

Re: DSP System

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"Jon Slaughter" <Jon_Slaughter@xxxxxxxxxxx> wrote in message [news:FmWni.9627\\$eY.8942@xx](mailto:news:FmWni.9627$eY.8942@xx)

How hard is it to actually implement a DSP system?

It depends.

All I want to do is take an analog signal, add some digital filtering(well, whatever I want once I get into the software side), and output the signal.

If all you need is filtering the audio signal and some effects, the simplest solution would be a digital audio processor. Consider TAS3004 from TI. It does have the stereo codec built in. There are also many newer DAPs made by AD, TI, Cirrus Logic, NXP, AKM and others.

The TAS does not seem to have any DSP like features and the filters are built in. I need more control because I want to design my own(although nothing that hasn't been done).

I think all I'll need is the converters, memory, and the dsp? (I don't think

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I'll need a controller?)

You will probably need a flash memory.

Yeah. TI doesn't seem to make memory? Not sure where to go with that and not sure if I can find something that is "plug in play"(that isn't going to require any controllers or anything).

Is it going to be much harder than just hooking all these up together and then downloading some code to the dsp?

Well. The hardest part is to get "some code" to work.

If you mean from the hardware perspective then I agree(in that I need the hardware setup properly to get the software to work)... but I'm a lot more comfortable with coding than I am with building "complex" circuits(its mainly that a fuck up, which I do a lot, is pretty costly in hardware compared to software).

At this point I do not need anything fancy and just want to apply some effects like reverb and chorus to a signal for a start. The biggest

problems

at this point is the IC packaging for these devices as most are out of my reach(BGA, for example) for prototyping.

Consider buying a DSP evaluation board.

I've considered it but I think I'll try and roll my own.

Is such a conceptually simple project out of my ability as a hobbyist?

It is not a rocket science however it requires time and effort, as everything.

need to come up with some prototyping schematic and get some pcb's made

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for

prototyping? I'm really not sure how to go about this and I can't find

any

documents online that can give me some details about the process ;/

You can use schematic of a DSP evaluation board as a reference.

It was something I was looking for but where can I get such a thing?
Specifically for TI as I think I'm more interested in the TMS then anything
else I saw.

Thanks,
Jon

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