NAME

audioamd – telephone quality audio device

AVAILABILITY

SPARC

SPARCstation 1 and 2, IPC, IPX, SLC, ELC, LC, and SPARCserver 6xx systems.

Desktop SPARCsystems include a built-in speaker for audio output. The audio cable provides connectors for a microphone and external headset. The headset output level is adequate to power most headphones, but may be too low for some external speakers. Powered speakers or an external amplifier may be used. SPARCserver 6xx systems do not have an internal speaker, but support an external microphone and speaker connected through the audio cable.

The Sun Microphone is recommended for normal desktop audio recording. It contains a battery that must be replaced after 210 hours of use. Other microphones may be used, but a pre-amplifier circuit may be required to achieve a sufficient input signal. Other audio sources may be recorded by connecting one channel of the line output to the audio cable microphone input. If the input signal is distorted, external attenuation may be required (audio sources may also be connected from their headphone output with the volume turned down).

DESCRIPTION

The **audioamd** device uses the AM79C30A Digital Subscriber Controller chip to implement the audio device interface. This interface is described fully in the **audio**(7I) manual page.

Applications that open **/dev/audio** may use the **AUDIO_GETDEV** ioctl to determine which audio device is being used. The audioamd driver will return **"SUNW,am79c30"** in the *name* field of the **audio_device** structure. The *version* field will contain **"a"** and the *config* field will be set to **"onboard1"** .

The **AUDIO_SETINFO ioctl** controls device configuration parameters. When an application modifies the *record.buffer_size* field using the **AUDIO_SETINFO** ioctl, the driver will constrain it to be greater than zero and less than or equal to 8000 bytes or one second of audio data. Applications are warned that setting this field too low or too high may cause system performance problems and should therefore set this field with caution.

Audio Data Formats

The **audioamd** device supports the audio formats listed in the following table. When the device is open for simultaneous play and record, the input and output data formats must match.

Supported Audio Data Formats			
Sample Rate	Encoding	Precision	Channels
8000 Hz	μ-law	8	1
8000 Hz	A-law	8	1

Since **audioamd** supports only single-channel (monaural) audio, the *play.balance* and *record.balance* fields of the **audio_info** structure are ignored.

Audio Ports

The *record.avail_ports* and *play.avail_ports* fields of the **audio_info** structure report the available input and output ports. The **audioamd** device supports one input port, selected by setting the *record.port* field to **AUDIO_MICROPHONE**. The *play.port* field may be set to either **AUDIO_SPEAKER** or **AUDIO_HEADPHONE**, to direct audio output to the built-in speaker or headphone jack, respectively. Note that **AUDIO_SPEAKER** cannot be enabled for systems that do not include a built-in speaker.

Sample Granularity

Since the **audioamd** device manipulates single samples of audio data, the reported input and output sample counts will be very close to the actual sample count. However, some other audio devices report sample counts that are approximate, due to buffering constraints. Programs should, in general, not rely on absolute accuracy of the sample count fields.

FILES

/dev/audio
/dev/audioctl
/dev/sound
/usr/demo/SOUND

SEE ALSO

ioctl(2), **audio**(7I), **streamio**(7I)

AMD data sheet for the AM79C30A Digital Subscriber Controller, Publication number 09893.