

Difference between revisions of "Audio codecs hardware components"



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The provided diff revision is invalid.

A [quality version](#) of this page, [accepted](#) on *11 February 2019*, was based off this revision.

Template:ArticleMainWriter Template:ArticleApprovedVersion



cs42151 bindings linked forced to 4.20. Version to be removed on next kernel rebase

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1 Article purpose

The purpose of this article is to:

- list the audio codec hardware components that might be integrated in the different STM32MPU boards
- link these components to the corresponding software framework(s)
- point to the datasheet(s) of these components
- explain, when necessary, how to configure these components.

2 Software frameworks

Do	Peri	Software frameworks	Comment
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Do	Peri	Software frameworks			Comment
mei A7 no secure (O P- TE E)	-A7	Cortex-M4 (STM32Cube)			
	no				
	n- sec ure (Li nux)				
Au dio	W olf so n w m 89 94		ALSA framework		DAC & ADC audio codec
Au dio	Cir ru s cs 42l 51		ALSA framework		DAC & ADC audio codec
Au dio	Sil ab sil 90 22		ALSA framework		HDMI transmitt er
Au dio	ST M P3 4D T0 1- M		ALSA framework		Digital microph one

3 Wolfson wm8994

The WM8994 is a highly integrated ultra-low power hi-fi CODEC rich in multimedia features.

For details and the datasheet please contact the WM8994 codec provider.



3.1 Linux driver

Bindings: Documentation/devicetree/bindings/sound/wm8994.txt

Sources:

- drivers/mfd/wm8994-core.c
- sound/soc/codecs/wm8994.c
- sound/soc/codecs/wm_hubs.c

4 Cirrus cs42l51

The CS42L51 is a highly integrated, 24-bit, low-power stereo CODEC.

For details and the datasheet please contact the CS42L51 codec provider.

4.1 Linux driver

Bindings: Documentation/devicetree/bindings/sound/cs42l51.txt (v4.20)

Sources: sound/soc/codecs/cs42l51.c

5 Silab sil9022

The Sil9022A HDMI transmitter supports the HDMI[®] Specification on a wide range of mobile products.

For details and the datasheet please contact the Sil9022A HDMI transmitter provider.

5.1 Linux driver

Bindings: Documentation/devicetree/bindings/display/bridge/sii902x.txt

Sources: drivers/gpu/drm/bridge/sii902x.c

6 ST MP34DT01-M

The MP34DT01-M is an ultra-compact, low-power, omnidirectional, digital MEMS microphone.

Datasheet: <https://www.st.com/resource/en/datasheet/mp34dt01-m.pdf>



6.1 Linux driver

Bindings: [Documentation/devicetree/bindings/sound/dmic.txt](#) Sources: [sound/soc/codecs/dmic.c](#)

Open Portable Trusted Execution Environment

Digital-to-analog converter (Electronic circuit that converts a binary number into a continuously varying value.)

Analog-to-digital converter. The process of converting a sampled analog signal to a digital code that represents the amplitude of the original signal sample.

High-Definition Multimedia Interface (HDMI standard)