



Audio codecs hardware components



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Audio codecs hardware components

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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
mai Cor tex -A7	Cor tex -A7 no n-		



Do	Peri	Software frameworks			Comment
main secure (O P- TE E)	secure (Linux)	Cortex-M4 (STM32Cube)			
Audio	Wolfson wm8994		ALSA framework		DAC & ADC audio codec
Audio	Cirrus cs42l51		ALSA framework		DAC & ADC audio codec
Audio	Silabs sil9022		ALSA framework		HDMI transmitter
Audio	ST MP34DT01-M		ALSA framework		Digital microphone

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)

Audio codecs hardware components

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Do	Peri	Software frameworks			Comment
mai Cortex -A7 secure (O P- TE E)	Cor tex -A7 no n- sec ure (Li nux)	Cortex-M4 (STM32Cube)			
Au dio	W olf so n w m 89 94		ALSA framework		DAC & ADC audio codec
Au dio	Cir ru s 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



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High-Definition Multimedia Interface (HDMI standard)

Pages in category "ST boards"

The following 8 pages are in this category, out of 8 total.

M

- [MB1230](#)
- [MB1262](#)
- [MB1263](#)
- [MB1272](#)
- [MB1379](#)
- [MB1407](#)

S

- [STM32MP157C-EV1 - hardware description](#)
- [STM32MP157X-DKX - hardware description](#)

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mai C r t e x - A 7 s e c u r e (O P - T E E)	Cor tex - A 7 n o n- s e c u r e (L i n u x)	Cortex-M4 (STM32Cube)			
	W olf				



Do	Peri	Software frameworks		Comment
Audio main	Peripheral		ALSA framework	DAC & ADC audio codec
	wm8994			
Audio	Cirrus		ALSA framework	DAC & ADC audio codec
	42151			
Audio	Silabs		ALSA framework	HDMI transmitter
	9022			
Audio	STM		ALSA framework	Digital microphone
	P34D T01-M			

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