

# iSMART Linux

## iSMART Disk Info

```
ubuntu@ubuntu-System-Product-Name:~/iSMART_6.4.06_linux_x86_x64/sample$ sudo ./iSMART_64 -d /dev/sda -a 1
```

```
sudo ./iSMART_64 -d /dev/sda -a 1
```

- `-d`: 指定查詢 Disk
- `-a 1`: 將 iAnalyzer 開啟.

```
* Innodisk iSMART V6.4.06                                     2022/06/17 *
*****
Model Name       : DGM24-B56M71ECAQF-B553
Serial Num      : 20170701AA0000000001
FW Version      : AABBCDD
WWN / EUI64     : 524693E000000000
-----
BusType         : 11
Capacity       : 93.16 GB
LBAs           : 195371568
Health         : 99.80
PE Cycle       : 3000
AVG. Erase     : 6
Temperature    : 32
Power ON Hours : 172
Power ON Cycle : 2067
LBA48          : YES
HPA            : NO
NCQ            : YES
TRIM           : YES
Security       : YES
TSensor        : YES
Crypto Erase   : NO
Transfer       : SATA/600
Interface      : Serial ATA
Standard       : ATA10
Analyzer       : YES (Enable) Ver 1
Write Protect  : YES (Disable)
InnoRobust     : NO
QEraser       : NO
```

- Model name: 產品號
- Serial Num: 序號
- FW Version: 外顯 FW
- WWN / EUI64: 全球名稱
- BusType: 硬碟匯流排類型( Serial Attached SCSI(SAS) )
- Capacity: 硬碟容量

- LABs: 區塊位址數
- Health: 健康度
- P/E Cycle: 寫入/抹除次數
- AVG. Erase: 平均抹除次數
- Temperature: 硬碟溫度
- Power on Hours: 上電時間(小時)
- Power ON Cycle: 上電次數
- LBA48: 磁碟讀取方式
- HPA: 主機保護區
- NCQ: 命令緩衝區
- TRIM: ATA資料集管理指令
- Security: 加密
- TSensor: 溫度感測器
- Crypto Erase: 加密刪除
- Transfer: 傳輸模式
- Interface: 傳輸界面
- Standard: 規範
- Analyzer: 分析儀
- Write Protect: 寫入保護
- InnoRobust: 資料安全技術
- QErase: 快速清除

ID	RAW Value	Value	SMART Attributes
[05]	[1200646400000000000000]	[0]	Later Bad
[09]	[1200AC64AC000000000000]	[172]	Power On Hours
[0C]	[1200130013080000000000]	[2067]	Power Cycle Count
[A3]	[12001E001E000000000000]	[30]	Total Bad Block Count
[A5]	[1200080008000000000000]	[8]	Max Erase Count
[A7]	[1200060006000000000000]	[6]	Avg Erase Count
[A9]	[0000640064000000000000]	[100]	Device Life
[AA]	[1300646402030000000000]	[770]	Spare Block Count
[AB]	[1200006400000000000000]	[0]	Program Fail Count
[AC]	[1200006400000000000000]	[0]	Erase Fail Count
[C0]	[12000E000E080000000000]	[2062]	Abnormal power cycle count
[C2]	[0200206420001800270320]	[32]	Temperature
[E5]	[00006464983C98B3767200]	[0]	Flash ID
[EB]	[0200000000000000000000]	[0]	Later Bad Block Read
[EB]	[0200000000000000000000]	[0]	Later Bad Block Write
[EB]	[0200000000000000000000]	[0]	Later Bad Block Erase
[F1]	[12006464E1240000000000]	[9441]	Total LBAs Written
[F2]	[120064643A130000000000]	[4922]	Total LBAs Read

- Later Bad: 使用後造成故障區塊數
- Power On Hours: 上電時間(小時)
- Power Cycle Count: 上電次數
- Total Bad Block Count: 總共故障區塊數
- Max Erase Count: 最大抹除數
- Avg Erase Count: 平均抹除數
- Device Life: 硬碟壽命
- Spare Block Count: 備用區塊數
- Program Fail Count: 程序失敗次數
- Erase Fail Count: 抹除失敗次數
- Abnormal power cycle count: 不正常斷電次數
- Temperature: 溫度
- Flash ID: Flash ID
- Later Bad Block Read: 使用後造成故障區塊數(讀取)
- Later Bad Block Write: 使用後造成故障區塊數(寫入)
- Later Bad Block Erase: 使用後造成故障區塊數(抹除)
- Total LBAs Written: 總區塊位址數(寫入)
- Total LBAs Read: 總區塊位址數(讀取)

Sequential Read		
Size	Percentage	Count
128.x K	39%	(429777)
64.x K	3%	(34637)
32.x K	14%	(144683)
16.x K	40%	(429569)
8.x K	1%	(5836)
4.x K	1%	(2839)
0.x K	2%	(17486)

### Sequential Write

Size	Percentage	Count
128.x K	9%	(172305)
64.x K	1%	(8338)
32.x K	81%	(1531433)
16.x K	1%	(17410)
8.x K	1%	(12537)
4.x K	1%	(17798)
0.x K	6%	(108744)

### Random Read

Size	Percentage	Count
128.x K	6%	(24515)
64.x K	15%	(62843)
32.x K	32%	(129992)
16.x K	4%	(14386)
8.x K	8%	(30956)
4.x K	2%	(9723)
0.x K	33%	(135605)

### Random Write

Size	Percentage	Count
128.x K	1%	(17683)
64.x K	1%	(13034)
32.x K	1%	(28796)
16.x K	1%	(28374)
8.x K	1%	(37017)
4.x K	1%	(81186)
0.x K	94%	(13767246)