DRIVE

Connect any 3.5" SATA Hard Drive to your computer through an available USB 3.0 port



EC-7F83

FEATURES

- Solid aluminum case
- Supports any 3.5" SATA hard drives
- SuperSpeed USB 3.0 interface
- Up to 5Gbps transfer speeds
- Built-in cooling fan for heat dissipation
- Plug & Play, Hot-Swappable
- Power input: External, 12V AC, 2A

PACKAGE CONTENTS

- USB 3.0 hard drive enclosure
- USB 3.0 cable
- Power adapter
- Screwdriver and assembly screws
- Enclosure stand
- User manual

CARACTERISTICAS

- Gabinete de aluminio sólido
- Compatible con discos duros 3.5" SATA
- Interfaz SuperSpeed USB 3.0
- Transferencia de hasta 5Gbps
- Fan incorporado para disipar el calor
- Plug & Play, Hot-Swappable
- Alimentación: Externa, 12V AC, 2A

CONTENIDO DE LA CAJA

- Gabinete USB 3.0
- Cable USB 3.0
- Adaptador de la energía
- Destornillador y tornillos de ensamblaje
- Soporte
- Manual del usuario

FONCTIONS

- Boîtier en aluminium solide
- Supporte n'importe quel 3.5" SATA disque dur
- Interface SuperSpeed USB 3.0
- Jusqu'aux vitesses de transfert 5Gbps
- Ventilateur intégré pour la dissipation thermique
- Plug & Play, Hot-Swappable
- Puissance fournie : Externe, 12V AC, 2A

CONTENU DE L'EMBALLAGE

- Boîtier disque dur USB 3.0
- Câble USB 3.0
- Adaptateur d'électricité
- Tournevis et vis d'assemblage
- Support pied du Boîtier
- Manuel d'utilisation

ESPECIFICAÇÕES

- Caso de alumínio sólido
- Compatível discos rígidos 3.5" SATA
- Interface SuperSpeed USB 3.0
- Até 5Gbps de transferência
- Ventilador para dissipação de calor
- Plug & Play, Hot-Swappable
- Entrada de alimentação: Externa, 12V AC, 2A

CONTEÚDO DA EMBALAGEM

- USB 3.0 disco rígido recinto
- Cabo USB 3.0
- Adaptador de alimentação
- Chave de fenda e parafusos de montagem
- Suporte de gabinete
- Manual do usuário

HOW IT WORKS



*HARD DRIVE NOT INCLUDED / DISQUE DUR NON INCLUS



www.sabrent.com



PLEASE RECYCLE



MADE IN CHINA / FABRICADO EN CHINA / FABRIQUE EN CHINE / FEITO EM CHINA

USB Flash Benchmark

Drive: [SCSI] W:\

Info

S/N: SCSI\DISK&VEN_ASMEDIA&F

Vendor:

Product:

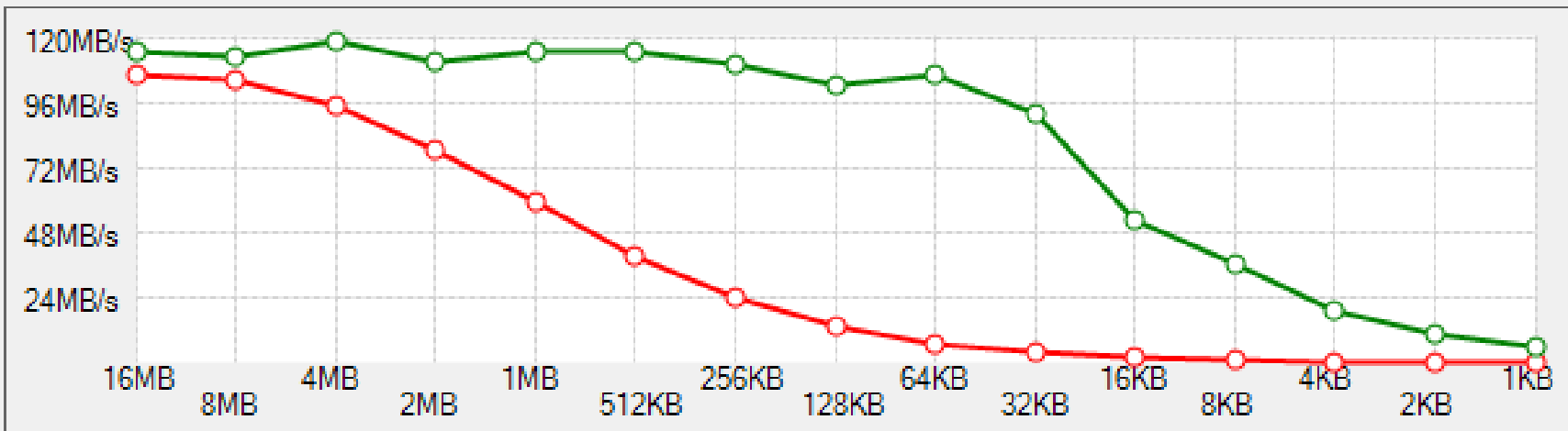
Model: ASMedia AS2115 SCSI Disk

VID: PID:

Size: 953867 Mb

Send Report

2k:2560 Write Speed:0.23MB/s
 2k:2560 Write Speed:0.23MB/s
 2k:2560 Write Speed:0.23MB/s
 2k:2560 Average Write Speed:0.23MB/s
 2k:2560 Read Speed:9.02MB/s
 2k:2560 Read Speed:11.59MB/s
 2k:2560 Read Speed:10.99MB/s
 2k:2560 Average Read Speed:10.41MB/s
 1k:5120 Write Speed:0.12MB/s
 1k:5120 Write Speed:0.12MB/s
 1k:5120 Write Speed:0.12MB/s
 1k:5120 Average Write Speed:0.12MB/s
 1k:5120 Read Speed:6.33MB/s
 1k:5120 Read Speed:5.68MB/s
 1k:5120 Read Speed:6.10MB/s
 1k:5120 Average Read Speed:6.02MB/s
 Deleting file.
 Benchmark done.
 Ended at 4/17/2015 10:49:15 PM



"CORSAIR" 32-GIGABYTE "FLASH
VOYAGER" **"USB 3"** "FLASH DRIVE"

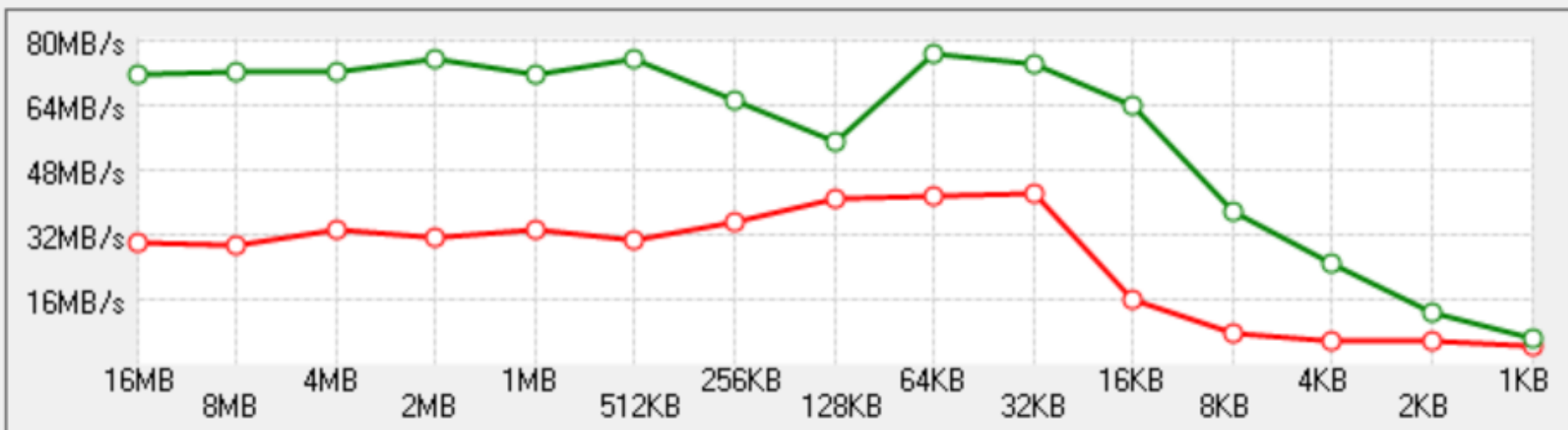
- See

Drive:

Info

S/N: Vendor: Product: Model: VID: PID: Size: Send Report

2k:2560 Average Write Speed:5.82MB/s
2k:2560 Read Speed:12.99MB/s
2k:2560 Read Speed:13.01MB/s
2k:2560 Read Speed:13.01MB/s
2k:2560 Average Read Speed:13.00MB/s
1k:5120 Write Speed:4.47MB/s
1k:5120 Write Speed:4.46MB/s
1k:5120 Write Speed:4.32MB/s
1k:5120 Average Write Speed:4.42MB/s
1k:5120 Read Speed:6.49MB/s
1k:5120 Read Speed:6.49MB/s
1k:5120 Read Speed:6.50MB/s
1k:5120 Average Read Speed:6.49MB/s
Deleting file.
Benchmark done.
Ended at 4/22/2015 3:33:57 PM
Submitting report.
link: <http://usbflashspeed.com/96572>
Submitting report. [Done]



"KINGSTON" 32-GIGABYTE
"DATATRavelER G3" **"USB 2"**
"FLASH DRIVE"

- See



Drive: [USB] E:\

Info

S/N: 001D60B1639EEC10A6C301C

Vendor: KINGSTON

Product: DATATRAVELER_G3

Model: Kingston DataTraveler G3

VID: 0930 PID: 6545

Size: 29768 Mb

Send Report

2k:2560 Average Write Speed:0.51MB/s
 2k:2560 Read Speed:1.42MB/s
 2k:2560 Read Speed:1.43MB/s
 2k:2560 Read Speed:1.43MB/s
 2k:2560 Average Read Speed:1.42MB/s
 1k:5120 Write Speed:0.26MB/s
 1k:5120 Write Speed:0.25MB/s
 1k:5120 Write Speed:0.26MB/s
 1k:5120 Average Write Speed:0.25MB/s
 1k:5120 Read Speed:0.74MB/s
 1k:5120 Read Speed:0.74MB/s
 1k:5120 Read Speed:0.73MB/s
 1k:5120 Average Read Speed:0.74MB/s
 Deleting file.
 Benchmark done.
 Ended at 4/17/2015 11:33:24 PM
 Submitting report.
 link: Internal error
 Submitting report. [Done]

