#### NAME

snd\_csa - Crystal Semiconductor CS461x/462x/4280 PCI bridge device driver

#### SYNOPSIS

To compile this driver into the kernel, place the following lines in your kernel configuration file:

# device sound device snd\_csa

Alternatively, to load the driver as a module at boot time, place the following line in loader.conf(5):

snd\_csa\_load="YES"

#### DESCRIPTION

The **snd\_csa** bridge driver allows the generic audio driver sound(4) to attach to Crystal Semiconductor CS461x/462x/4280 based sound cards.

# HARDWARE

The **snd\_csa** driver supports the following sound cards:

- Crystal Semiconductor CS4280
- Crystal Semiconductor CS4610
- Crystal Semiconductor CS4611
- Crystal Semiconductor CS4614
- Crystal Semiconductor CS4615
- Crystal Semiconductor CS4622
- Crystal Semiconductor CS4624
- Crystal Semiconductor CS4630
- Genius Soundmaker 128 Value
- Hercules Game Theatre XP
- Turtle Beach Santa Cruz

Some onboard CS4610 chips are accompanied by the CS423x ISA codec instead of the CS4297 AC97 codec. Such configurations are not supported by the **snd\_csa** driver yet.

# SEE ALSO

sound(4)

# HISTORY

The **snd\_csa** device driver first appeared in FreeBSD 4.0.

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