

Release Note of Android Pie (20190812)

Summary

Release Date	Aug/12/2019 KST
Release Type	Preview release
Release Files	Self-installation Image (MD5SUM: 2df56d8b304ea757a2efb20ec89384b7)
	Fastboot update (MD5SUM: c49499063a5f4acaa53ba5e1b022a2bd)

File name : [selfinstall-odroidn2-eng-s922_9.0.0_master-80-20190812.img](#)

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

- Fix Wifi #3 unstable issue.
 - <https://forum.odroid.com/viewtopic.php?f=180&t=35948>
- Reconnect automatically Ethernet connection after configuration without restart.
 - <https://forum.odroid.com/viewtopic.php?f=178&t=35794>
- Support to disable the blue LED heartbeat blinking in Settings menu.
 - <https://forum.odroid.com/viewtopic.php?f=178&t=35992>
- Assign USB 3.0 and Ethernet IRQ handlers to BIG cores after boot. (For better USB and Ethernet responsiveness)
- Fix VPN issue. Special thanks to our forum member @voodik.
 - <https://forum.odroid.com/viewtopic.php?f=178&t=34454>

Known issues

- If USB GPS's PID is 01a8, it does not work well.
- Only 32bit Android version is supporting, and 64bit version is being investigated.
- 32bit [OpenGapps](#) must be downloaded and installed. Otherwise, the installation will be failed.

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 (32Bit)"

#####
#
# Display & Touch
#
#####

# 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
# "2560x1440p60hz" | 2560x1440 Progressive 60Hz
# "2560x1600p60hz" | 2560x1600 Progressive 60Hz
# "3440x1440p60hz" | 3440x1440 Progressive 60Hz
setenv hdmimode "1080p60hz"

### voutmode : hdmi or dvi
setenv voutmode "hdmi"
# setenv voutmode "dvi"

### CVBS encoder : 480CVBS or 576CVBS
# "480cvbs" | NTSC, 480i
# "576cvbs" | PAL, 576i
#setenv cvbsmode "576cvbs"

# Display Auto Detection
# "false" or "true"
setenv display_autodetect "true"

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

# disable vu7
setenv disable_vu7 "false"

# invert touch screen x,y
setenv touch_invert_x "false"
setenv touch_invert_y "false"

# Display Zoom Rate
setenv zoom_rate "100"

setenv osd_reverse "0"
setenv video_reverse "0"

setenv colorattribute "444,8bit"

setenv suspend_hdmiphy "1"
```

```
setenv heartbeat "1"
setenv sg_tablesize "2"
#####
#
# CPU
#
#####

### A73 max cpu frequency sets
# setenv max_freq_a73 "1992" # 1.992GHz
# setenv max_freq_a73 "1932" # 1.932GHz
# setenv max_freq_a73 "1920" # 1.920GHz
# setenv max_freq_a73 "1908" # 1.908GHz
# setenv max_freq_a73 "1800" # 1.800GHz
# setenv max_freq_a73 "1704" # 1.704GHz
setenv max_freq_a73 "1800"
setenv governor_a73 "performance"

### A53 max cpu frequency sets
# setenv max_freq_a53 "1992" # 1.992GHz
# setenv max_freq_a53 "1896" # 1.896GHz
# setenv max_freq_a53 "1704" # 1.704GHz
setenv max_freq_a53 "1896"
setenv governor_a53 "performance"

setenv test_mt_vid "0000"
setenv test_mt_pid "0000"

# Enable backlight_pwm
# disable : backlight "no"
# ODR0ID-VU5/7 : backlight "yes"
# ODR0ID-VU8 : backlight "invert"
setenv backlight_pwm "yes"

# gpio power key : GPIOX.3 (Pin 11) of 2x20 pins connector
#setenv gpiopower "479"

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

# Wake on Lan
setenv enable_wol "0"

# Init args
setenv rootopt "rootfstype=ramfs init=/init"
setenv consoleopt "console=ttyS0,115200n8 no_console_suspend
```

```
earlyprintk=aml-uart,0xff803000 quiet"
setenv ramoopsopt "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=${colorattribute}"
setenv testmtopt "test_mt_vid=${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}
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 "${hdmimode}" = "custombuilt"; then setenv cmode
"modeline=${modeline} customwidth=${customwidth}
customheight=${customheight}"; fi

setenv initargs "${rootopt} ${consoleopt} ${ramoopsopt}
max_freq_a73=${max_freq_a73} max_freq_a53=${max_freq_a53} ${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
```

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