

## ASoC Platform Driver

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An ASoC platform driver can be divided into audio DMA and SoC DAI configuration and control. The platform drivers only target the SoC CPU and must have no board specific code.

### Audio DMA

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The platform DMA driver optionally supports the following ALSA operations:-

```
/* SoC audio ops */
struct snd_soc_ops {
    int (*startup)(struct snd_pcm_substream *);
    void (*shutdown)(struct snd_pcm_substream *);
    int (*hw_params)(struct snd_pcm_substream *, struct snd_pcm_hw_params
*);
    int (*hw_free)(struct snd_pcm_substream *);
    int (*prepare)(struct snd_pcm_substream *);
    int (*trigger)(struct snd_pcm_substream *, int);
};
```

The platform driver exports its DMA functionality via struct snd\_soc\_platform:-

```
struct snd_soc_platform {
    char *name;

    int (*probe)(struct platform_device *pdev);
    int (*remove)(struct platform_device *pdev);
    int (*suspend)(struct platform_device *pdev, struct snd_soc_cpu_dai
*cpu_dai);
    int (*resume)(struct platform_device *pdev, struct snd_soc_cpu_dai
*cpu_dai);

    /* pcm creation and destruction */
    int (*pcm_new)(struct snd_card *, struct snd_soc_codec_dai *, struct
snd_pcm *);
    void (*pcm_free)(struct snd_pcm *);

    /* platform stream ops */
    struct snd_pcm_ops *pcm_ops;
};
```

Please refer to the ALSA driver documentation for details of audio DMA.  
<http://www.alsa-project.org/~iwai/writing-an-alsa-driver/c436.htm>

An example DMA driver is soc/pxa/pxa2xx-pcm.c

## SoC DAI Drivers

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Each SoC DAI driver must provide the following features:-

- 1) Digital audio interface (DAI) description

platform.txt

- 2) Digital audio interface configuration
- 3) PCM's description
- 4) SYSCLK configuration
- 5) Suspend and resume (optional)

Please see codec.txt for a description of items 1 - 4.