

256G EMMC速率测试

测试方法

- 格式化emmc, 清除所有内容[Ext3、Ext4、FAT、FAT32、NTFS、exFAT、Sparse、Raw-CSDN博客](#);

```
# 格式化成ext4格式
mkfs.ext4 /dev/mmcblk0
```

- **每次**测试之前先清除缓存; 内核文档中有三种释放程度, 这里直接使用**第三条指令**释放所有缓存; 并使用**free -h**查看缓存情况;

```
# To free pagecache:
echo 1 > /proc/sys/vm/drop_caches
# To free reclaimable slab objects (includes dentries and inodes):
echo 2 > /proc/sys/vm/drop_caches
# To free slab objects and pagecache:
echo 3 > /proc/sys/vm/drop_caches
```

- 分别测试**16K、4K、1K**读写性能, 读写文件大小为2GBytes, mmc挂载到/mnt目录下;

```
# 挂载到/mnt目录
mount /dev/mmcblk0 /mnt
# 读
dd if=/mnt of=/dev/null bs=1k/4k/16k count=2097152/524288/131072
# 写
dd if=/dev/zero of=/mnt/test bs=1k/4k/16k count=2097152/524288/131072
```

测试结果

[1] 读性能

- 1K

```
root@bionic:/# echo 3 > /proc/sys/vm/drop_caches
root@bionic:/# dd if=/mnt/test of=/dev/null bs=1k count=2097152
2097152+0 records in
2097152+0 records out
2147483648 bytes (2.1 GB, 2.0 GiB) copied, 34.0007 s, 63.2 MB/s
root@bionic:/# █
```

- 4K

```
root@bionic:/# echo 3 > /proc/sys/vm/drop_caches
root@bionic:/# dd if=/mnt/test of=/dev/null bs=4k count=524288
524288+0 records in
524288+0 records out
2147483648 bytes (2.1 GB, 2.0 GiB) copied, 33.7797 s, 63.6 MB/s
root@bionic:/# █
```

- 16K

```
root@bionic:/# echo 3 > /proc/sys/vm/drop_caches
root@bionic:/# dd if=/mnt/test of=/dev/null bs=16k count=131072
131072+0 records in
131072+0 records out
2147483648 bytes (2.1 GB, 2.0 GiB) copied, 33.8532 s, 63.4 MB/s
root@bionic:/# █
```

[2] 写性能

- 1K

```
root@bionic:/# echo 3 > /proc/sys/vm/drop_caches
root@bionic:/# dd if=/dev/zero of=/mnt/test bs=1k count=2097152
2097152+0 records in
2097152+0 records out
2147483648 bytes (2.1 GB, 2.0 GiB) copied, 31.9852 s, 67.1 MB/s
root@bionic:/# █
```

- 4K

```
root@bionic:/# echo 3 > /proc/sys/vm/drop_caches
root@bionic:/# dd if=/dev/zero of=/mnt/test bs=4k count=524288
524288+0 records in
524288+0 records out
2147483648 bytes (2.1 GB, 2.0 GiB) copied, 30.4305 s, 70.6 MB/s
root@bionic:/# █
```

- 16K

```
root@bionic:/# echo 3 > /proc/sys/vm/drop_caches
root@bionic:/# dd if=/dev/zero of=/mnt/test bs=16k count=131072
131072+0 records in
131072+0 records out
2147483648 bytes (2.1 GB, 2.0 GiB) copied, 30.3116 s, 70.8 MB/s
root@bionic:/# █
```