

**FORUMS** 

Review

& Answers

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```
cd raphael-p-oss
git clone https://android.googlesource.com/platform/prebui
```

Download a compatible CLANG toolchain (Using AOSP's CLANG for this guide): Download
Move the downloaded file in the raphael-p-oss folder manually and then extract using the
following command:

```
Code: tar vxzf linux-x86-android-9.0.0_r48-clang-4691093.tar.gz
```

• Download the device-tree-compiler attached below and place it in /usr/bin

#### Step 3: Make device specific changes

Make these changes in the /kernel/module.c file.

If you are not familiar with github, you can check out many github guides available on XDA, for now you can just download the module.c file attached to this thread and replace the one in /kernel folder with the downloaded one!

Now, browse back to raphael-p-oss directory, and open the raphael\_user\_defconfig located in \arch\arm64\configs

Add the following lines:

```
Code:

CONFIG_BUILD_ARM64_DT_OVERLAY=y
CONFIG_MODULE_FORCE_LOAD=y
```

WIFI & Audio won't work if you don't make these changes, apparently Xiaomi decided to skip wlan & audio drivers in pie sources.

### Step 4: Building The Kernel

```
cd raphael-p-oss
rm -rf out
mkdir out
export ARCH=arm64
export DTC_EXT=dtc

make 0=out ARCH=arm64 raphael_user_defconfig

PATH="${PWD}/bin:${PWD}/toolchain/bin:${PATH}" \
make -j$(nproc --all) 0=out \
```

# Step 5: How To Get Help If You Encounter Errors

A kernel.log file will be generated in raphael-p-oss folder, find the line which says error. If you can't figure out the solution, attach the kernel.log in your reply to this thread.

## Step 6: Booting The Kernel

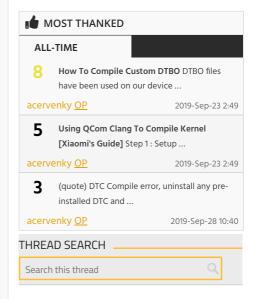
Once you're done with Step 4, browse to /out/arch/arm64/boot & you'll find the Image-dtb file (compiled zImage)

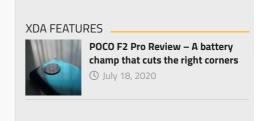
Download the anykernel template for raphael from attachments and add your Image-dtb file to the archive.

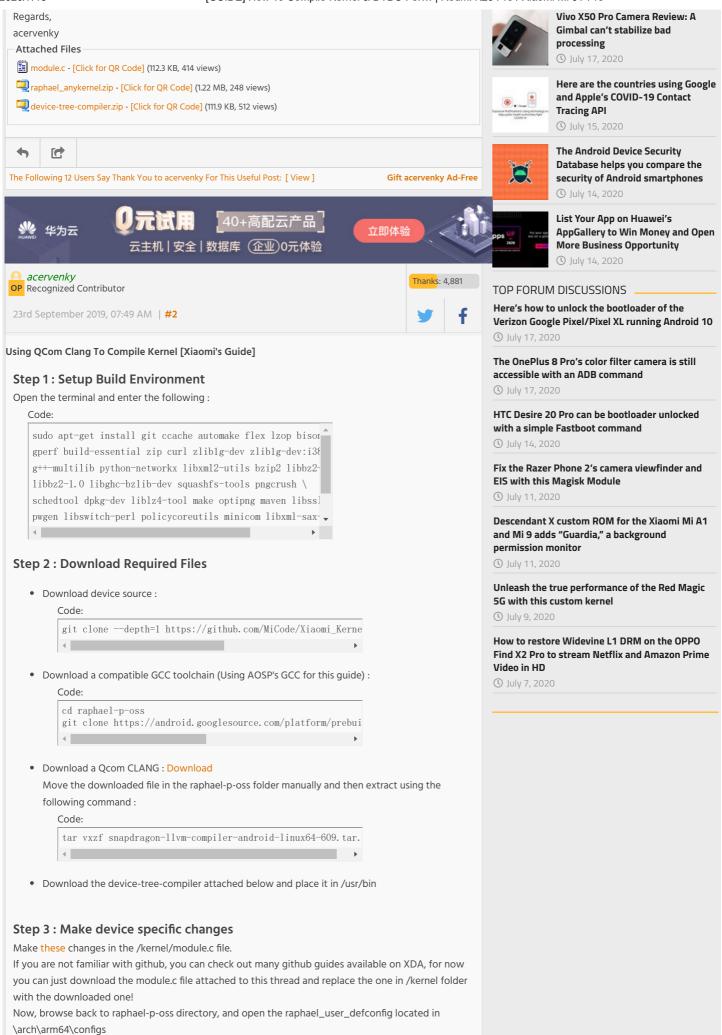
Boot in TWRP, backup your stock kernel & flash the anykernel zip.

### References:

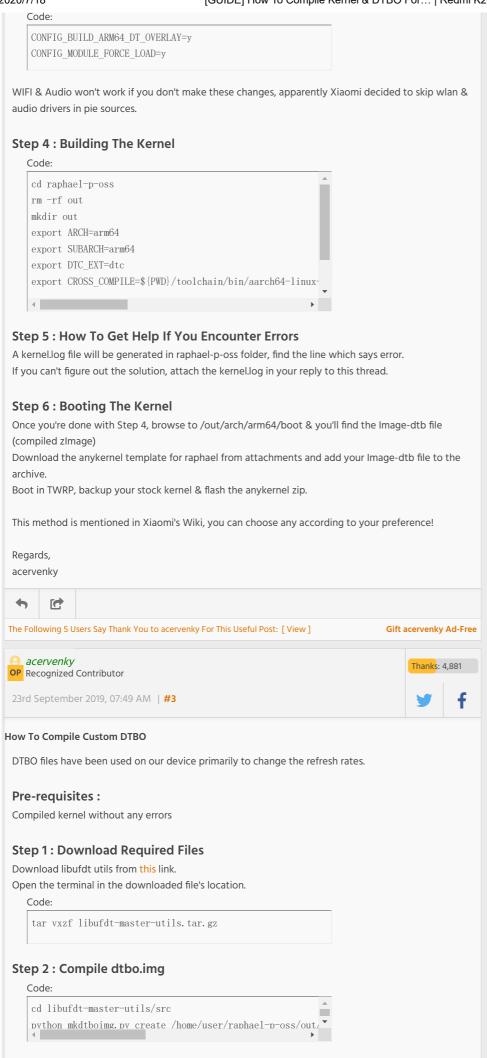
Information on compiling Android kernels with Clang by nathanchance
How to compile kernel standalone by Xiaomi
Kernel Builder Virtual Machine & device specific changes by mslezak
AnyKernel3 Template by osm0sis
Wahoo Kernel Tools by frap129

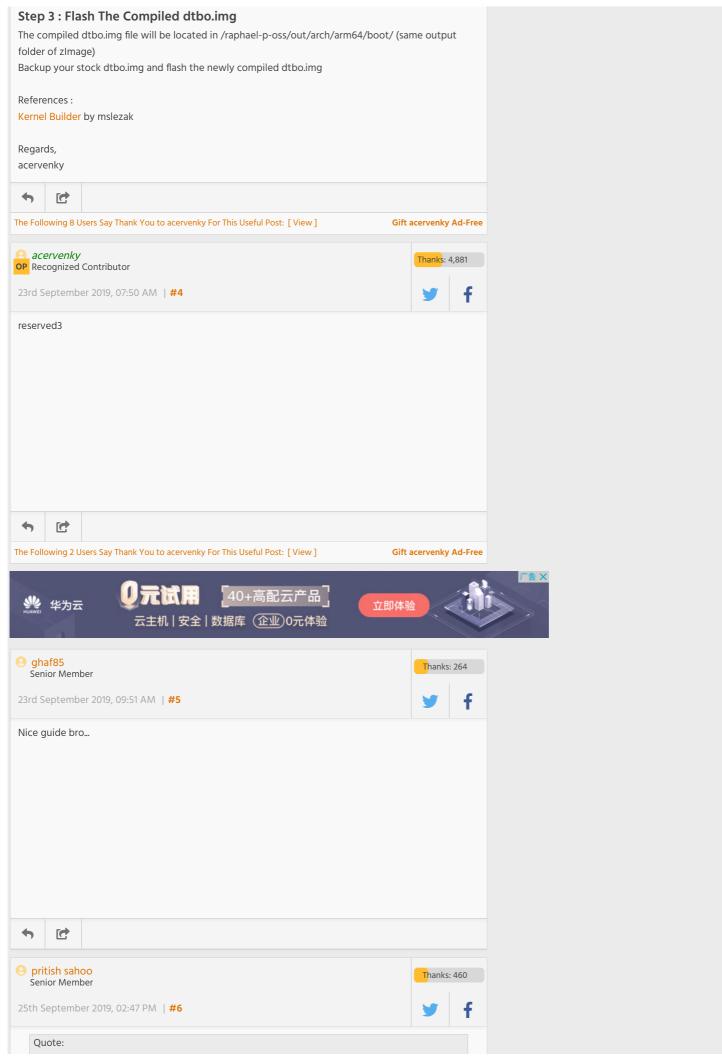


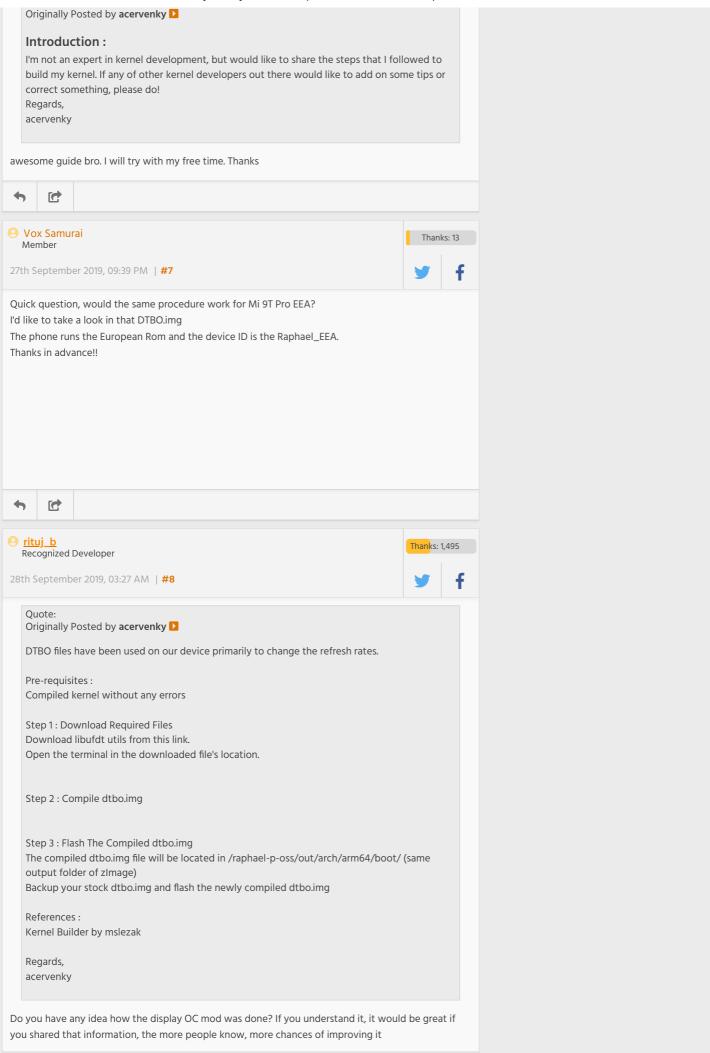


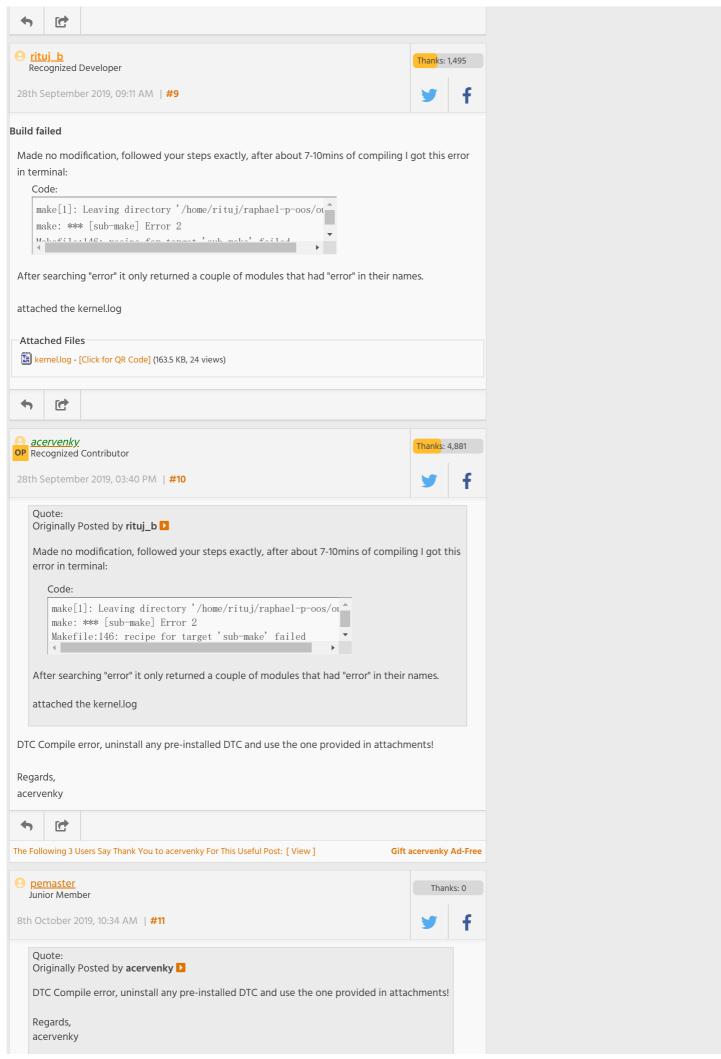


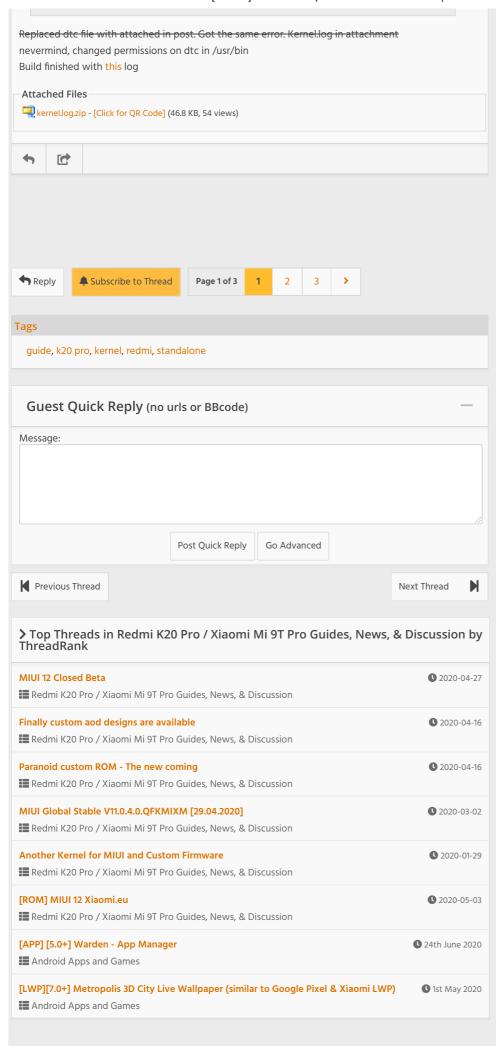
Add the following lines:











\*\* xda-developers \* Redmi K20 Pro / Xiaomi Mi 9T Pro \*\* Redmi K20 Pro / Xiaomi Mi 9T Pro Guides, News, & Discussion \*\* [GUIDE] How To Compile Kernel & DTBO For Redmi K20 Pro by acervenky

