

# Porting Android

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# Hardware

- Arm v5
  - ARM 926-EJS, ARM 11
    - PXA, IXP, OMAP3, i.MX 31 and so on
- RAM 64MB or more
- ROM 64MB or more
- Display Frame Buffer
  - double buffering is not mandatory
- Beagleboard

# Kernel

- Linux Kernel 2.6.24 - 2.6.28
- Cross Compiler
  - Code Sourcing
- Android Patch
  - `diff -urN vanilla android > android.patch`
  - `patch target < android.patch`
  - `make config`
    - Documentations/android.txt - except pmem
- Android Drivers
  - ashmem / binder / yaffs2

# User Land

- Debian ARM
  - debootstrap --arch armel
- Angstrom
  - Build tools, Toolchain, Kernel, User Land
    - The World
  - Pre-configured for various platforms
    - Zaurus, Beagleboard, OMAP3EVM
- Busybox
- Pre-installed rootfs

# Android

- source.android.com
  - main / cupcake / donut
- out/target/product/generic
  - root/
  - system/ --> root/system
- Boot
  - \$ chroot android /init
  - Kernel option - init=/init

# Troubleshooting

- `strace`

- `$ strace -ff -o log chroot android /init`

- `adb`

- `/sbin/adb`

- `$ export ADBHOST=<target IP>`

- `$ android-sdk/tools/adb kill-server`

- `$ android-sdk/tools/adb start-server`

- `$ android-sdk/tools/adb shell logcat`

# Points of Interest

- [android-embedded-japan](#)
  - Android Group Japan - Embedded Working Group
- [android-porting](#)
  - Official discussion on porting Android
- [labs.embinux.org](#)
  - Perfect manual for porting Android on Beagleboard
  - TLS patch for OMAP3
- [androidzaurus bookmark](#)
- [Wassr - Android Channel](#)



Thanks!

Any Questions?