

Single Android Image

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ANNOUNCING

INTEL REFERENCE DESIGN for ANDROID



Why is it so hard ?

Download Fedora 21 Workstation

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64-Bit 1.4GB Live Image

Board specific images

- Build time definition
- One image per BOM



What's missing ?

- Kernel modules
- Dynamic HAL selection
- HW specific binaries selection
- Properties
- Permissions
- Misc configuration files

IRDA autodetection

- Hardware is described by the firmware
 - Not by BoardConfig makefiles
- Standalone daemon
- Trigger actions based on kernel uevents
- Actions described by autodetection records

IRDA autodetection

- libkmod for loading kernel modules
- libhardware to use the autodetection IPC
- Bind mount HW specific binaries
- FUSE for configuration and permission files

```
# Bosch BMC150 Magnetometer HAL record
```

```
[global]
```

```
module_name = sensors
```

```
library_name = iio-sensors-hal.so
```

```
[device]
```

```
bus = acpi
```

```
desc = BSBM0150
```

```
[properties]
```

```
ro.iio.magn.name = BMC150 Magnetometer
```

```
ro.iio.magn.vendor = Bosch Sensortec
```

```
ro.iio.magn.max_range = 2500
```

```
ro.iio.magn.resolution = 0.3
```

```
ro.iio.magn.power = 2
```

```
ro.iio.magn.quirks = noisy
```

```
ro.iio.magn.min_freq = 15
```

```
ro.iio.magn.cal_steps = 3
```

```
[fuse]
```

```
src_name = android.hardware.sensor.compass.xml
```

```
mount_type = permissions
```



```
[global]
```

```
module_name = wifi
```

```
mount_source = lnp
```

```
[device]
```

```
bus = sdio
```

```
vid = 0089
```

```
did = 5501
```

```
[fuse]
```

```
src_name = wpa_supplicant-start-iwlfwifi
```

```
dst_name = wpa_supplicant-start
```

Android Improvements

- Better reference HALs
- Built-in kernel module support
- Resources should not describe HW features
- Layered Android