

# Cb3 A20-compiling Android Image For Cubietruck

## About this Article

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## Download the source code

```
$mkdir cubietruck-android && cd cubietruck-android
$wget
http://dl.cubieboard.org/software/a20-cubieboard/android/A20-android-4.
2.tar.xz
$tar -xvf A20-android-4.2.tar.xz
```

## Compiling image

After get the source code, you could use common to build it as follow:

### Build Linux kernel

```
$cd lichee/
$cp linux-3.3/arch/arm/configs/cubietruck_defconfig
linux-3.3/arch/arm/configs/sun7ismp_android_defconfig
$./build.sh -p sun7i_android
```

Start Building:

```
build@net01: /work/cubietruck_android/lichee
build@net01:~$ cd /work/cubietruck_android/lichee/
build@net01:/work/cubietruck_android/lichee$ cp linux-3.3/arch/arm/configs/sun7i
smp_androidCT_defconfig linux-3.3/arch/arm/configs/sun7ismp_android_defconfig
build@net01:/work/cubietruck_android/lichee$ ./build.sh -p sun7i_android

mkscript current setting:
    Chip: sun7i
    Platform: android
    Board:
    Output Dir: /work/cubietruck_android/lichee/out/android/common

INFO: build lichee ...
INFO: build buildroot ...
external toolchain has been installed
INFO: build buildroot OK.
INFO: build kernel ...
INFO: prepare toolchain ...
Building kernel
build standby
make: Entering directory `/work/cubietruck_android/lichee/linux-3.3/arch/arm/mac
h-sun7i/pm/standby'
rm -rf *.o ../*.o dram/*.o
arm-linux-gnueabi-gcc -I. -I/work/cubietruck_android/lichee/linux-3.3/include -I
/work/cubietruck_android/lichee/linux-3.3/arch/arm/mach-sun7i/include -g -c -no
```

Success Building:

```
build@net01: /work/cubietruck_android/lichee
nd/libnand.o drivers/mtd/onenand/libonenand.o drivers/mtd/spi/libspi_flash.o dri
vers/mtd/ubi/libubi.o drivers/net/libnet.o drivers/net/phy/libphy.o drivers/pci/
libpci.o drivers/pcmcia/libpcmcia.o drivers/power/libpower.o drivers/rtc/librtc.
o drivers/serial/libserial.o drivers/spi/libspi.o drivers/storage_type/libstorag
e_type.o drivers/twserial/libtw.o drivers/usb/eth/libusb_eth.o drivers/usb/gadg
et/libusb_gadget.o drivers/usb/host/libusb_host.o drivers/usb/musb/libusb_musb.o
drivers/usb/phy/libusb_phy.o drivers/video/libvideo.o drivers/watchdog/libwatch
dog.o fs/cramfs/libcramfs.o fs/ext2/libext2fs.o fs/fat/libfat.o fs/fdos/libfdos.
o fs/jffs2/libjffs2.o fs/reiserfs/libreiserfs.o fs/ubifs/libubifs.o fs/yaffs2/li
byaffs2.o lib/libfdt/libfdt.o lib/libgeneric.o lib/lzma/liblzma.o lib/lzo/liblzo
.o lib/zlib/libz.o nand_sunxi/libnand net/libnet.o post/libpost.o board/allwinne
r/sun7i-evb/libsun7i-evb.o --end-group /work/cubietruck_android/lichee/u-boot/ar
ch/arm/lib/eabi_compat.o -L /work/cubietruck_android/lichee/out/android/common/
buildroot/external-toolchain/bin/./lib/gcc/arm-linux-gnueabi/4.6.3 -lgcc -Map u
-boot.map -o u-boot
arm-linux-gnueabi-objcopy -O srec u-boot u-boot.srec
arm-linux-gnueabi-objcopy --gap-fill=0xff -O binary u-boot u-boot.bin
make[1]: Leaving directory `/work/cubietruck_android/lichee/u-boot'
INFO: build u-boot OK.
INFO: build rootfs ...
INFO: skip make rootfs for android
INFO: build rootfs OK.
INFO: build lichee OK.
build@net01:/work/cubietruck_android/lichee$
```

## Build Android image

```
$cd ../android42
```

```
$source build/envsetup.sh
```

```
$lunch 16 (select sugar_cubietruck-eng)
```

```
$extract-bsp
```

```
$make -j8
```

Finish building:

```
build@net01: /work/cubietruck_android/android42
Block groups: 4
Reserved block group size: 31
Created filesystem with 1488/32768 inodes and 99963/131072 blocks
+ '[' 0 -ne 0 ']'
Running:  img2img out/target/product/sugar-cubietruck/obj/PACKAGING/systemimage_intermediates/system.img out/target/product/sugar-cubietruck/obj/PACKAGING/systemimage_intermediates/unsparse_system.img
Running:  e2fsck -f -n out/target/product/sugar-cubietruck/obj/PACKAGING/systemimage_intermediates/unsparse_system.img
e2fsck 1.41.14 (22-Dec-2010)
Pass 1: Checking inodes, blocks, and sizes
Pass 2: Checking directory structure
Pass 3: Checking directory connectivity
Pass 4: Checking reference counts
Pass 5: Checking group summary information
out/target/product/sugar-cubietruck/obj/PACKAGING/systemimage_intermediates/unsparse_system.img: 1488/32768 files (0.0% non-contiguous), 99963/131072 blocks
Install system fs image: out/target/product/sugar-cubietruck/system.img
out/target/product/sugar-cubietruck/system.img+out/target/product/sugar-cubietruck/obj/PACKAGING/recovery_patch_intermediates/recovery_from_boot.p maxsize=548110464 blocksize=4224 total=403412340 reserve=5537664
DroidDoc took 203 sec. to write docs to out/target/common/docs/doc-comment-check
19 warnings
build@net01: /work/cubietruck_android/android42$
```

Pack Final image:

\$pack

Pack success:

```
build@net01: /work/cubietruck_android/android42
>>> script_parse 0.9.1
>>> check sys_config line format
>>> done.
>>> check mainkey unique
>>> done.
>>> check module rule
>>> not implement yet
cp /work/cubietruck_android/lichee/out/android/common/u-boot.bin bootfs/linux/ [
OK]
script sys_config.fex [OK]
script sys_partition.fex [OK]
update_mbr sys_partition.bin 4 [OK]
update_boot0 boot0_nand.bin sys_config.bin NAND [OK]
update_boot0 boot0_sdcard.fex sys_config.bin SDMMC_CARD [OK]
update_boot1 boot1_nand.fex sys_config.bin NAND [Uncheck]
update_boot1 boot1_sdcard.fex sys_config.bin SDMMC_CARD [Uncheck]
fsbuild bootfs.ini split_xxxx.fex [OK]
dragon image.cfg sys_partition.fex [OK]
-----image is at-----

/work/cubietruck_android/lichee/tools/pack/sun7i_android_sugar-cubietruck.img

/work/cubietruck_android/android42
build@net01:/work/cubietruck_android/android42$
```

## Install image

The final image is at /lichee/tools/pack/sun7i\_android\_sugar-cubietruck.img

You can use Livesuit to install it