ITTIAM-AC3DEC-UG

User Guide

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Ittiam Systems (P) Ltd,
The Consulate, 1 Richmond Road,
Bangalore 560 025, India

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Revision History

Version	Date	Changes
1.0	October 21, 2009	Original

1. Component Placement

Copy Ittiam's OMX IL component to OMX IL audio source directory in Android BSP installation.

```
cp –rf <rel_dir>/ittiam-sw/omxil/auddec/ac3_dec_ittiam
<android_bsp>/25.x/mydroid/hardware/ti/omx/audio/src/openma
x_il/

mv <rel_dir>/ittiam-
sw/omxil/auddec/ac3_dec_ittiam/inc/IttiamOMX.h
<android_bsp>/25.x/mydroid/hardware/ti/omx/system/src/openm
ax_il/common/inc/
```

2. Build instructions

Modify top-most level of OMX makefile for including Ittiam's OMX IL component builds. Add following lines to the makefile <android_bsp>/25.x/mydroid/hardware/ti/omx/Android.mk after the comment

```
#call to audio.
      include $(TI_OMX_AUDIO)/ac3_dec_ittiam/Android.mk
      include $(TI_OMX_AUDIO)/ac3_dec_ittiam/tests/Android.mk
```

Build the file system at the top-most level.

```
      cd <android_bsp>/25.x/mydroid
      make
```

Note Ensure that PATH environment variable contains path for ARM tool-chain.

Ittiam's OMX IL component gets generated at

```
      <android_bsp>/25.x/mydroid/out/target/product/zoom2/system/
      lib/libOMX.ITTIAM.AC3.decode.so
```

Ittiam's OMX IL testbench gets generated at

```
      <android_bsp>/25.x/mydroid/out/target/product/zoom2/system/
      bin/Ac3Decoder_Test
```

3. Execution instructions

Copy OMX IL component to target's file system at

```
/system/lib/libOMX.ITTIAM.AC3.decode.so
/system/bin/Ac3Decoder_Test
```

Run the following commands in the target to execute the component using OMX-IL sample testbench

```
cd /system/bin/

./Ac3Decoder_Test [INFILE] [OUTFILE] [FRAME_MODE] [TESTCASE]
[PCMWIDTH] [IP_BUF] [OUT_BUF][KARAOKE_MODE] [DYNRANGE_MODE] [LFE
CHANNEL] [OUT_CHAN_CONFIG] [NUM_CHAN] [PCM_SCALEFACTOR]
[STEREO_OUT_MODE] [DUAL_MONOMODE] [DYNRANGE_CUT_FACTOR]
[DYNRANGE_BOOST_FACTOR] [CHANNEL_ROUTING_INFORMATION]

Where

      INFILE      input ac3 file

      OUTFILE     output pcm file

      FRAME_MODE  0/1

      PCMWIDTH    16/24

      IP_BUF      no of input buffer

      OUT_BUF     no of output buffer

      KARAOKE_MODE      Karaoke capable reproduction mode (default3)

         0 = no vocal
         1 = left vocal
         2 = right vocal
         3 = both vocals

      DYNRANGE_MODE     Dynamic range compression mode (default 2)

         0 = custom mode, analog dialnorm
         1 = custom mode, digital dialnorm
         2 = line out mode
         3 = RF remod mode

      LFE CHANNEL       Output lfe channel present (default 1)

      OUT_CHAN_CONFIG   Output channel configuration (default 7)

         0 = reserved
         1 = 1/0 (C)
         2 = 2/0 (L, R)
         3 = 3/0 (L, C, R)
```

```
   4 = 2/1 (L, R, l)
   5 = 3/1 (L, C, R, l)
   6 = 2/2 (L, R, l, r)
   7 = 3/2 (L, C, R, l, r)
NUM_CHAN   Number of output channels (default 6)
PCM_SCALEFACTOR  PCM scale factor (default 1<<15)
STEREO_OUT_MODE  Stereo output mode (default 0)
   Only effective when OUT_CHAN_CONFIG = 2
   0 = auto detect
   1 = Dolby Surround compatible (Lt/Rt)
   2 = Stereo (Lo/Ro)
DUAL_MONOMODE  Dual mono reproduction mode (default 0)
   0 = Stereo
   1 = Left mono
   2 = Right mono
   3 = Mixed mono
DYNRANGE_CUT_FACTOR  Dynamic range compression cut scale
   factor (default 1<<15)
DYNRANGE_BOOST_FACTOR    Dynamic  range  compression  boost
   scale factor (default 1<<15)
CHANNEL_ROUTING_INFORMATION   0..5 Channel routing
   information
   Route arbitrary input channels (0=L,1=C,2=R,3=l,4 =
   r,5=s) to arbitrary interleaved output channel (0..5).

   Example: 0 1 routes left bitstream channel to first
   interleaved output channel, and routes right bitstream
   channel to second interleaved output channel.

   Note: use l to designate mono surround in 2/1 or 3/1
   modes, use L and R to designate independent channels in
   1+1 mode.

   Default: 0 1 2 3 4 5
```

Eg:-

```
./Ac3Decoder_Test difmus6.ac3 difmus6.pcm 0 1 16 1 1
```