

1. 打补丁

```
cd ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06

patch -p1 < ~/ti/08_04_00_06/package/0001-update-vision-apps-makefile-support-SBL-boot-linux.patch
```

2. 编译SBL

```
cd ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/pdk_jacinto_08_04_00_21/packages/ti/build

make BOARD=j721e_evm CORE=mcu1_0 BUILD_PROFILE=release pdk_libs -sj

make BOARD=j721e_evm CORE=mcu1_0 BUILD_PROFILE=release sbl_mmcscd_img -sj
```

生成的文件在：

```
~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/pdk_jacinto_08_04_00_21/packages/ti/boot/sbl/binary/j721e_evm/mmcscd/bin/sbl_mmcscd_img_mcu1_0_release.bin

cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/pdk_jacinto_08_04_00_21/packages/ti/boot/sbl/binary/j721e_evm/mmcscd/bin/sbl_mmcscd_img_mcu1_0_release.bin /media/$USER/BOOT/tiboot3.bin
```

3. 编译 can boot app

```
cd ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/vision_apps

make sbl_mcusw_bootimage_sd
```

生成的文件：

```
~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/mcusw/binary/can_boot_app_mcu_rtos/bin/j721e_evm/can_boot_app_mcu_rt
```

```
os_mcu1_0_release.appimage
```

```
cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/mcusw/binary/can_boot_app_mcu_rtos/bin/j721e-evm/can_boot_app_mcu_rt  
os_mcu1_0_release.appimage /media/$USER/BOOT/app
```

4. 编译DTB

需要更新 DTB 的 bootargs:

board-support/linux-5.10.120+gitAUTOINC+95b90aa828-
g95b90aa828/arch/arm64/boot/dts/ti/k3-j721e-common-proc-board.dts

```
bootargs = "console=ttyS2,115200n8 earlycon=ns16550a,mmio32,0x02800000  
root=/dev/mmcblk1p2 r w rootfstype=ext4 rootwait";
```

在 k3-j721e-common-proc-board.dts 里面添加 board-support/linux-
5.10.120+gitAUTOINC+95b90aa828-g95b90aa828/arch/arm64/boot/dts/ti/k3-j721e-vision-
apps.dts的内容(不加include)。

编译:

```
cd ~/ti/08_04_00_06/ti-processor-sdk-linux-j7-evm-08_04_00_11  
make linux-dtbs  
  
cp ~/ti/08_04_00_06/ti-processor-sdk-linux-j7-evm-08_04_00_11/board-  
support/linux-5.10.120+gitAUTOINC+95b90aa828-  
g95b90aa828/arch/arm64/boot/dts/ti/k3-j721e-common-proc-board.dtb  
~/ti/08_04_00_06/ti-processor-sdk-linux-j7-evm-08_04_00_11/board-  
support/prebuilt-images/base-board.dtb
```

5. 转换Linux的ATF、 dtb、 kernel Image

修改~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-
08_04_00_06/vision_apps/makerules/makefile_sbl.mak

~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-
08_04_00_06/vision_apps/makerules/makefile_sbl_combined_appimage.mak

开头加上

```
SJ_PATH_PSDKLA=~/ti/08_04_00_06/ti-processor-sdk-linux-j7-evm-08_04_00_11
```

编译:

```
make sdk -j10 或 ./make_sdk.sh  
make sbl_bootimage
```

编辑~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/mcusw/mcuss_demos/boot_app_mcu_rtos/main_domain_apps/scripts/hlos/constructappimageshlos.sh

```
OS=linux  
  
LINUX_BUILD_DIR_PATH=/home/${USER}/ti/07_03/ti-processor-sdk-linux-j7-evm-07_03_00_05/board-support/prebuilt-images  
  
MULTICOREAPP_BIN_PATH=~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/vision_apps/out/sbl_bootfiles/rprcs
```

转换:

```
cd ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/mcusw/mcuss_demos/boot_app_mcu_rtos/main_domain_apps/scripts/hlos  
  
./constructappimageshlos.sh j721e_evm
```

转换后的文件在~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/vision_apps/out/sbl_bootfiles/rprcs下:

```
atf_optee.appimage  
tidtb_linux.appimage  
tikernelimage_linux.appimage
```

拷贝:

```
cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-08_04_00_06/vision_apps/out/sbl_bootfiles/rprcs/atf_optee.appimage  
/media/$USER/BOOT  
  
cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-
```

```
08_04_00_06/vision_apps/out/sbl_bootfiles/rprcs/tidtb_linux.appimage  
/media/$USER/BOOT  
  
cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/vision_apps/out/sbl_bootfiles/rprcs/tikernelimage_linux.appimage  
/media/$USER/BOOT
```

6. 拷贝到SD卡

```
//cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/pdk_jacinto_08_04_00_21/packages/ti/boot/sbl/binary/j721e-evm/mmc  
sd/bin/sbl_mmc_sdl_img_mcu1_0_release.bin /media/$USER/BOOT/tiboot3.bin  
  
cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/vision_apps/out/sbl_bootfiles/tifs.bin /media/$USER/BOOT  
  
//cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/vision_apps/out/sbl_bootfiles/app /media/$USER/BOOT  
  
//cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/vision_apps/out/sbl_bootfiles/rprcs/atf_optee.appimage  
/media/$USER/BOOT  
  
//cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/vision_apps/out/sbl_bootfiles/rprcs/tidtb_linux.appimage  
/media/$USER/BOOT  
  
//cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/vision_apps/out/sbl_bootfiles/rprcs/tikernelimage_linux.appimage  
/media/$USER/BOOT  
  
cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/vision_apps/out/sbl_bootfiles/lateapp1 /media/$USER/BOOT  
  
cp ~/ti/08_04_00_06/ti-processor-sdk-rtos-j721e-evm-  
08_04_00_06/vision_apps/out/sbl_bootfiles/lateapp2 /media/$USER/BOOT
```