

This document explains the steps to make a static alsa library `alsa-lib` for ARM Coretex-A8.

Steps to make static alsa library `alsa-lib`

1. Get ALSA Lib 1.0.24.1 from <ftp://ftp.alsa-project.org/pub/lib/alsa-lib-1.0.24.1.tar.bz2>
. It is all available on <http://www.alsa-project.org/main/index.php/Download>
2. Untar it on location say `<ALSA_BASE>`
3. `$> cd <ALSA_BASE>`
4. `$> export PATH=$PATH:<PATH to CGTools_A8 say /data/local/ti_tools/cgt_a8/arm-2009q1/bin>`
5. `$> export CC="arm-none-linux-gnueabi-gcc -march=armv7-a -mtune=cortex-a8 -mfpu=neon -mfloat-abi=softfp -mthumb-interwork -mno-thumb"`
6. `$> export CFLAGS="-fexpensive-optimizations -frename-registers -fomit-frame-pointer -O2 -ggdb2"`
7. `$> export LDFLAGS="-Wl,-O1 -Wl,--hash-style=gnu"`
8. `$> export ALSA_DEPLIBS="-lpthread -lrt"`
9. `$> ./configure --disable-old-symbols --disable-alisp --target=arm-none-linux-gnueabi --host=arm-none-linux-gnueabi --prefix=/usr --exec-prefix=/usr --sysconfdir=/etc --enable-shared=no --enable-static=yes --with-alsa-devdir=/dev/snd --with-pcm-plugins="all" --with-ctl-plugins="all" --without-versioned --disable-python --with-softfloat --with-libdl=no`
10. `$> make`
11. `$> make install DESTDIR=/destination_dir/`
12. `$> cd <DVR_RDK_BASE>`
13. `$> export DEST_DIR= destination_dir`
14. Link the `alsa-lib` with `-lrt`. Eg. Modify the `dvr_rdk/makerules/includes_a8.mk` for ALSA lib path as below `AUDIO_LIBS=-lrt $DESTDIR/usr/lib/libasound.a`

Notes

1. `DVR_RDK_BASE` is the application code where the `alsa-lib` will be linked a statically.
2. `DESTDIR` is the location where include and the library files related to ALSA reside.

3. This is verified on ARM Coretex-A8 only. For other processor exported parameters may vary