

## Re: GX1-CS5530 sound problem !!!

**Source:** <http://linux.derkeiler.com/Newsgroups/comp.os.linux.embedded/2004-06/0132.html>

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**From:** Tech Support for IDE-CF (*tech\_at\_ide-cf.info-for.us*)

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Jürgen Querengässer <msg1000@web.de> wrote in message news:<2j7iksFu5k7nU1@uni-berlin.de>...

> *Tech Support for IDE-CF wrote:*

>> *We found that if you are running heavy sound I/O, i.e. mp3 and video*

>> *at the same time, the geode interrupt stack gets confused.*

>>

>> *The conflict is inside the geode companion chip, there is nothing you*

>> *can do about it.*

>>

>> *Our solution is to put it in graphic mode (even for simple text*

>> *display) for mp3. X appears to have less latency than the Geode's*

>> *Virtual VGA system. However, it does take up much more system memory.*

>> *On the plus side, system memory seems to be faster than the bios*

>> *memory anyway.*

>

>

> *Hi 'Tech Support for IDE-CF',*

>

> *I'm interested in how did you find this.*

>

> *I would like to know how I can provoke such behaviour. My app. also needs*

> *much CPU time and has to serve much interrupts and does video output.*

> *(Video uses the VESA-framebuffer device and afaik it doesn't need an*

> *interrupt. Furthermore the video memory is shared with the system memory*

> *(also in the virtual VGA mode [I think]) and should not slower or faster*

> *than X (unless X uses hardware acceleration; but this is possible in*

> *VEAS-mode, too.)*

I am using a 233 MHz (only 80 bogomips) Geode GX1. The performance is disappointing, but barely enough for dedicated functions. Playing mp3 requires roughly 80% of CPU time on the chip. Our text mode mp3 player updates the play time every second, so there is a video refresh every second.

In console text mode, the sound is distorted whenever the video refresh occurs. Total system lock-up occurs once in a while.

In X, the sound is smooth and mp3 plays for hours.

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Except for changing songs (audio is muted), only one or two characters on the screen are updated. My guess is that X only updates the small region but the Geode VGA buffers compress and update the whole screen all the time.