

New i.MX User's guide I -- Compiling Android & Linux BSP

1、 Install 18.04 on vmplayer

After installation is done, root user should be set at first.

```
# sudo passwd root
```

Then follow these steps to configuration ubuntu 18.04 for environment of compilation.

(1) Change sources of ubuntu 18.04 mirror

```
# sudo cp /etc/apt/sources.list /etc/apt/sources.list.bak
```

```
# sudo geit /etc/apt/source.list
```

[Comment]

I.MX customers outside China do not need to modify Ubuntu source list, or can modify it to local mirror site of Ubuntu 18.04, which can improve the speed of software upgrade.

Delet all sources and copy following lines here, Then save it and exit

```
deb https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic main restricted universe multiverse
# deb-src https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic main restricted universe multiverse
deb https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-updates main restricted universe multiverse
# deb-src https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-updates main restricted universe multiverse
deb https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-backports main restricted universe multiverse
# deb-src https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-backports main restricted universe multiverse
deb https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-security main restricted universe multiverse
# deb-src https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-security main restricted universe multiverse
# deb https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-proposed main restricted universe multiverse
# deb-src https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-proposed main restricted universe multiverse
```

(2) Run these 2 commands to update sources and packages

```
# sudo apt-get update
```

```
# sudo apt-get upgrade
```

2. Installing packages for compilation

After installing the following packages, android9.0.0-2.3.1 and Linux BSP 4.19.35-1.1.0 can both compiled without errors.

For other lower versions of android and linux BSP, even I didn't test them, customer can also install these packages before compilation, probably these packages can help customer solve some of problems during compiling BSP.

```
# sudo apt-get install flex bison gperf build-essential zlib1g-dev lib32ncurses5-dev x11proto-core-dev libx11-dev
lib32z1-dev libgl1-mesa-dev tofrodos python-markdown libxml2-utils xsltproc
# sudo apt-get install uuid-dev:i386 liblz2-dev:i386 gcc-multilib g++-multilib subversion openssh-server
openssh-client uuid uuid-dev zlib1g-dev liblz-dev lzop liblz2-2 liblz2-dev git-core curl
# sudo apt-get install u-boot-tools mtd-utils android-tools-fsutils openjdk-8-jdk device-tree-compiler aptitude
libcurl4-openssl-dev nss-updatedb
# sudo apt-get install chrpath texinfo gawk cpio diffstat
```

```

Get:1 https://mirrors.tuna.tsinghua.edu.cn/ubuntu bionic/main amd64 gawk amd64 1:4.1.4+dfsg-1build1 [401 kB]
Get:2 https://mirrors.tuna.tsinghua.edu.cn/ubuntu bionic/main amd64 tex-common all 6.09 [33.0 kB]
Get:3 https://mirrors.tuna.tsinghua.edu.cn/ubuntu bionic/universe amd64 chrpath amd64 0.16-2 [13.2 kB]
Get:4 https://mirrors.tuna.tsinghua.edu.cn/ubuntu bionic/universe amd64 libtext-unidecode-perl all 1.30-1 [99.0 kB]
Get:5 https://mirrors.tuna.tsinghua.edu.cn/ubuntu bionic/universe amd64 texinfo amd64 6.5.0.dfsg.1-2 [752 kB]
Fetched 1,299 kB in 3s (493 kB/s)
Selecting previously unselected package gawk.
(Reading database ... 140018 files and directories currently installed.)
Preparing to unpack .../gawk_1%3a4.1.4+dfsg-1build1_amd64.deb ...
Unpacking gawk (1:4.1.4+dfsg-1build1) ...
Selecting previously unselected package tex-common.
Preparing to unpack .../tex-common_6.09_all.deb ...
Unpacking tex-common (6.09) ...
Selecting previously unselected package chrpath.
Preparing to unpack .../chrpath_0.16-2_amd64.deb ...
Unpacking chrpath (0.16-2) ...
Selecting previously unselected package libtext-unidecode-perl.
Preparing to unpack .../libtext-unidecode-perl_1.30-1_all.deb ...
Unpacking libtext-unidecode-perl (1.30-1) ...
Selecting previously unselected package texinfo.
Preparing to unpack .../texinfo_6.5.0.dfsg.1-2_amd64.deb ...
Unpacking texinfo (6.5.0.dfsg.1-2) ...
Setting up chrpath (0.16-2) ...
Setting up tex-common (6.09) ...
update-language: texlive-base not installed and configured, doing nothing!
Setting up libtext-unidecode-perl (1.30-1) ...
Setting up gawk (1:4.1.4+dfsg-1build1) ...
Setting up texinfo (6.5.0.dfsg.1-2) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
weidong@ubuntu:/etc/apt$ █

```

3. Compiling Android 9.0.0-2.3.1 BSP

(1) Downloading document & Android BSP source from NXP website

---Documents

Link: https://www.nxp.com/design/development-boards/i.mx-evaluation-and-development-boards/android-os-for-i.mx-applications-processors:IMXANDROID?tab=Documentation_Tab

After downloading it, decompress it, please! We will find 6 files with pdf format.

	Android_Quick_Start_Guide.pdf	2019/11/13 13:59	PDF Document F...	652 KB
	Android_Release_Notes.pdf	2019/11/13 14:04	PDF Document F...	130 KB
	Android_User's_Guide.pdf	2019/11/13 14:01	PDF Document F...	271 KB
	i.MX_Android_Extended_Codec_Release_Notes.pdf	2019/11/13 14:22	PDF Document F...	172 KB
	i.MX_Android_Security_User_Guide.pdf	2019/11/13 14:07	PDF Document F...	496 KB
	i.MX_Graphics_User's_Guide.pdf	2019/8/9 13:54	PDF Document F...	5,530 KB

[Comment]

In Android_User's_Guide.pdf, detailed steps are described for compiling the version of android BSP. Due to access limitation of Google site in China, Here we will summarize some steps again by referring to Android_User's_Guide.pdf.



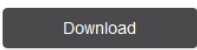


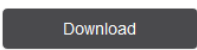


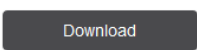
For customers that are no in China, Android_User's_Guide.pdf is enough. NXP customers in

China can use Tsinghua University Mirror Site to get Android Source Code. So when we begin to compile android bsp, we will point to Tsinghua University Mirror Site to get android source code.

---Downloading Android BSP Source Code

Link: https://www.nxp.com/design/development-boards/i.mx-evaluation-and-development-boards/android-os-for-i.mx-applications-processors:IMXANDROID?tab=Design_Tools_Tab

BSP, Drivers and Middleware (78)

	P9.0.0_2.3.1_ANDROID_SOURCE (REV P9.0.0_2.3.1) NEW  NXP i.MX Android proprietary source code for Android P9.0.0_2.3.1 PKG 72171 KB P9.0.0_2.3.1_ANDROID_SOURCE 2019-11-11 09:26:00	
	9.0.0_2.3.1_DEMO_8MN (REV P9.0.0_2.3.1) NEW  Prebuilt images with NXP extended features for the i.MX 8M Nano EVK PKG 560839 KB P9.0.0_2.3.1_DEMO_8MN 2019-11-11 09:43:00	
	P9.0.0_1.1.0_ANDROID_SOURCE (REV P9.0.0_1.1.0)  i.MX Android proprietary source code for Android P9.0.0_1.1.0 Patch, base on Linux L4.14.78_1.1.0 bsp PKG 27944 KB P9.0.0_1.1.0_ANDROID_SOURCE 2019-08-15 15:19:00	

[More](#)



I downloaded the file by firefox in Ubuntu 18.04. So it will be in ~/Downloads/ after downloading it.

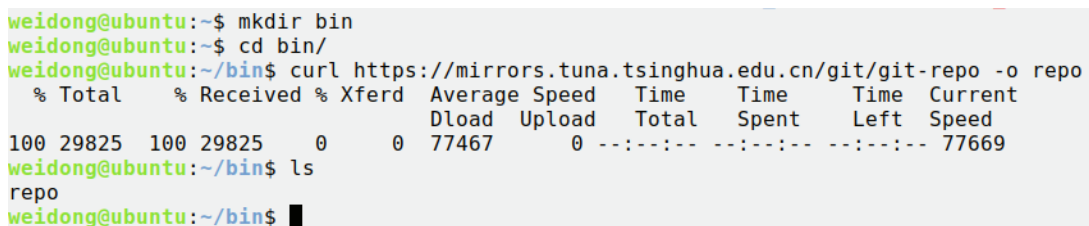
```
# cd ~/
# cp ~/Downloads/imx-p9.0.0_2.3.1.tar.gz ./
# tar xzvf imx-p9.0.0_2.3.1.tar.gz
```



(2) Downloading Android source code from Tsinghua University Mirror Site

① Getting repo

```
# cd ~/
# mkdir bin
# cd bin
# curl https://mirrors.tuna.tsinghua.edu.cn/git/git-repo -o repo
```



```
# chmod a+x ./repo
```

```
weidong@ubuntu:~/bin$ chmod a+x ./repo
weidong@ubuntu:~/bin$ ls
repo
weidong@ubuntu:~/bin$
```

```
# gedit ./repo
```

Changing

```
REPO_URL = 'https://gerrit.google.com/git-repo'
```

To be:

```
REPO_URL = 'https://mirrors.tuna.tsinghua.edu.cn/git/git-repo'
```

Save and exit.

```
# export PATH=${PATH}:~/bin
```

② Setting email address

```
# git config --global user.email "xxxx@nxp.com"
```

```
# git config --global user.name "xxxx"
```

③ Modifying android setup script and Running it

```
# cd ~/
```

```
# gedit ~/imx-p9.0.0_2.3.1/imx_android_setup.sh
```

Add lines below, changing Google site to be Tsinghua site.

```
if [ "$src" != 0 ]; then
    echo "-----"
    echo "-----Repo Init failure"
    echo "-----"
    return 1
fi

find -name 'aosp-p9.0.0_2.3.1.xml' | \
xargs perl -pi -e 's|https://android.google.com|https://aosp.tuna.tsinghua.edu.cn|g'

else
    cd "$android_builddir"
fi
```

④ Running imx_android_setup.sh to fetch android source code

```
# source ~/imx-p9.0.0_2.3.1/imx_android_setup.sh
```

```
* [new branch]      sdk-release          -> aosp/sdk-release
* [new branch]      simpleperf-release -> aosp/simpleperf-release
* [new branch]      temp-b_69925323      -> aosp/temp-b_69925323
* [new branch]      temp_140451723      -> aosp/temp_140451723
* [new branch]      temp_p_merge        -> aosp/temp_p_merge
remote: Counting objects: 13, done.          0 1:39:06 0:00:35 1:38:31 3315Receiving objects: 18% (34/181), 196.01 KiB | 5.00 KiB/s
remote: Compressing objects: 100% (10/10), done.
0 39.2M 0 239k 0 0 6783 0 1:41:08 0:00:36 1:40:32 3426remote: Counting objects: 5606, done.
remote: Compressing objects: 100% (2384/2384), done.
Receiving objects: 32% (1814/5606), 7.73 MiB | 2.58 MiB/s 39 1:42:30 3334Receiving objects: 32% (1814/5606), 5.61 MiB | 2.24 MiB/s s
```

It takes a long time to download Android source code, about 15 hours. During the download process, you may encounter the following situations:

No.1: Download interrupted.

No.2: download speed is very slow.

No.3: Download must stop and shut down the computer.

For No.1, you can run “repo sync” again. For No.2, you can press “Ctrl+C” to stop downloading, and run “repo sync” again. For No.3, After reboot computer, open terminal, and enter into

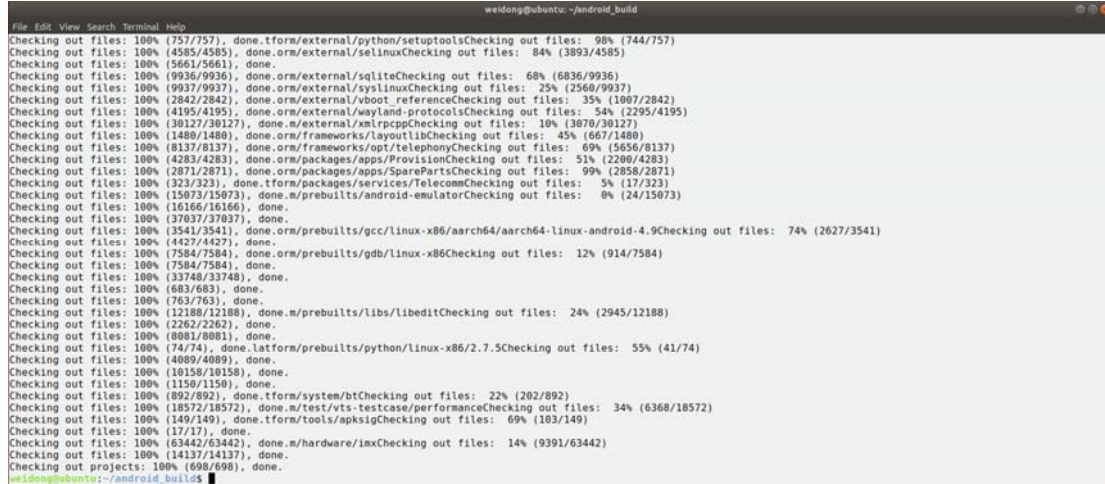
android_build directory, then run :

```
# export PATH=${PATH}:~/bin
```

```
# repo sync
```

“repo sync” will continue to download from the previous download location.

The following screenshot indicates downloading Android Source Code has been done.



```
weidong@ubuntu: ~/android_build
File Edit View Search Terminal Help
Checking out files: 100% (757/757), done.tform/external/python/setupoolsChecking out files: 98% (744/757)
Checking out files: 100% (4585/4585), done.orn/external/selinuxChecking out files: 84% (3893/4585)
Checking out files: 100% (5661/5661), done.
Checking out files: 100% (9936/9936), done.orn/external/sqliteChecking out files: 68% (6836/9936)
Checking out files: 100% (9937/9937), done.orn/external/syslinuxChecking out files: 25% (2566/9937)
Checking out files: 100% (2842/2842), done.orn/external/vboot_referenceChecking out files: 35% (1007/2842)
Checking out files: 100% (4195/4195), done.orn/external/wayland-protocolsChecking out files: 54% (2295/4195)
Checking out files: 100% (30127/30127), done.m/external/xmllrpcppChecking out files: 10% (3070/30127)
Checking out files: 100% (1480/1480), done.orn/frameworks/layoutlibChecking out files: 45% (667/1480)
Checking out files: 100% (8137/8137), done.orn/frameworks/opt/telephonyChecking out files: 69% (5656/8137)
Checking out files: 100% (4283/4283), done.orn/packages/apps/ProvisionChecking out files: 51% (2200/4283)
Checking out files: 100% (2871/2871), done.orn/packages/apps/SparePartsChecking out files: 99% (2858/2871)
Checking out files: 100% (323/323), done.tform/packages/services/TelecomChecking out files: 5% (17/323)
Checking out files: 100% (15073/15073), done.m/prebuilts/android-emulatorChecking out files: 0% (24/15073)
Checking out files: 100% (16166/16166), done.
Checking out files: 100% (37037/37037), done.
Checking out files: 100% (3541/3541), done.orn/prebuilts/gcc/linux-x86/aarch64/aarch64-linux-android-4.9Checking out files: 74% (2627/3541)
Checking out files: 100% (4427/4427), done.
Checking out files: 100% (7584/7584), done.orn/prebuilts/gdb/linux-x86Checking out files: 12% (914/7584)
Checking out files: 100% (7584/7584), done.
Checking out files: 100% (33748/33748), done.
Checking out files: 100% (683/683), done.
Checking out files: 100% (7637/7637), done.
Checking out files: 100% (12188/12188), done.m/prebuilts/libs/libeditChecking out files: 24% (2945/12188)
Checking out files: 100% (2262/2262), done.
Checking out files: 100% (8081/8081), done.
Checking out files: 100% (74/74), done.latform/prebuilts/python/linux-x86/2.7.5Checking out files: 55% (41/74)
Checking out files: 100% (4089/4089), done.
Checking out files: 100% (10158/10158), done.
Checking out files: 100% (1159/1159), done.
Checking out files: 100% (892/892), done.tform/system/btChecking out files: 22% (202/892)
Checking out files: 100% (18572/18572), done.m/test/vts-testcase/performanceChecking out files: 34% (6368/18572)
Checking out files: 100% (149/149), done.tform/tools/apksigChecking out files: 69% (103/149)
Checking out files: 100% (17/17), done.
Checking out files: 100% (63442/63442), done.m/hardware/ixmChecking out files: 14% (9391/63442)
Checking out files: 100% (14137/14137), done.
Checking out projects: 100% (698/698), done.
weidong@ubuntu: ~/android_build
```

⑤ Building Android Source Code

Now, we have downloaded the complete Android BSP source code, including u-boot, Linux kernel & Android source code. We can start compiling.

```
---Copy files related to media to ~/android_build/vendor/
```

```
# cd ~/android_build/vendor
```

```
# cp -r ~/imx-p9.0.0_2.3.1/vendor/* ./
```

```
---Setting path for cross-compiling BSP
```

```
# export ARCH=arm64
```

```
# export CROSS_COMPILE=/home/weidong/android_build/prebuilts/gcc/linux-x86/aarch64/aarch64-linux-android-4.9/bin/aarch64-linux-android-
```

```
---Compiling image for i.MX8M Mini EVK
```

```
# source build/envsetup.sh
```

```
weidong@ubuntu: ~/android_build$ source build/envsetup.sh
including device/fsl/imx6dq/vendorsetup.sh
including device/fsl/imx6sl/vendorsetup.sh
including device/fsl/imx6sx/vendorsetup.sh
including device/fsl/imx7d/vendorsetup.sh
including device/fsl/imx7ulp/vendorsetup.sh
including device/fsl/imx8m/vendorsetup.sh
including device/fsl/imx8q/vendorsetup.sh
including device/generic/car/vendorsetup.sh
including device/generic/mini-emulator-arm64/vendorsetup.sh
including device/generic/mini-emulator-armv7-a-neon/vendorsetup.sh
including device/generic/mini-emulator-mips64/vendorsetup.sh
including device/generic/mini-emulator-mips/vendorsetup.sh
including device/generic/mini-emulator-x86_64/vendorsetup.sh
including device/generic/mini-emulator-x86/vendorsetup.sh
including device/generic/uml/vendorsetup.sh
including device/google/bonito/vendorsetup.sh
including device/google/crosshatch/vendorsetup.sh
including device/google/cuttlefish/vendorsetup.sh
including device/google/marlin/vendorsetup.sh
including device/google/muskie/vendorsetup.sh
including device/google/taimen/vendorsetup.sh
including device/linaro/hikey/vendorsetup.sh
including sdk/bash_completion/adb.bash
```

```
# lunch evk_8mm-userdebug
```

```
weidong@ubuntu:~/android_build$ lunch evk_8mm-userdebug
=====
PLATFORM_VERSION_CODENAME=REL
PLATFORM_VERSION=9
TARGET_PRODUCT=evk_8mm
TARGET_BUILD_VARIANT=userdebug
TARGET_BUILD_TYPE=release
TARGET_ARCH=arm64
TARGET_ARCH_VARIANT=armv8-a
TARGET_CPU_VARIANT=cortex-a53
TARGET_2ND_ARCH=arm
TARGET_2ND_ARCH_VARIANT=armv7-a-neon
TARGET_2ND_CPU_VARIANT=cortex-a9
HOST_ARCH=x86_64
HOST_2ND_ARCH=x86
HOST_OS=linux
HOST_OS_EXTRA=Linux-5.0.0-37-generic-x86_64-Ubuntu-18.04.3-LTS
HOST_CROSS_OS=windows
HOST_CROSS_ARCH=x86
HOST_CROSS_2ND_ARCH=x86_64
HOST_BUILD_TYPE=release
BUILD_ID=2.3.0-ga-rc2
OUT_DIR=out
=====
weidong@ubuntu:~/android_build$
```

```
# make -j4
```

```
weidong@ubuntu:~/android_build$ make -j4
=====
PLATFORM_VERSION_CODENAME=REL
PLATFORM_VERSION=9
TARGET_PRODUCT=evk_8mm
TARGET_BUILD_VARIANT=userdebug
TARGET_BUILD_TYPE=release
TARGET_ARCH=arm64
TARGET_ARCH_VARIANT=armv8-a
TARGET_CPU_VARIANT=cortex-a53
TARGET_2ND_ARCH=arm
TARGET_2ND_ARCH_VARIANT=armv7-a-neon
TARGET_2ND_CPU_VARIANT=cortex-a9
HOST_ARCH=x86_64
HOST_2ND_ARCH=x86
HOST_OS=linux
HOST_OS_EXTRA=Linux-5.0.0-37-generic-x86_64-Ubuntu-18.04.3-LTS
HOST_CROSS_OS=windows
HOST_CROSS_ARCH=x86
HOST_CROSS_2ND_ARCH=x86_64
HOST_BUILD_TYPE=release
BUILD_ID=2.3.0-ga-rc2
OUT_DIR=out
=====
[1/1] out/soong/.minibootstrap/minibp out/soong/.bootstrap/build.ninja
[55/56] glob prebuilts/ndk/cpufeatures.bp
[79/79] out/soong/.bootstrap/bin/soong_build out/soong/build.ninja
out/build-evk_8mm-cleanspec.ninja is missing, regenerating...
out/build-evk_8mm.ninja is missing, regenerating...
[25/1005] including development/build/Android.mk ...
development/build/build_android_stubs.mk:43: warning: android_stubs_current
development/build/build_android_stubs.mk:43: warning: metalava_android_stubs_current metalava_android_stubs_current
development/build/build_android_stubs.mk:43: warning: android_system_stubs_current
development/build/build_android_stubs.mk:43: warning: android_test_stubs_current
development/build/build_android_stubs.mk:43: warning: metalava_android_system_stubs_current metalava_android_system_stubs
current
development/build/build_android_stubs.mk:43: warning: metalava_android_test_stubs_current metalava_android_test_stubs_cur
rent
[152/1005] including external/drm_gralloc/Android.mk ...
external/drm_gralloc/Android.mk:43: warning: invalid GPU drivers: vivante
[206/1005] including external/mesa3d/Android.mk ...
external/mesa3d/Android.mk:53: warning: invalid GPU drivers: vivante
[501/1005] including platform_testing/libraries/longevity/Android.mk ...
```

The compilation process takes about 8-9 hours.

The following is the screenshot after compilation. During the whole compilation process, there is no error or unexpected stop.


```
[ 99% 105739/105777] ProGuard: out/target/common/obj/APPS/TelephonyProvider_intermediates/classes-proguard.jar
ProGuard, version 5.1
Reading system jar [/home/weidong/android_build/out/target/common/obj/JAVA_LIBRARIES/core-obj_intermediates/classes-header.jar]
Reading system jar [/home/weidong/android_build/out/target/common/obj/JAVA_LIBRARIES/core-libart_intermediates/classes-header.jar]
Reading system jar [/home/weidong/android_build/out/target/common/obj/JAVA_LIBRARIES/ext_intermediates/classes-header.jar]
Reading system jar [/home/weidong/android_build/out/target/common/obj/JAVA_LIBRARIES/framework_intermediates/classes-header.jar]
Reading system jar [/home/weidong/android_build/out/target/common/obj/JAVA_LIBRARIES/okhttp_intermediates/classes-header.jar]
Reading system jar [/home/weidong/android_build/out/target/common/obj/JAVA_LIBRARIES/core-lambda-stubs_intermediates/classes-header.jar]
Reading system jar [/home/weidong/android_build/out/target/common/obj/JAVA_LIBRARIES/telephony-common_intermediates/classes-header.jar]
Reading program jar [/home/weidong/android_build/out/target/common/obj/APPS/TelephonyProvider_intermediates/classes.jar]
Preparing output jar [/home/weidong/android_build/out/target/common/obj/APPS/TelephonyProvider_intermediates/classes-proguard.jar]
Copying resources from program jar [/home/weidong/android_build/out/target/common/obj/APPS/TelephonyProvider_intermediates/classes.jar]
[ 99% 105745/105777] target Package: TelephonyProvider (out..k.8mm/obj/APPS/TelephonyProvider_intermediates/package.apk)
warning: ignoring flag -c mdpi-v4. Use --preferred-density instead.
warning: ignoring flag -c tvdpi-v4. Use --preferred-density instead.
warning: ignoring flag -c hdpi-v4. Use --preferred-density instead.
warning: ignoring flag -c xhdpi-v4. Use --preferred-density instead.
warning: ignoring flag -c mdpi-v4. Use --preferred-density instead.
warning: ignoring flag -c tvdpi-v4. Use --preferred-density instead.
warning: ignoring flag -c hdpi-v4. Use --preferred-density instead.
warning: ignoring flag -c xhdpi-v4. Use --preferred-density instead.
[ 99% 105772/105777] Target vendor fs image: out/target/product/evk_8mm/vendor.img
depmod: WARNING: could not open /home/weidong/android_build/out/target/product/evk_8mm/obj/PACKAGING/depmod_vendor_intermediates/lib/modules/0.0/modules.order: No such file or directory
depmod: WARNING: could not open /home/weidong/android_build/out/target/product/evk_8mm/obj/PACKAGING/depmod_vendor_intermediates/lib/modules/0.0/modules.builtin: No such file or directory
[100% 105777/105777] build out/target/product/evk_8mm/vbmeta-ix8mm.img

### build completed successfully (04:19:00 (hh:mm:ss)) ###
weidong@ubuntu:~/android_build$
```

Check images we got :

```
weidong@ubuntu:~/android_build/out/target/product/evk_8mm$ ls
android-info.txt      kernel                system.img
boot.img              module-info.json     testkey_public_rsa4096.bin
build_fingerprint.txt obj                    u-boot.imx
build_thumbprint.txt obj_arm               u-boot-ix8mm-4g-evk-uuu.imx
clean_steps.mk        partition-table-28GB.bpt  u-boot-ix8mm-4g.imx
data                  partition-table-28GB.img  u-boot-ix8mm-ddr4-evk-uuu.imx
dex_bootjars          partition-table-7GB.bpt  u-boot-ix8mm-ddr4.imx
dtbo.img              partition-table-7GB.img  u-boot-ix8mm-evk-uuu.imx
dtbo-ix8mm-ddr4.img   partition-table.bpt      u-boot-ix8mm.imx
dtbo-ix8mm.img        partition-table-default.bpt  u-boot-ix8mm-trusty-4g-evk-uuu.imx
dtbo-ix8mm-m4.img     partition-table-default.img  u-boot-ix8mm-trusty-4g.imx
dtbo-ix8mm-mipi-panel.img  partition-table.img      u-boot-ix8mm-trusty.imx
fake_packages         previous_build_config.mk  uuu_imx_android_flash.bat
fastboot_imx_flashall.bat  product_copy_files_ignored.txt  uuu_imx_android_flash.sh
fastboot_imx_flashall.sh  ramdisk.img            vbmeta.img
fsl-sdcard-partition.sh  ramdisk-recovery.img    vbmeta-ix8mm-ddr4.img
gen                     recovery                vbmeta-ix8mm.img
ix8mm_mcu_demo.img      recovery.id              vbmeta-ix8mm-m4.img
installed-files.json     root                     vbmeta-ix8mm-mipi-panel.img
installed-files.txt      rpmb_key_test.bin       vendor
installed-files-vendor.json  symbols                  vendor.img
installed-files-vendor.txt  system
```

⑥ Burning images into eMMC On i.MX8M Mini EVK Board

---Download Demo image from NXP website

https://www.nxp.com/design/development-boards/i.mx-evaluation-and-development-boards/android-os-for-i.mx-applications-processors:IMXANDROID?tab=Design_Tools_Tab


































The screenshot shows a download button for the file 'P9.0.0_2.3.0_GA_DEMO_8MM' (REV P9.0.0_2.3.0). Below the button, it says 'Prebuilt images with NXP extended features for the i.MX 8M Mini EVK'. The file size is 566640 KB and the date is 2019-08-08 15:59:00.

After downloading it, we will get a file named android_p9.0.0_2.3.0_image_8mmevk.tar.gz, We can decompress it on windows PC or Ubuntu Host, because our MFG tools can run on windows or Linux.

Here we will use it on windows, and decompress it in the path below:

E:\i.MX Processor\i.MX8-Projects\i.MX8M-MINI\images\android_p9.0.0_2.3.0_image_8mmevk

Below is all files listed

 boot.img	2019/7/25 10:18	PuddingZip.img	49,152 KB
 dtbo-imx8mm.img	2019/7/25 10:18	PuddingZip.img	4,096 KB
 dtbo-imx8mm-ddr4.img	2019/7/25 10:18	PuddingZip.img	4,096 KB
 dtbo-imx8mm-m4.img	2019/7/25 10:18	PuddingZip.img	4,096 KB
 dtbo-imx8mm-mipi-panel.img	2019/7/25 10:18	PuddingZip.img	4,096 KB
 EULA.txt	2019/7/25 21:13	文本文档	36 KB
 fastboot_imx_flashall.bat	2019/7/25 10:18	Windows 批处理...	13 KB
 fastboot_imx_flashall.sh	2019/7/25 10:17	SH 文件	10 KB
 fsl-sdcard-partition.sh	2019/7/25 10:18	SH 文件	12 KB
 imx8mm_mcu_demo.img	2019/7/25 10:18	PuddingZip.img	39 KB
 partition-table.img	2019/7/25 10:18	PuddingZip.img	34 KB
 partition-table-7GB.img	2019/7/25 10:17	PuddingZip.img	34 KB
 partition-table-28GB.img	2019/7/25 10:17	PuddingZip.img	34 KB
 rpmb_key_test.bin	2019/7/25 10:18	BIN 文件	1 KB
 SCR-p9.0.0_2.3.0.txt	2019/7/29 10:52	文本文档	32 KB
 system.img	2019/7/25 10:18	PuddingZip.img	1,173,849...
 testkey_public_rsa4096.bin	2019/7/25 10:18	BIN 文件	2 KB
 u-boot-imx8mm.imx	2019/7/25 10:18	IMX 文件	1,062 KB
 u-boot-imx8mm-4g.imx	2019/7/25 10:17	IMX 文件	1,063 KB
 u-boot-imx8mm-4g-evk-uuu.imx	2019/7/25 10:17	IMX 文件	1,063 KB
 u-boot-imx8mm-ddr4.imx	2019/7/25 10:17	IMX 文件	1,062 KB
 u-boot-imx8mm-ddr4-evk-uuu.imx	2019/7/25 10:18	IMX 文件	1,063 KB
 u-boot-imx8mm-evk-uuu.imx	2019/7/25 10:18	IMX 文件	1,062 KB
 u-boot-imx8mm-trusty.imx	2019/7/25 10:17	IMX 文件	2,308 KB
 u-boot-imx8mm-trusty-4g.imx	2019/7/25 10:17	IMX 文件	2,308 KB
 u-boot-imx8mm-trusty-4g-evk-uuu.imx	2019/7/25 10:18	IMX 文件	1,063 KB
 uuu_imx_android_flash.bat	2019/7/25 10:18	Windows 批处理...	26 KB
 uuu_imx_android_flash.sh	2019/7/25 10:18	SH 文件	22 KB
 vbmata-imx8mm.img	2019/7/25 10:18	PuddingZip.img	4 KB
 vbmata-imx8mm-ddr4.img	2019/7/25 10:18	PuddingZip.img	4 KB
 vbmata-imx8mm-m4.img	2019/7/25 10:18	PuddingZip.img	4 KB
 vbmata-imx8mm-mipi-panel.img	2019/7/25 10:17	PuddingZip.img	4 KB
 vendor.img	2019/7/25 10:18	PuddingZip.img	71,277 KB