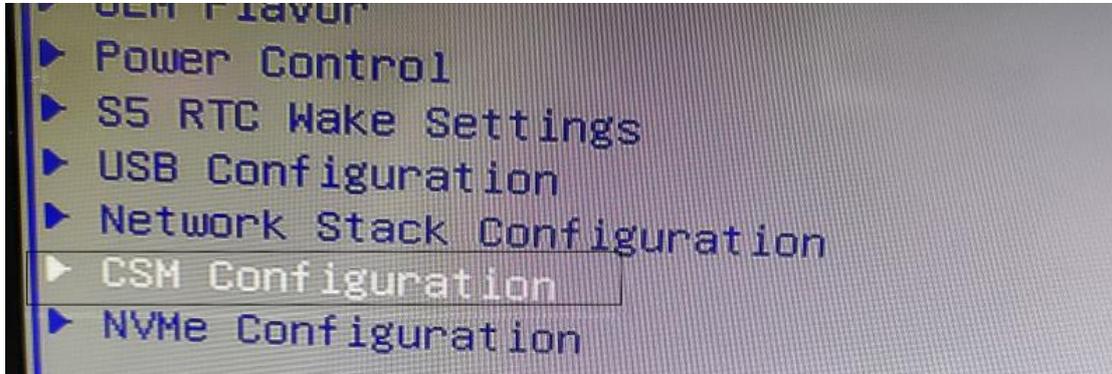


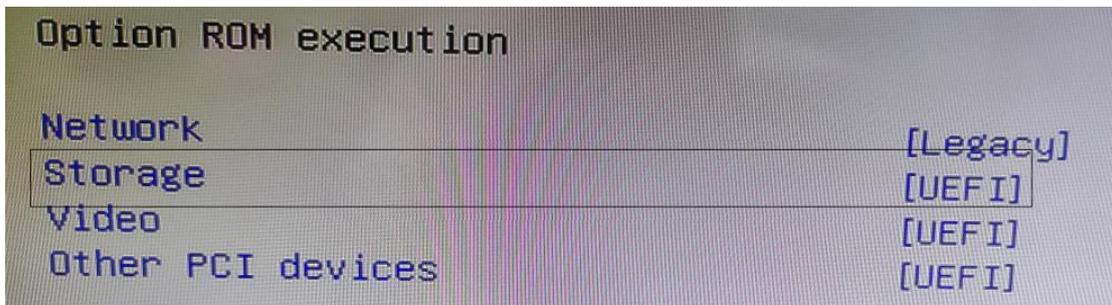
2241-2IR How to Creat RAID

1. RAID Creat

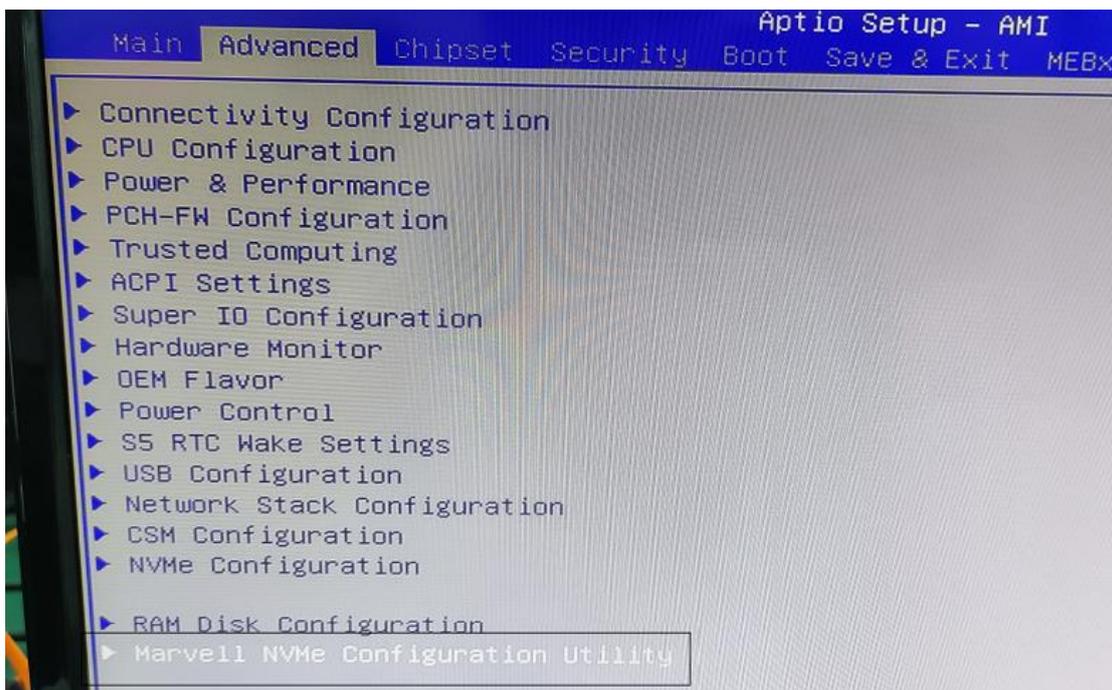
1、Through UEFI to creat RAID ONLY, Enter into BIOS, find CSM Configuration, press Enter into



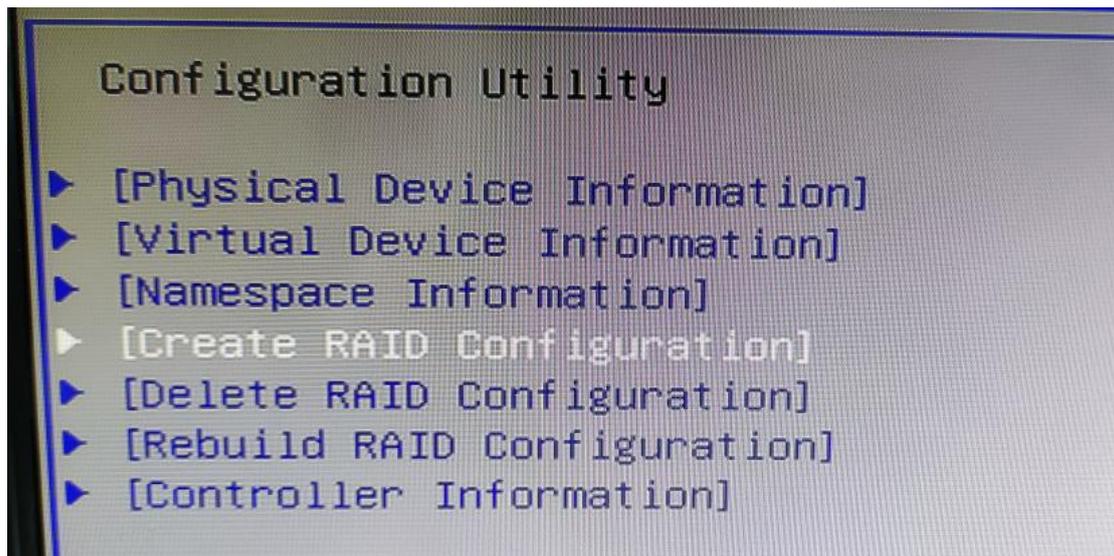
2、Find storage choice, change the mode into UEFI, save and restart (Note: Some motherboard position will be a little different, exactly position is according the motherboard itself.)



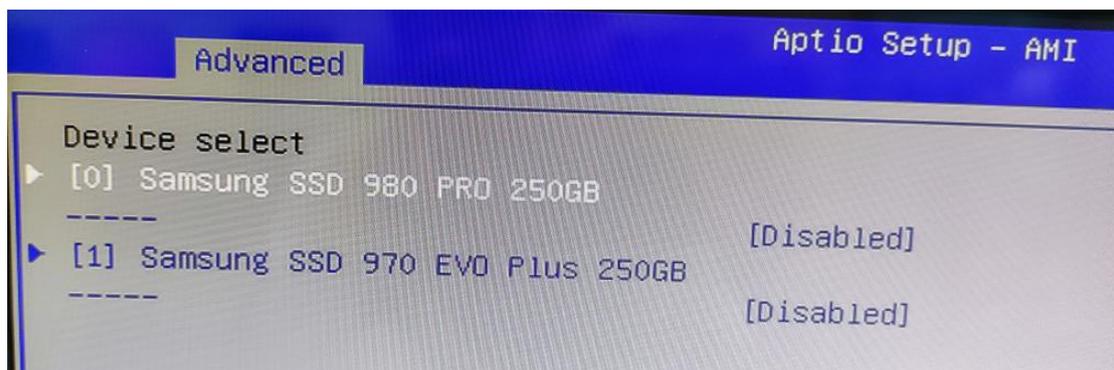
3、Enter into BIOS again, you will see the card information as follows



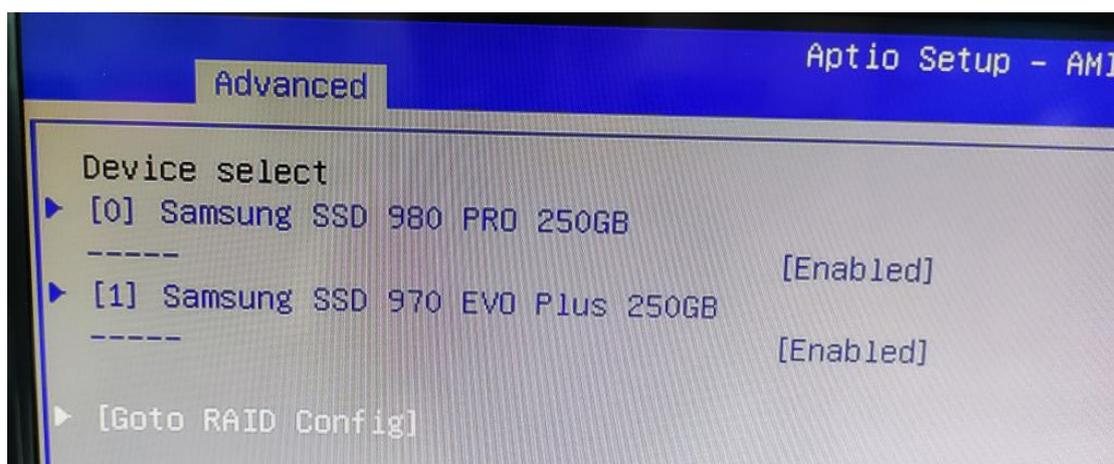
4、 Enter into card interface,as follows:



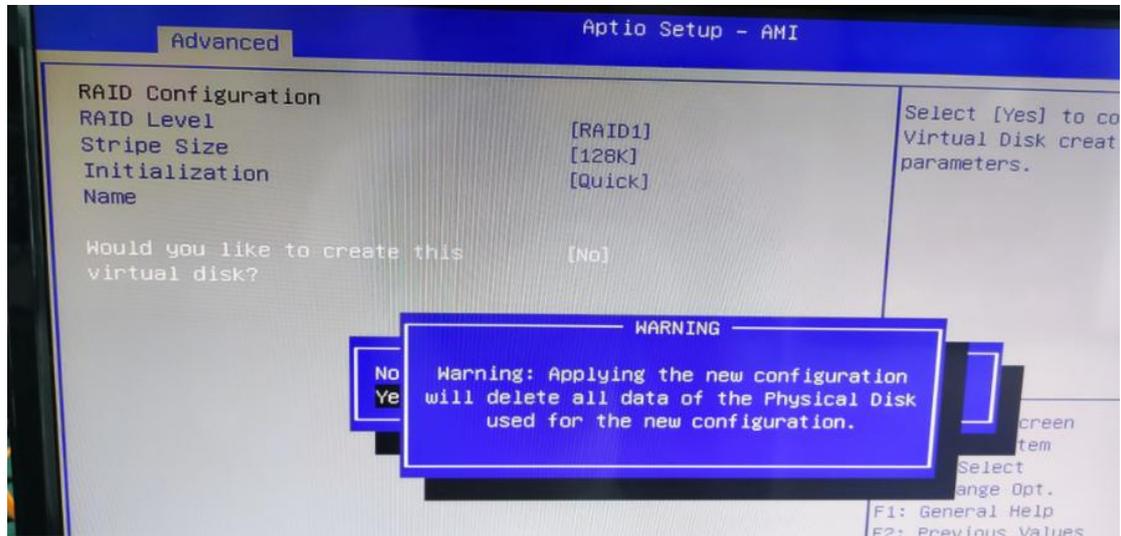
5、 Creat RAID, choose Create RAID Configuration menu, press Enter, you will see two NVME disk



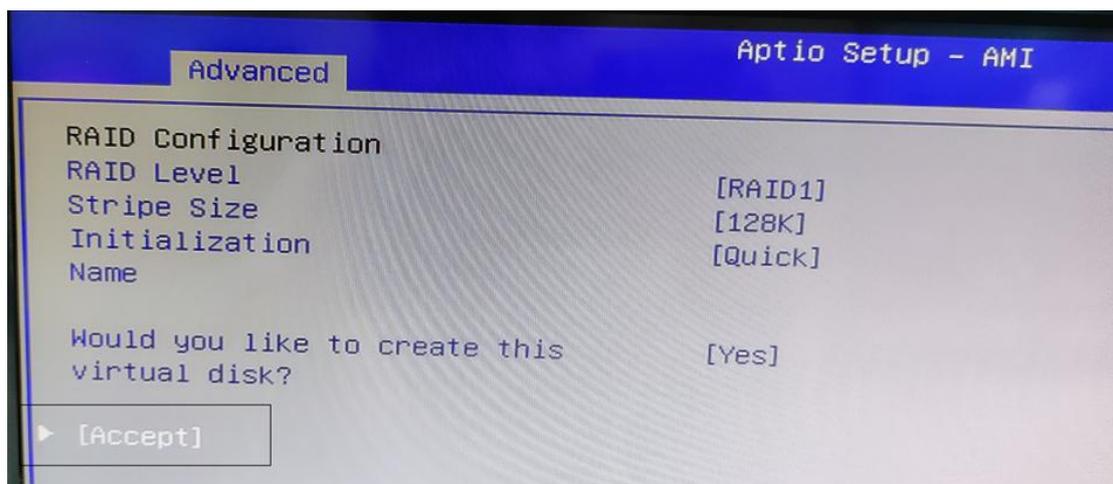
6、 Press '↓' and 'Enter' to change the state from Disable to Enable. Then choose Goto RAID Config, as follows:



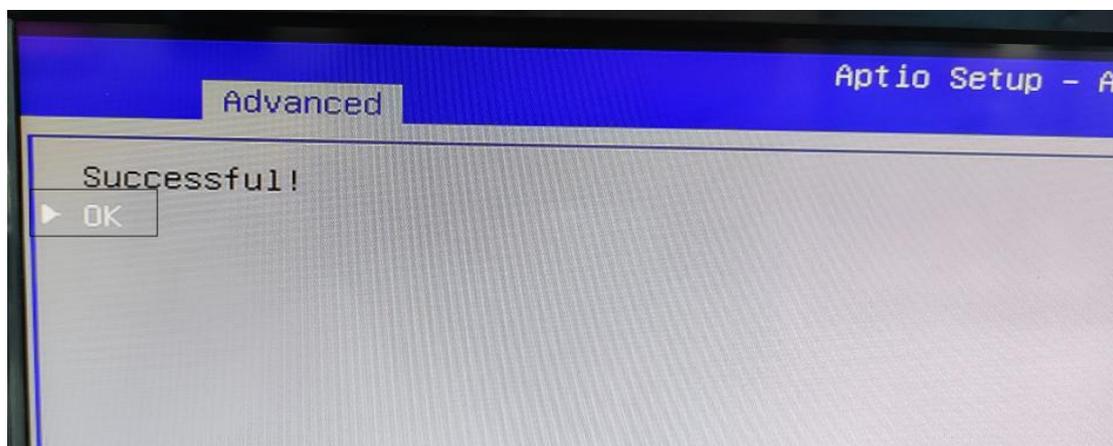
7、 Change RAID Level according to your demands. Take RAID1 for example with default parameters, the pop-up 'Would you like to create this virtual disk' choose 'YES', the Warning as shown below, press 'Enter'



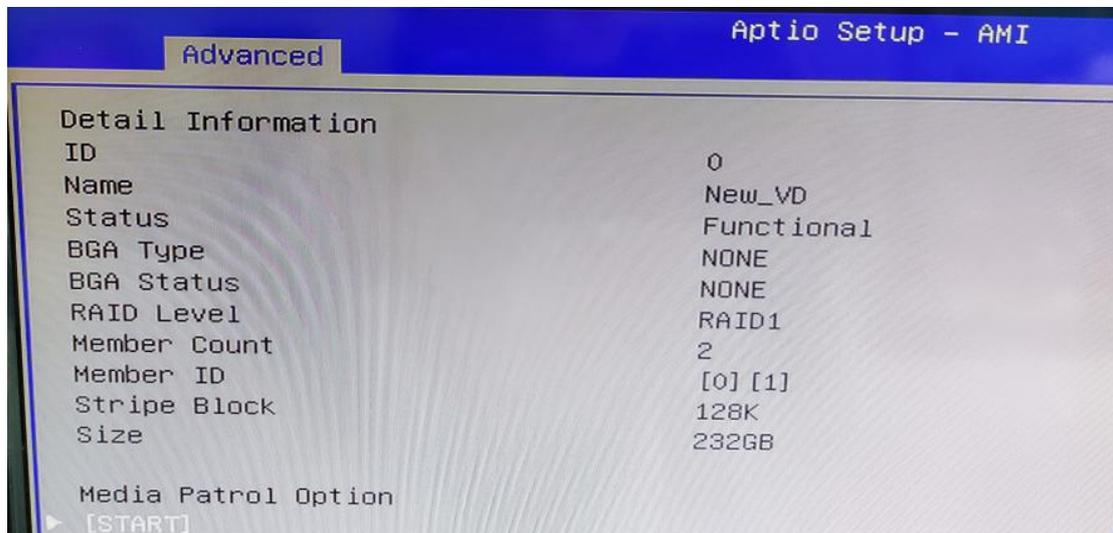
8、 Choose 'Accept', then 'Enter'



9、 Finished creating the RAID, choose 'OK'

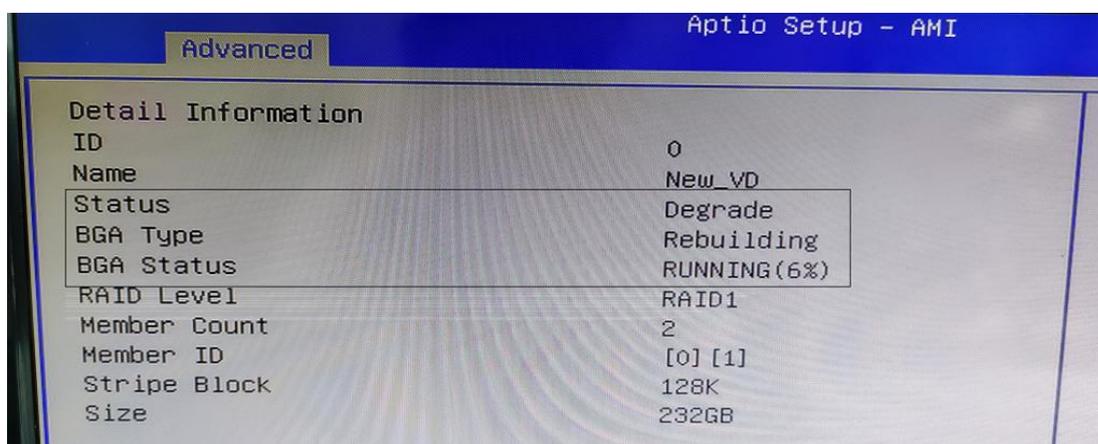


10、 Choose Virtual Device Information to check the RAID information, If the screen as follows, means you creat the RAID succesfully.



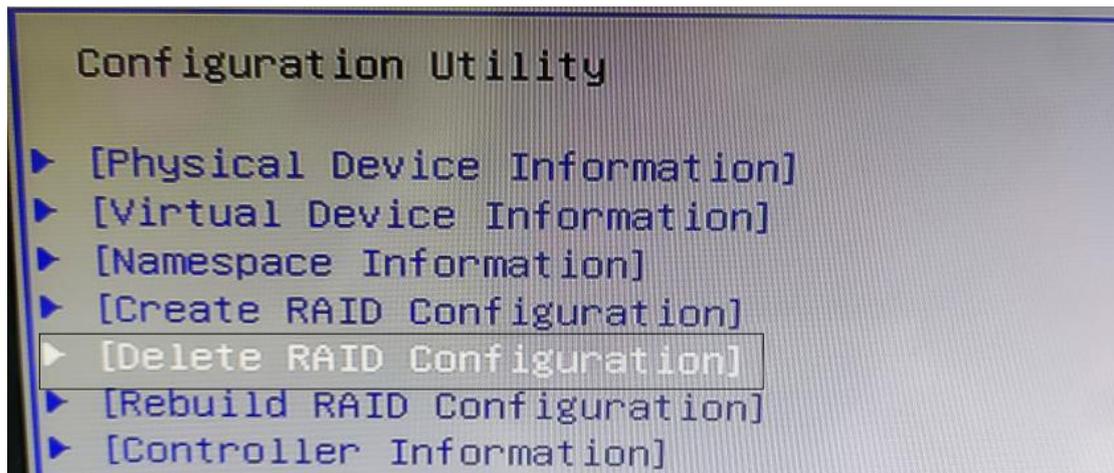
2. RAID Reconstruction

1、 When there's failed disk for RAID Mode, need to shutdown and change the bad disk to a good one. RAID mode will be reconstructed automatically. Get into RAID interface, status shows 'Degraded' and BGA Type shows 'Rebuilding'. You can check the progress of percent that shown after 'Running'.

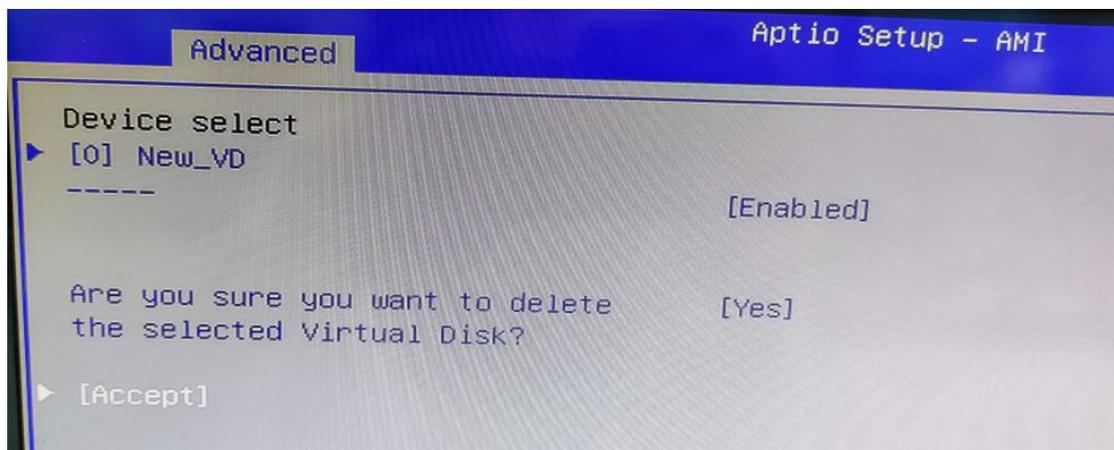


3. Delete RAID

1、 Choose Delete RAID Configuration and press 'Enter'



2、 Shown 'Are you sure you want to delete the selected virtual Disk?' then choose 'YES' then 'ACCEPT' to delete RAID.



Using CLI Tool to creat, we have 3 tools (UEFI, Linux, Windows).

1、 Take linux System for example, run with cli Tool, ./mnv_cli Command.,

```
[root@localhost linux]# ./mnv_cli
CLI Version: 1.0.0.1046
Welcome to NVMe Command Line Interface.
```

> █

2、 Check the info of RAID Card, run command info -o hba,

```

> info -o hba
NVMe Controller ID          0
Bus Device Fun:             01:00.00
Device:                     /dev/nvme0
Firmware Version:          1.0.0.1054
VID:                        0x1b4b
SVID:                       0x1b4b
DID:                        0x2241
SDID:                       0x2241
RevisionID:                 BOB
Port Count:                 2
Max PD of Per VD:          2
Max VD:                     2
Max PD:                     2
Max NS of Per VD:          1
Max NS:                     2
Host ID:                    0
Supported RAID Mode:        RAID0 RAID1 JBOD
Cache:                      On
Supported BGA Features:     Initialization Rebuild MediaPatrol
Support Stripe Size:        128KB 256KB 512KB
Supported Features:         Import RAID Namespace Dump
Root Complex:               0
  Link width:                4x
  PCIe speed:                8Gb/s
Root Complex:               1
  Link width:                4x
  PCIe speed:                8Gb/s
End Point:                  0
  Link width:                8x
  PCIe speed:                8Gb/s

```

3、 Check the info of the disks, run Command info -o pd,

```

PD ID:                      0
Model:                      Samsung SSD 980 PRO 500GB
Serial:                     S5GYNF0W100501Y
Sector Size:                 512 bytes
LBA:                        976773168
Size:                       465 GB
SSD backend RC/Slot ID:     0
SSD backend Namespace ID:   1
Firmware version:           5B2QGXA7
Status:                     Idle
Assigned:                   No
SMART Critical Warning:     No

PD ID:                      1
Model:                      Samsung SSD 980 PRO 500GB
Serial:                     S5GYNF0W100578T
Sector Size:                 512 bytes
LBA:                        976773168
Size:                       465 GB
SSD backend RC/Slot ID:     1
SSD backend Namespace ID:   1
Firmware version:           5B2QGXA7
Status:                     Idle
Assigned:                   No
SMART Critical Warning:     No

```

4、 Creat RAID1, execute command vd -a create -r 1 -d 0,1, 'cmd success' shown created successfully.

```

> vd -a create -r 1 -d 0,1
cmd success
> █

```

5、 Check RAID info, execute command info -o vd

```
> info -o vd

VD ID:          0
Name:           VD_0
Status:         Functional
Importable:     No
RAID Mode:      RAID1
size:           465 GB
PD Count:       2
PDs:            0 1
Stripe Block Size: 128K
Sector Size:    512 bytes

Total # of VD: 1
```

6、 If SSD has malfunction, shutdown and change to a good one, RAID will reconstructed automatically. Check RAID info as below.

```
> info -o vd

VD ID:          0
Name:           VD_0
Status:         Degrade
Importable:     No
RAID Mode:      RAID1
size:           465 GB
PD Count:       2
PDs:            0 1
Stripe Block Size: 128K
Sector Size:    512 bytes
BGA progress:   Rebuilding is running in 13%
```

7、 To Delete RAID, execute Command vd -a delete -i 0.