

# Release Note of Android Pie (20200507)

## Summary

Release Date	May/07/2020 KST
Release Type	Preview release
Release Files	<a href="#">Self-installation Image</a> (MD5SUM: d6d27c3a8e142f078996c9cb54c37d8e)
	<a href="#">Fastboot update</a> (MD5SUM: d12592bc574170e657547c8016a93fa7)

File name : [selfinstall-odroidn2-55-64bit-20200507.img.xz](#)

Official **Mirrors** by mdrjr

In US

<http://www.odroid.in/mirror/dn.odroid.com/S922X/ODROID-N2/Android>

In Germany

<https://de.eu.odroid.in/?directory=.%2Fmirror%2Fdn.odroid.com%2FS922X%2FODROID-N2%2FAndroid%2F>

## New updates

- Update Amlogic 20200117 BSP.
- **Introducing “env.ini” file to separate logic and value processing from “boot.ini”.**
- Add pl2303 driver.
  - <https://forum.odroid.com/viewtopic.php?f=178&t=38359>
- Fixed ODROID-VU series “display\_autodetect” bug.
  - <https://forum.odroid.com/viewtopic.php?f=178&t=38482&sid=42a69e5776dd3224ccdabf8678c77d84>
- Added a few requested USB-Multitouch VID/PID.
  - <https://forum.odroid.com/viewtopic.php?f=183&t=38514&sid=42a69e5776dd3224ccdabf8678c77d84>

```
/* CROSSOVER HDMI capacitive Screen */  
#define USB_VENDOR_ID_CROSSOVER^I0x056A  
#define USB_DEVICE_ID_133TF3_DEX^I0x509D
```

- Support gamepad, joystick devices.
  - <https://forum.odroid.com/viewtopic.php?f=178&t=38586#p290142>
- Fix SD reboot and boot failure.
  - <https://forum.odroid.com/viewtopic.php?f=178&t=38482>
  - Tested SD Card



```

ADATA          ADATA SDXC uhs-I[u3] A2 V30
EssenCore     Klevv SDXC uhs-I[u3] A2 V30
Lexar         633x SDXC uhs-1[u3] A2 V30
Toshiba       SDHC Exceria uhs-1
Sandisk       SDHC uhs-1
              SDHC Ultra uhs-1
              SDHC uhs-1(white)
              SDHC Industrial uhs-1
              SDHC Industrial uhs-1
              SDHC Extreme Pro uhs-1
Samsung       SDHC EVO uhs-1
              SDHC EVO Plus uhs-1
              SDHC uhs-1
              SDHC Pro Plus uhs-3
Transcend     SDHC class 10
              SDHC Ultimate uhs-1
              SDHC Premium 300x uhs-1

```

### Known issues

- 64bit Pico package [OpenGapps](#) must be downloaded and installed. Otherwise, the installation will be failed.
- Petitboot User need to update next version.

## OS installation(flashing)

You can install this OS image into your MicroSD or eMMC with [this guide](#).



A few users reported they couldn't see the Android logo on their TV while installing even though installation proceeds. If the red LED is on and the blue LED is blinking periodically, this is the sign that Android is running. So please keep your device on for 5~10 minutes as is, later than when Android installer finishes the installation it will restart the ODROID-N2.

## Reference boot.ini

[boot.ini](#)

```

ODROIDN2-UBOOT-CONFIG

setenv bootlabel "Android Pie (64Bit)"

#####

```

```
# Default values
#####
setenv hdmimode "1080p60hz"
setenv voutmode "hdmi"
setenv display_autodetect "true"
setenv backlight_pwm "yes"
setenv zoom_rate "100"
setenv colorattribute "444,8bit"
setenv osd_reverse "0"
setenv video_reverse "0"
setenv suspend_hdmiphy "1"
setenv cvbmode "576cvbs"
setenv disablehpd "false"
setenv disable_vu7 "false"
setenv touch_invert_x "false"
setenv touch_invert_y "false"
setenv test_mt_vid "0000"
setenv test_mt_pid "0000"
setenv max_freq_big "1800"
setenv max_freq_little "1896"
setenv enable_wol "0"
setenv heartbeat "1"
setenv sg_tablesize "2"
setenv prevent_sleep "0"

#####
# ini load & read
#####

setenv iniloaddr "0x4001000"
load ${devtype} ${devnum} ${iniloaddr} env.ini
ini display ${iniloaddr}
ini cpu ${iniloaddr}
ini etc ${iniloaddr}

#####
# Boot args
#####

# Init args
setenv rootopt "rootfstype=ramfs init=/init"
setenv consoleopt "console=ttyS0,115200n8 no_console_suspend
earlyprintk=aml-uart,0xff803000 quiet"
setenv ramoopspt "ramoops.pstore_en=1 ramoops.record_size=0x8000
ramoops.console_size=0x4000"
setenv touchopt "touch_invert_x=${touch_invert_x}
touch_invert_y=${touch_invert_y}"
setenv displayopt "colorattribute=${colorattribute}
disablehpd=${disablehpd}"
setenv testmtopt "test_mt_vid=${test_mt_vid} test_mt_pid=${test_mt_pid}
```

```

backlight_pwm=${backlight_pwm}"
setenv androidopt "androidboot.selinux=permissive
androidboot.firstboot=${firstboot} jtag=disable
androidboot.hardware=odroidn2 otg_device=1 buildvariant=eng"
setenv miscopt "disable_vu7=${disable_vu7} ${touchopt}
zoom_rate=${zoom_rate} ${testmtopt} suspend_hdmiphy=${suspend_hdmiphy}
prevent_sleep=${prevent_sleep} usb-xhci.tablesize=${sg_tablesize}"

# dtbs & boot addr
setenv dtb_mem_addr 0x1000000
setenv loadaddr 0x1080000

# logo
setenv display_layer "osd0"
setenv fb_addr "0x3d800000"
setenv logo "${display_layer},loaded,${fb_addr}"

# Boot Arguments
if test "${display_autodetect}" = "true"; then hdmitx edid; fi
# TODO -> if test "${display_autodetect}" = "true"; then usb pwren;
hdmitx edid; fi
if test "${hdmimode}" = "custombuilt"; then ini iniaddr
Custombuilt;setenv cmode "modeline=${modeline}
customwidth=${customwidth} customheight=${customheight}"; fi

setenv initargs "${rootopt} ${consoleopt} ${ramoopspt}
max_freq_a73=${max_freq_big} max_freq_a53=${max_freq_little} ${cmode}
${miscopt}"

setenv bootargs "${initargs} ${androidopt} ${displayopt} logo=${logo}
cvbsmode=${cvbsmode} hdmimode=${hdmimode} voutmode=${voutmode}
cvbscable=${cvbscable} osd_reverse=${osd_reverse}
video_reverse=${video_reverse} gpiopower=${gpiopower}
enable_wol=${enable_wol}"

movi read boot 0 ${loadaddr}
movi read dtbs 0 ${dtb_mem_addr}
fdt addr ${dtb_mem_addr}
if test "${heartbeat}" = "0"; then fdt set /leds/blueled linux,default-
trigger "none"; fi
booti ${loadaddr} - ${dtb_mem_addr}
bootm

```

## Reference env.ini

[env.ini](#)

[display]

```
;;;;;;;;;;  
; Resolution Configuration  
; 'hdmimode' & 'outputmode' must be one of below to configure display  
resolution within  
; supported by your TV or monitor.  
; And both of values MUST be same.
```

```
;+-----+-----+  
;| Symbol | Resolution |  
;+-----+-----+  
;| "480x320p60hz" | 480x320 Progressive 60Hz |  
;| "480p60hz" | 720x480 Progressive 60Hz |  
;| "576p50hz" | 720x576 Progressive 50Hz |  
;| "720p60hz" | 1280x720 Progressive 60Hz |  
;| "720p50hz" | 1280x720 Progressive 50Hz |  
;| "1080p60hz" | 1920x1080 Progressive 60Hz |  
;| "1080p50hz" | 1920x1080 Progressive 50Hz |  
;| "1080p30hz" | 1920x1080 Progressive 30Hz |  
;| "1080p24hz" | 1920x1080 Progressive 24Hz |  
;| "1080i60hz" | 1920x1080 Interlaced 60Hz |  
;| "1080i50hz" | 1920x1080 Interlaced 50Hz |  
;| "2160p60hz" | 3840x2160 Progressive 60Hz |  
;| "2160p50hz" | 3840x2160 Progressive 50Hz |  
;| "2160p30hz" | 3840x2160 Progressive 30Hz |  
;| "2160p25hz" | 3840x2160 Progressive 25Hz |  
;| "2160p24hz" | 3840x2160 Progressive 24Hz |  
;| "smpte24hz" | 3840x2160 Progressive 24Hz SMPTE |  
;| "640x480p60hz" | 640x480 Progressive 60Hz |  
;| "800x480p60hz" | 800x480 Progressive 60Hz |  
;| "800x600p60hz" | 800x600 Progressive 60Hz |  
;| "1024x600p60hz" | 1024x600 Progressive 60Hz |  
;| "1024x768p60hz" | 1024x768 Progressive 60Hz |  
;| "1280x800p60hz" | 1280x800 Progressive 60Hz |  
;| "1280x1024p60hz" | 1280x1024 Progressive 60Hz |  
;| "1360x768p60hz" | 1360x768 Progressive 60Hz |  
;| "1440x900p60hz" | 1440x900 Progressive 60Hz |  
;| "1600x900p60hz" | 1600x900 Progressive 60Hz |  
;| "1600x1200p60hz" | 1600x1200 Progressive 60Hz |  
;| "1680x1050p60hz" | 1680x1050 Progressive 60Hz |  
;| "1920x1200p60hz" | 1920x1200 Progressive 60Hz |  
;| "2560x1080p60hz" | 2560x1080 Progressive 60Hz |  
;+-----+-----+
```

```
hdmimode="1080p60hz"
```

```
;;;;;;;;;;  
; Custom modeline  
;;;;;;;;;;  
; hdmimode="custombuilt"  
; 2560x1440p60hz sample  
modeline="2560,1440,241500,88800,60,2560,2608,2640,2720,1440,1442,1447,  
1481,1,1,1"
```

```

customwidth="2560"
customheight="1440"

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; voutmode
; hdmi or dvi
voutmode="hdmi"

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; Display Auto Detection
; "false" or "true"
display_autodetect="true"

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; Enable backlight_pwm
;+-----+-----+
;| Value | target |
;+-----+-----+
;| "no" | disable |
;| "yes" | ODR0ID-VU5/7 |
;| "invert" | ODR0ID-VU8 |
;+-----+-----+
backlight_pwm="yes"

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; Display Zoom Rate
zoom_rate="100"

colorattribute="444,8bit"

osd_reverse="0"
video_reverse="0"
suspend_hdmiphy="1"

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; CVBS encoder : 480CVBS or 576CVBS
;+-----+-----+
;| Value | target |
;+-----+-----+
;| "480cvbs" | NTSC, 480i |
;| "576cvbs" | PAL, 576i |
;+-----+-----+
cvbsmode="576cvbs"

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; HPD enable/disable option
disablehpd="false"

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; Disable VU7
disable_vu7="false"

```

```
;;;;;;;;;;;;;
; invert touch screen x,y
touch_invert_x="false"
touch_invert_y="false"

test_mt_vid="0000"
test_mt_pid="0000"

[cpu]

;;;;;;;;;;;;;
; Max cpu frequency sets
;+-----+-----+-----+
;| Value | Frequency | Cpu |
;+-----+-----+-----+
;| "1992" | 1.992GHz | big Little |
;| "1932" | 1.932GHz | big |
;| "1920" | 1.920GHz | big |
;| "1908" | 1.908GHz | big |
;| "1896" | 1.896GHz | Little |
;| "1800" | 1.800GHz | big |
;| "1704" | 1.704GHz | big Little |
;+-----+-----+-----+
max_freq_big="1800"
max_freq_little="1896"

;;;;;;;;;;;;;
; big, Little governor
;;;;;;;;;;;;;
; "interactive"
; "performance"
; "schedutil"
governor_big="performance"
governor_little="performance"

[etc]

;;;;;;;;;;;;;
; Wake on Lan
enable_wol="0"

;;;;;;;;;;;;;
; Gpio power key
;;;;;;;;;;;;;
; GPIOX.3 (Pin 11) of
; 2x20 pins connector
;gpiopower="479"

heartbeat="1"
```



```
sg_tablesize="2"
```

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