

# OS installation using Petitboot and USB OTG

## Petitboot

Petitboot is a platform-independent bootloader based on the Linux kexec warm reboot mechanism. Petitboot supports loading kernel, initrd, and device tree files from any Linux mountable filesystem, plus can it can load files from the network using the FTP, SFTP, TFTP, NFS, HTTP, and HTTPS protocols.

[Thread to port Petitboot into ODROID-N2](#)

## Version check

To check your Petitboot version, toggle the boot mode switch to **SPI boot mode** and turn on the ODROID-N2.



```
Petitboot (dev.20191127) Hardkernel ODROID-N2  
-----  
*  
System information  
System configuration  
System status log  
Language  
Rescan devices  
Retrieve config from URL  
Plugins (0)  
Exit to shell  
  
-----  
Enter=accept, e=edit, n=new, x=exit, l=language, g=log, h=help
```

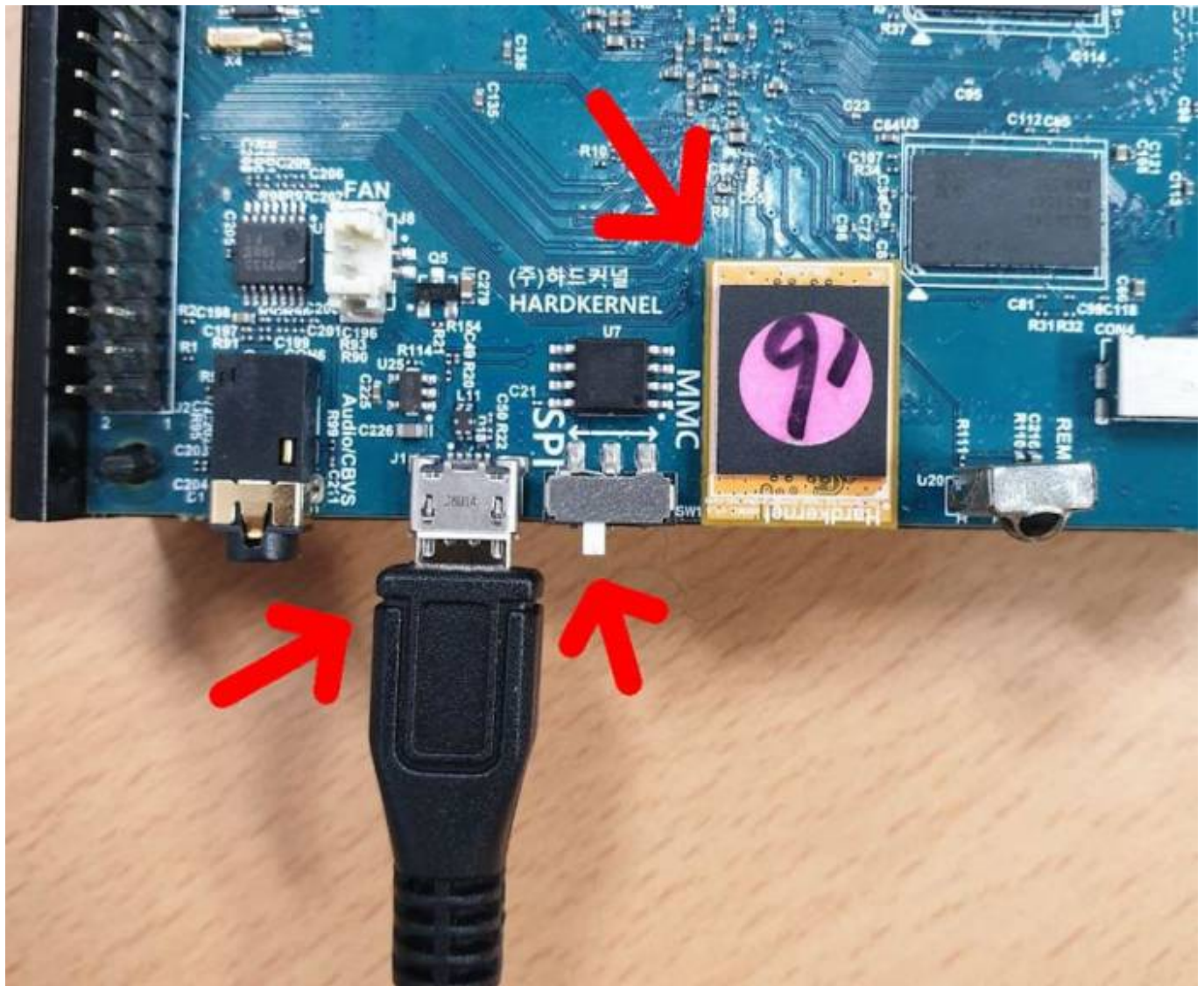
If your Petitboot version is lower than dev.20191127, please refer to [How to Recover or Upgrade](#) for steps to preform a petitboot upgrade.

# OS installation

## Memory connection to PC via OTG and ODROID-N2

This configuration will allow for OS installation directly to the memory (eMMC or uSD) on the ODROID-N2 from a PC over USB to the N2's OTG port.





## Petitboot setup(ODROID)

Select **Exit to shell**.

```
Petitboot (dev.20191127) Hardkernel ODROID-N2
-----
System information
System configuration
System status log
Language
Rescan devices
Retrieve config from URL
Plugins (0)
*Exit to shell
-----
Enter=accept, e=edit, n=new, x=exit, l=language, g=log, h=help
```

List all storage device nodes with a name starting with “mmc”.

```
ls /dev/mmc*
```

Set the storage device on the ODROID-N2 as a mass storage device using ‘ums’ (USB Mass Storage mode). This allows the ODROID-N2 and OTG to act as a memory card reader.

### ODROID-N2 and OTG act like a memory card reader.

```
ums <the device node of storage>
```

```
Exiting petitboot. Type 'exit' to return.
You may run 'pb-sos' to gather diagnostic data
/bin/sh: can't access tty: job control turned off
/ # ls /dev/mmc*
/dev/mmcblk0      /dev/mmcblk0boot0 /dev/mmcblk0boot1 /dev/mmcblk0p1    /dev/mmcblk0rpnb
/ # ums /dev/mmcblk0
/ # _
```

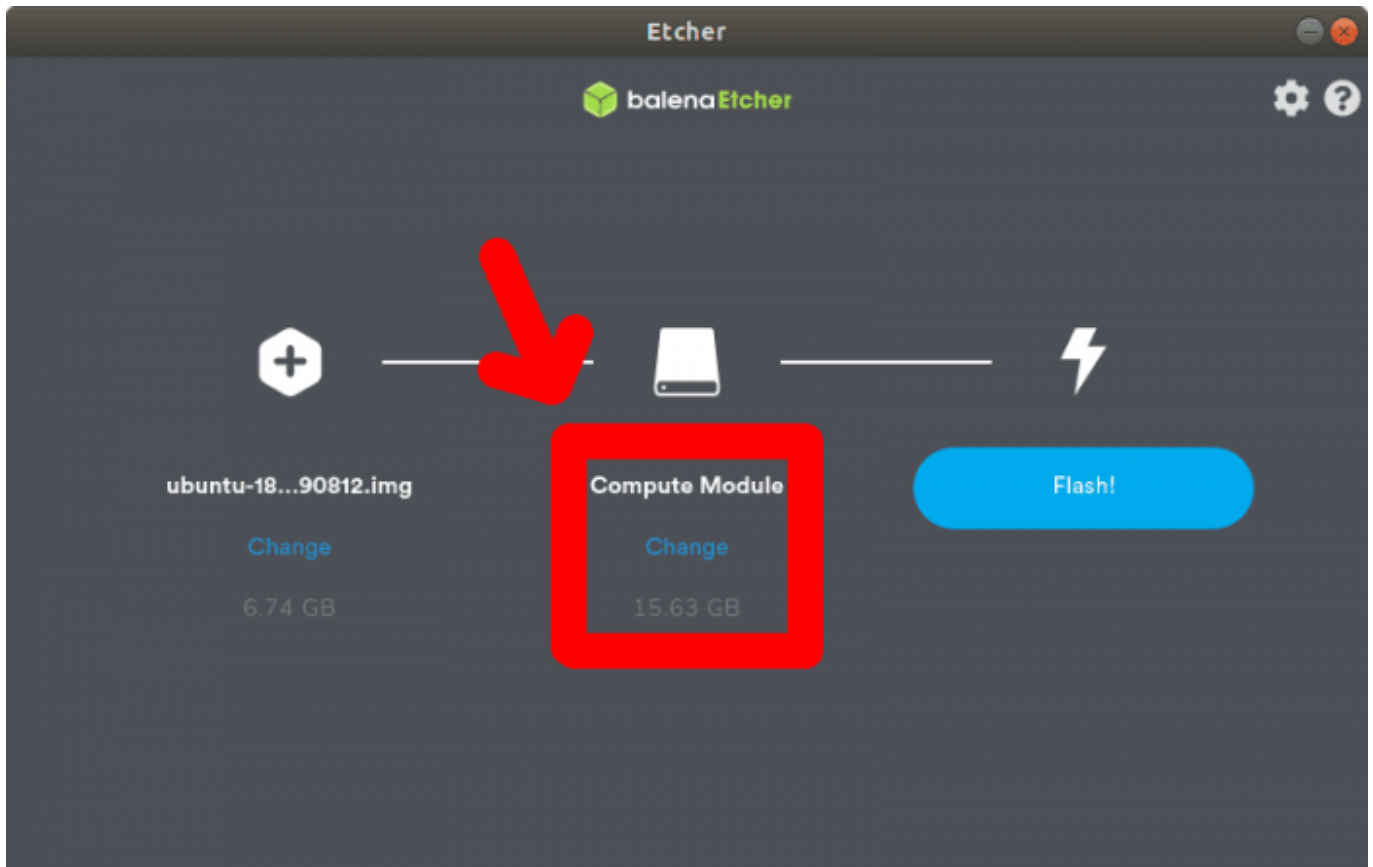
Wait for memory detection on your PC.

## Flash OS image to memory(PC)

When the memory is detected, the host PC recognizes your N2 as a USB card reader.

Therefore, to flash OS image into memory, refer to [OS installation guide](#), except for some that use a memory card reader.





When done, press Ctrl + Alt + Delete, and boot the installed OS. See the OS section below.

## OS Booting

### Direct booting

1. Power off ODROID
2. Toggle the boot mode switch to MMC boot mode
3. Power on ODROID

### Bootting via Petitboot

1. Power off ODROID
2. Toggle the boot mode switch to SPI boot mode
3. Power on ODROID
4. Select 'Rescan devices'
5. Select boot partition

### Set autoboot

1. Select 'Rescan devices'
2. Select 'System configuration'

1. Set 'Autoboot' (\*) Enabled
  2. Set 'Boot Order'
    1. Clear
    2. Add Device
  3. Set 'Timeout' (10 seconds or more recommended)
  4. OK
3. Press Ctrl + Alt + Delete

```
Petitboot System Configuration
-----

Autoboot:      ( ) Disabled
               (*) Enabled

Boot Order:    (0) disk: mmcblk0p1 [uuid: F702-39CB]
               [   Add Device   ]
               [ Clear & Boot Any ]
               [   Clear       ]

Timeout:       30 seconds

Network:       (*) DHCP on all active interfaces
               ( ) DHCP on a specific interface
               ( ) Static IP configuration

DNS Server(s):                               (eg. 192.168.0.2)
               (if not provided by DHCP server)

HTTP Proxy:
HTTPS Proxy:

Disk R/W:      ( ) Prevent all writes to disk
               (*) Allow bootloader scripts to modify disks

Boot console:  Manually set: 'ttyS0,115200n8'
               Current interface: /dev/console

               [ OK ] [ Help ] [ Cancel ]

-----
tab=next, shift+tab=previous, x=exit, h=help
```

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