

SD Karte kopieren

Am sichersten ist es die Kopie im Terminal mit dem Programm "dd" durchzuführen. Dies kopiert die komplette Disk, nicht nur eine Partition.

Wenn man 2 SD Karten verbinden kann geht der Vorgang auch direkt. Dann einfach den "of" Parameter entsprechend anpassen.

1) Quell SD einsetzen und identifizieren

```
diskutil list
```

hier `"/dev/disk4"` mit ~8GB

```

/Volumes | $ diskutil list
/dev/disk0 (internal, physical):
#:          TYPE NAME              SIZE      IDENTIFIER
0:          GUID_partition_scheme   *500.3 GB  disk0
1:          Apple_APFS_ISC Container disk1    524.3 MB  disk0s1
2:          Apple_APFS Container disk3    494.4 GB  disk0s2
3:          Apple_APFS_Recovery Container disk2    5.4 GB    disk0s3

/dev/disk3 (synthesized):
#:          TYPE NAME              SIZE      IDENTIFIER
0:          APFS Container Scheme -    +494.4 GB  disk3
                        Physical Store disk0s2
1:          APFS Volume Macintosh HD    9.1 GB    disk3s1
2:          APFS Snapshot com.apple.os.update-... 9.1 GB    disk3s1s1
3:          APFS Volume Preboot         4.7 GB    disk3s2
4:          APFS Volume Recovery        799.4 MB  disk3s3
5:          APFS Volume Data            447.4 GB  disk3s5
6:          APFS Volume VM              2.1 GB    disk3s6

/dev/disk4 (external, physical):
#:          TYPE NAME              SIZE      IDENTIFIER
0:          GUID_partition_scheme   *7.9 GB   disk4
1:          Microsoft Reserved       33.6 MB   disk4s1
2:          Linux Filesystem         25.2 MB   disk4s2
3:          Linux Filesystem         268.4 MB  disk4s3
4:          Linux Filesystem         25.2 MB   disk4s4
5:          Linux Filesystem         268.4 MB  disk4s5
6:          Linux Filesystem         8.4 MB    disk4s6
7:          Linux Filesystem         100.7 MB  disk4s7
8:          Linux Filesystem         7.2 GB    disk4s8

/dev/disk6 (external, physical):
#:          TYPE NAME              SIZE      IDENTIFIER
0:          FDisk_partition_scheme   *4.0 TB   disk6
1:          Apple_HFS blau4TB        4.0 TB    disk6s1

```

2) Die Karte in ein Image File kopieren

```
~ | git:(master) ✗ $ sudo dd if=/dev/disk4 of=raspy7_8GB.dmg status=progress
```

Die Angabe des Homeverzeichnis mit '~' hat bei mir auf dem Mac nicht funktioniert. Also 'cd' um ins Homeverzeichnis zu kommen vor dem Kommando.

```

~ | git:(master) ✗ $ sudo dd if=/dev/disk4 of=raspy7_8GB.dmg
15523840+0 records in
15523840+0 records out
7948206080 bytes transferred in 498.540218 secs (15942959 bytes/sec)

```

3) Disk auswerfen

```
diskutil unmountDisk /dev/disk4
```

```
~ | git:(master) ✕ $ diskutil unmountDisk /dev/disk4
Unmount of all volumes on disk4 was successful
```

4) Target SD einsetzen und Device bestimmen

```
diskutil list
```

hier "/dev/disk4" mit ~128GB

```
~ | git:(master) ✕ $ diskutil list
/dev/disk0 (internal, physical):
#:

| #: | TYPE                          | NAME  | SIZE      | IDENTIFIER |
|----|-------------------------------|-------|-----------|------------|
| 0: | GUID_partition_scheme         |       | *500.3 GB | disk0      |
| 1: | Apple_APFS_ISC Container      | disk1 | 524.3 MB  | disk0s1    |
| 2: | Apple_APFS Container          | disk3 | 494.4 GB  | disk0s2    |
| 3: | Apple_APFS_Recovery Container | disk2 | 5.4 GB    | disk0s3    |


/dev/disk3 (synthesized):
#:

| #: | TYPE                    | NAME                    | SIZE      | IDENTIFIER |
|----|-------------------------|-------------------------|-----------|------------|
| 0: | APFS Container Scheme - |                         | +494.4 GB | disk3      |
|    |                         | Physical Store disk0s2  |           |            |
| 1: | APFS Volume             | Macintosh HD            | 9.1 GB    | disk3s1    |
| 2: | APFS Snapshot           | com.apple.os.update-... | 9.1 GB    | disk3s1s1  |
| 3: | APFS Volume             | Preboot                 | 4.7 GB    | disk3s2    |
| 4: | APFS Volume             | Recovery                | 799.4 MB  | disk3s3    |
| 5: | APFS Volume             | Data                    | 455.4 GB  | disk3s5    |
| 6: | APFS Volume             | VM                      | 2.1 GB    | disk3s6    |


/dev/disk4 (external, physical):
#:

| #: | TYPE                   | NAME | SIZE      | IDENTIFIER |
|----|------------------------|------|-----------|------------|
| 0: | FDisk_partition_scheme |      | *126.4 GB | disk4      |


/dev/disk6 (external, physical):
#:

| #: | TYPE                   | NAME    | SIZE    | IDENTIFIER |
|----|------------------------|---------|---------|------------|
| 0: | FDisk_partition_scheme |         | *4.0 TB | disk6      |
| 1: | Apple_HFS              | blau4TB | 4.0 TB  | disk6s1    |


~ | git:(master) ✕ $ █
```

5) Disk auswerfen und Schreibvorgang starten

```
diskutil unmountDisk /dev/disk4
```

```
~ | git:(master) ✕ $ diskutil unmountDisk /dev/disk4
Unmount of all volumes on disk4 was successful
```

```
sudo dd if=raspy7_8GB.dmg of=/dev/disk4 status=progress
```

```
~ | git:(master) x $ sudo dd if=raspy7_8GB.dmg of=/dev/disk4 status=progress
7941571072 bytes (7942 MB, 7574 MiB) transferred 784.004s, 10 MB/s
15523840+0 records in
15523840+0 records out
7948206080 bytes transferred in 784.695517 secs (10129032 bytes/sec)
~ | git:(master) x $ diskutil unmountDisk /dev/disk4
Unmount of all volumes on disk4 was successful
```

Am Ende auswerfen fertig

Revision #1

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