Subject: Standalone ESP2 development board?
Posted by Doug Wellington on Fri, 14 Feb 2014 18:33:12 GMT
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I've been slowly reverse engineering the EDS-1000 card and I finally pulled the cover off of my DP/Pro to start figuring it out as well. (I have one of the ones with the digital I/O.)

So, I'm starting to think that I should create a new PCB for the ESP2 so that I can play around with effects algorithms. If I can get things to work directly on the ESP2, then I think I'll have a better chance of figuring out the entire EDS card.

If I were to make a board, what form factor should I use though? Should I make a standalone unit like the Freescale Symphony Soundbite that has audio inputs and outputs on one PCB or should I create some kind of daughter card that would plug into something like a Beaglebone Black, Raspberry Pi, or something similar?

Anybody else twisted enough to want to work with me on something like this?

Subject: Re: Standalone ESP2 development board?
Posted by kerryg on Fri, 14 Feb 2014 19:04:49 GMT
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Hmmm... if there's a possibility to do modular AD/DA so we can build our I/O up to the max a bit at a time, I'd find that interesting. I'm thinking of a small form-factor I/O like the RME daughter cards.

Subject: Re: Standalone ESP2 development board?
Posted by Doug Wellington on Fri, 14 Feb 2014 20:48:53 GMT
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I haven't actually worked with any RME stuff as of yet.

If I get a chance this weekend, I'll look at the various bus specifications to see if I can leverage one of the designs from the Papilio, the Mojo, or the BBB. The Ensoniq stuff uses the I2S protocol, but most of the recent stuff I've used is SPI-based. Worst case, I'll find some kind of converter or use a CPLD or small FPGA to make one...

Subject: Re: Standalone ESP2 development board?
Posted by kerryg on Fri, 14 Feb 2014 21:04:46 GMT
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RME stuff is the bomb; it's some of the best gear you can get before jumping up to the Metric Halo/Apogee price points. I've had three of their products and they've all delivered exceptional performance (and their drivers kick ass).

Subject: Re: Standalone ESP2 development board?
Posted by Doug Wellington on Fri, 14 Feb 2014 22:09:07 GMT
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Very cool. I first heard of RME because they were Linux friendly. I was about to try the MADI stuff, but then the aliens took my daughter's brain and pretty much all non-parent and non-dayjob activities ceased. We're still trying to pay the ransom to get the brain back. She's only 22, so there's hope that might happen in the next year or two...

Subject: Re: Standalone ESP2 development board?
Posted by excelav on Fri, 21 Feb 2014 06:24:32 GMT
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Hey Doug! I have no idea what I am talking about, but I will point something out anyways. I was thinking about buying a TV box, and I stumbled across the newer Quad Android TV boxes on Amazon. They are basically the guts of a tablet/net PC with more optional connectors and no screen. There are quad processor versions for under $110.00 and they are coming down in price. I'm probably off on the wrong track, but I'm thinking maybe you could hack the right one of these and get more power. I think they have quad 1.8 and 2.0 Ghz versions with more memory that might give you the power to do even more???

Some of these have SP/DIF, USB, more memory, on board graphic processors etc. I also saw models with wireless keyboards that had a track pad and joy stick. You might want to do a search for quad core android TV box. I'm not sure what guts or DSPs they have inside of them... I know you are talking about DSP, so this may be the wrong track, but I thought I'd mention it.

James