Company: Cirrus Logic
Presenters: Dr. Jason Rhode – President and Chief Executive Officer
Event: Canaccord Genuity 32nd Annual Growth Conference
Date: 8/14/2012

So, good afternoon, and we'd like to welcome you once again to the 32nd Annual Growth Conference. My name is Bobby Burleson. I'm semiconductor analyst here at Canaccord, and I'm very happy to host a fireside chat with CEO Jason Rhode of Cirrus Logic. So, we're going to run through some Q&A and we'll just dive right into it. Welcome, Jason.

Jason Rhode

Thanks, Bobby.

Host

So, I guess my first question should be kind of a basic one for those that are listening and here in the audience. Can you just provide a brief overview of Cirrus Logic? What the company does and kind of its place in the semiconductor industry?

Jason Rhode

Sure. I'll try it. We've been around for over 25 years, so it's actually not a brief history. I've been with the company for 17 years. I've been a CEO for the last five. You might think, "Wow, 17 years. Must have been a great company to work for all that time." Not always. We have some challenges along the way. Cirrus has been a lot of different things over the years, but there's always been some really amazing people and some great technology within the company.

There was a long time where we were, frankly, trying to do too many things at once for a company our size. Starting a while back, we really focused in and tried to understand really where are we adding value, and where does that align with what we're passionate about, what markets could we deploy that in that are going to be really lucrative, and kind of basic 101 business stuff. It turns out, that's been pretty successful.

So, the thing that we think we're among the best in the world at is signal processing, as close to the analog to digital boundary as possible. We're particularly excited about deploying that signal processing in areas of audio and energy. We've been in audio for many, many years, got our start in that back in the days where professional audio really drove the bulk of that market. A lot of our people are musicians or came from a musical background, or some other that really made them excited about that market for some other reason.

Then, similarly, we refocused the investment we were making on the industrial market to really target it in at energy. Because not only was that a compelling market that was really going to undergo some secular growth as far as we could tell, but it's an area that we're hiring kids straight

out of grad school that want to save the world. It's an area where the technology that we're working on can have a meaningful impact on the energy consumption of the world at large.

Host

Great. So, I guess that segues nicely into the next question, which is superficially you look at the two main segments that you guys play in, energy and audio. One wouldn't assume a lot of synergies between the two. I'm assuming that there are. If you could just kind of explain where the overlap is and how you guys benefit from it applying to your strength?

Jason Rhode

Sure. Yeah, it really does. It's not obvious from the outside perspective. Obviously, the markets don't appear to have much of an overlap. But the technologies that we're deploying in both areas really do have a lot. In particular, power meters for example. The power meter 80D converter is basically like a slightly slower sample rate audio 80D converter. It's the exact same technology that underlies the two.

LED lighting is less of an overlap from a pure, here, we've developed this, and we can reuse it. But the skill sets that we're bringing to bear in LED lighting are very much focused on the signal processing strengths. Actually, I think that is our best advantage in the LED lighting market, is, we're coming at it from a very signal processing centric point of view.

Host

Right.

Jason Rhode

Rather than coming at it from a very analog and very high power point of view. So a lot of the competitors in that space have come at it where a high number of devices for them to integrate on a single chip is 500.

Host

Right.

Jason Rhode

And trying to cover all the corner cases of a world that has more than 200 kinds of dimmers in it. That's installed base of half a billion units, and a lot of complexity to really make the device work. We're coming at that from a signal processing point of view, where it's not nearly as difficult for us to add strange corner cases to our algorithm and software as it is to add new components on the analog circuit board.

Host

Great. Just in terms of how the revenue breaks down, obviously, audio is the biggest chunk. I'm wondering, how did you, as a company, decide to focus so intensely on portable audio? You mentioned you have a legacy in that business that goes back a ways. But what was the strategic decision that you made there? And maybe if you could share a little bit about your background with the company before becoming CEO.

Jason Rhode

Well, OK. I'll take it in an opposite order. I started as an analog circuit designer. I finished my Ph.D. at N.C. State in '95. And the guy that was supposed to have been my PHD advisor hired me into Crystal Semiconductor, which was, at the time, the wholly owned subsidiary of [SP]. And I started working on audio converters right out of the gate.

Frankly, we missed the beginning of when portable started to get exciting. The reason was, portable had been around forever. We all could have bought portable CD players in the mid-90s, and nobody did, or no adults did. You know, us kids had 'em. But it wasn't like the flight attendant had to tackle the entire first class section to get them to turn off their headphones, like they do now.

Host

Right.

Jason Rhode

So we kinda missed that as, like, hey, here comes the next big thing in the marketplace. But I would love to claim that we had some real sophisticated algorithm for picking that market. But the reality is, we did audio. And that was what appeared to be the most rapid growing piece of it. We really got our start there by designing quite a similar codec to what else was out on the market. Except that, we figured, since we're late to the game, we better bring something really special to the party.

So we designed our chip in a way that it didn't need a pair of very large, what's referred to as an AC coupling capacitor, but two very large capacitors to connect between the headphone amplifier and the headphone. And that's $0.20 to $0.30 in an environment where the codec socket is on the order of a dollar. So we knocked $0.20 to $0.30 off, and physically reduced the size pretty significantly in an area where size and costs are gonna matter a lot. That's a pretty significant advantage to come in with.

Host

Great. And I guess the integration, or the focus on integration, and lowering the overall bill of materials continues. And, you know, you guys are a nice path to increase your dollar content. I'm wondering, are there types of technology within consumer that lend themselves particularly to

you increasing your dollar content, or integrating a way other parts of the build materials? Maybe just a little bit of color on what's behind your growth in ASP.

Jason Rhode

Sure. Well, portable is a particularly good market for that. At least, in part, because, 1, it's still a fairly immature market, in that, lots of new features are being added every generation. It's also an area that's going to be very size and cost constrained. So reducing external components has a double benefit. It's not that many markets where you can afford to revise the device every year, and still have the R&D cost per unit work out and make sense.

Portable's got a lot of nice properties to it, in that the volumes are high enough, and the demand for new features is also high enough, where we can meaningfully add to our portfolio every year. Which is great, because it enables us to go back to the customer, and highlight, here's some additional value that we're bringing. It's not just we're selling the same component every year, which is usually not a positive situation to be in.

Obviously, you wanna keep selling the same devices for long term, but if you're also able to blend in with that addition of new devices. So it's a recurring theme. We see it in portable. We're also trying to do the same thing in LED lighting. Where, you know, the form factor's very constrained. We see a lot of opportunity to continue to decrease passive components, and free up more space...

Host

Right.

Jason Rhode

. . . for the rest of the light bulb, the heat sync, etc.

Host

OK. A couple more on audio before switching gears to energy. On that same topic of adding value for the customer. You know, you need a little bit more lead time to do that. You guys are known for working on designs quite early. And I'm wondering, for the audience here, can you give us a sense of how far in advance of your customer's products being introduced into the market, Cirrus Logic might be working on solutions.

Jason Rhode

Sure. Yeah, I think we really had some pretty remarkable guidance a few weeks back. And I think a lot of people were kind of in the, wow, you must have worked really hard last quarter. And it turns out that it's really over years that it takes to develop the kind of products that are gonna lead to these type of results. In general, when we develop a new device, it takes on the order of a year for us to, from the time we start to the point where we can really put good silicone

in somebody's hands. It takes a customer roughly a year to develop a board that uses that silicone, and really wring it out, and get it ready for production, and go through all the qualification processes, etc.

So it's really kind of a two-year window in there, in particular, when we're doing a custom product for somebody, which we've done for a pretty wide range of customers at this point. It's really our preferred method of operation. That gives us a fair amount of visibility, and ability to plan for capacity etc.

We saw this last January talking about an investment we've done with STATS ChipPAC. We invested $10,000,000 to help bring up a whole new production line so we'd have enough capacity on back-end assembly and test. It gives us a lot of opportunity to work with our foundry partners to make sure that we can source a whole lot more wafers than we needed to do before. So, it's a great business model.

The challenge with it is that there are frankly not a lot of customers who are capable of planning two or three years in advance what kind of chips they're going to need. But it actually happens to be a pretty good overlap with the kind of customers where we can really add value.

Host

So if we think about the opposite of custom, think of standard products, are there opportunities in sort of a broader OEM world where a standard product from Cirrus might be attractive for you to do in portable audio where maybe the return isn't what you've seen with some of the custom but the operating margins and the gross margins sort of work out in a similar fashion?

Jason Rhode

Yeah, we think over all of our portfolio as being kind of a combination of the two. There's kind of a symbiotic relationship between them because obviously, we're very diligent about trying to work with everybody in the industry trying to understand what’s all going on. It's not because somebody is small today that they're always going to be small. The next big thing is going to come out of somewhere and only the paranoid survive, so we like to keep our fingers in everybody's pie as much as possible.

The challenge is developing a custom codec for somebody costs $3 million to $5 million dollars and there's not that many customers that you're willing to invest that much in, in advance of the return.

We do like to maintain a portfolio of catalog products. We've got a new amplifier device that includes speaker protection. It's a boosted amplifier so you'll get a lot more volume out of the speakerphone, for example, on a cell phone that would use that device. It's a very simple to design end product so we expect that's got better opportunities to get in to customers who are maybe largely dependent on using one of the large reference designs where they don't maybe have the ability to adapt app's processor software to use any old codec they want. In this case

since it's an analog in, analog out amplifier they don't necessarily need help from the app's processor manufacturer to design it in.

The other area where we really see benefit from our catalog portfolio is we have a new, very low-powered DSP. And I'll caution you that DSP is a very confusing acronym in our space because we could mean capital DSP meaning a general purpose programmable chip that we can make do a whole bunch of different things which is a relatively small portion of our portfolio or we could mean embedded signal processing that is embedded in almost every chip that we do. It really is the centerpiece of our company.

In this case we're talking about the capital letters DSP. It's an area where we can help our customers develop all sorts of low-power, very customized to them, neat applications where they've either done a lot of programming on their own with our tools or we've helped them a little bit with programming but it’s a much lower level of investment from us on a per-customer basis.

The neat thing is that gets our foot in the door with a lot of different folks. At the very least to have a conversation about what we can do, show them some neat demos, and keep our fingers on what else is going on in the industry, so that we can constantly be bringing up new ideas.

Host

It's interesting, 'cuz it sounds like, with the amplifier, in particular, you're able to compete with some of those analog mix signal suppliers that, often times, investors are worried might be competing against you in your core business. But it sounds like the opposite might be possible, for Cirrus to actually go take some sockets from those competitors.

Jason Rhode

Yeah, I think so. I mean, you have to look at, most any account we would be penetrating. There's a lot of sockets and plans. So when I hear feedback from investors or whatever, it tends to be very black or white. It's usually not.

But, you're right. I mean, amplifiers are a completely new business for us, really. I mean, we've always had speaker amps and headphone amps that are integrated into our codex. But to go out and actually develop a standalone amplifier that's a meaningful part of a chip set, completely new for us. We have no ground to lose in that area so far.

So that's good fun to be in that position.

Host

Great. So just switching gears a little bit to energy. You know, most of the focus is on LED lighting. And you've talked about some nice growth that you're seeing there throughout the year. Can you talk a little bit about what the customer landscape looks like? You know, how many customers out there really matter, in terms of market share. And then, do you expect, you've

made one specific customer announcement so far. Are you guys gonna be able to announce other customers over the next 12 months, in your opinion?

Jason Rhode

Yeah. So as far as which ones matter, much like children, they're all beautiful. Some of them are more beautiful than others, but really the prime movers in lighting are, for the name brands, Philips, Osran, GE, Panasonic, Samsung. There's also some key ODMs that are the design houses behind some of the store brands that you certainly wouldn't wanna lose sight of.

Whenever we engage in a new market, again, I'm not so sophisticated to be able to go outside the textbook. We view it as, if we can't get the attention of number 1 or number 2 in the market when we're entering a new space, then we must be doing something wrong, you know? Right. It's probably doesn't justify investing heavily in pioneering some new area. So, those are the folks we work with. We've announced we're shipping with Philips already. We said that we expect to be able to ship with multiple other new customers this year. Currently, the light bulb that we're in.

So our chip, just by way of background, actually goes in the light bulb. So anything you read about LEDs, a lot of times, is heavily skewed towards back lighting and things like that. We have nothing to do with back lighting. So, we're in a bulb from Philips today that is shipping with, that is a European model. We expect to see several other form factors hitting the shelves over the next little while. So we're pretty excited about that because it really is, I think, our best opportunity to diversify our revenue.

Great. And in terms of your solution that's in the bulb. It sounds like there's a lot of flexibility built into it. Can you contrast what you're doing there versus what your understanding is? What the competition might be doing, and what the implications might be longer term?

Jason Rhode

Sure, yeah. So, to set the stage a little bit, the problem to be solved is in mating up a solid state light bulb, an LED light bulb, into existing infrastructure, where you have to work with these dimmers that people tend to have installed in their homes.

So, we've got a collection of over 200 different kinds of dimmers. There are 500-plus million of these things installed in the world. So there's not, the infrastructure's not gonna go away. The dimmers evolved over decades in a market where there were no standards, and the only thing they had to drive was an incandescent light bulb.

So incandescent light bulbs are pretty simple things. You put in more power, you get more light out. Solid-state lighting, on the other hand, is very finicky. You have to take this incoming electrical wave form from the dimmer, and then generate your own very stable DC power supply from that. Additionally, at the same time, you have to analyze that electrical wave form for clues about how bright is it indicating to the light that it wants the light to be? Not to put human terms on what a light bulb is thinking, but if you were in the light bulb that's what you'd be thinking.

So the challenge is, we started off with a bag of five or ten dimmers. And we got our technology working, 'cuz one of our technical fellows thought, oh, this is gonna be a great market. And we thought, all right, look at us, here we go. We went to the customer, and they went, yeah, that's neat. Those 5 dimmers work. Here's 20 more, and the next customer, here's 50 more. And by the time we're done, we've got 200 plus different styles.

As I mentioned earlier, we came at this from a very signal processing, digital-oriented perspective. So all of the algorithm that we have is embedded digitally in our device. We've taken the bare minimum analog peripheral set that we need to interface to the real world. The benefit that that's given us is, we've found these new dimmers, and that even still happens. Even very large customers who you would think would know everything about the world's electrical grid, will still occasionally go, ‘Hey, we found a new dimmer.’

So, for us, we can take that, put it in the lab, and figure out why it's not working. Make an adjustment to our program. And we program that into the device just before we ship to the customer. It's not like we have to manufacture it in. We program it in during test. Now, actually, it turns out, the complex part, at this point, when we find a new one, is we have to then go verify that we didn't break the other 200 in the process of making that one work.

But for everybody else, that entails moving components around the board, changing the values of passives, making some adjustments that might actually be a physical adjustment to the design, which is complicated and takes a long time. The net result of it is, the best competitor we've found on our dimmer compatibility standard does about 60% of the dimmers in total.

Host

OK.

Jason Rhode

We'll work with. And that explains why, if you bought any of these things, there's a pretty good chance you got it home, and it didn't work right. It explains why it is currently the most returned product category at major hardware chains in the U.S., right?

Host

I understand, at one point, you were even in flea markets in China...

Jason Rhode

[laughs] We've gotten...

Host

With the dimmers.

Jason Rhode

We've gotten light bulbs and dimmers from all corners of the globe. It really has been the case where very large OEMs that you'd think would know everything have mailed us a dimmer that they found somewhere in Australia that completely worked differently than any dimmer we've seen so far.

Host

Great. I want to give the audience members here a chance to ask some questions.

Jason Rhode

Sure.

Host

Why don't we just open it up a little bit? I think we have our first question right there.

Questioner

(inaudible)

Jason Rhode

The question, just so that it's on the webcast, is a company called iWatt has had some success. What's that all about, and how does their solution compare to ours? I'd say they've been shipping in that space for a little longer than we have. They have a decent solution. It's a pretty wide open market at this point, I would say.

We're just now this year have our first product on the market. So, we expect to ship 5 million to 10 million units this year, which is faster than our portable audio business got out of the gate years ago. I think for us the sign is on the wall that we are heading in the right direction and customers are valuing our solution. The nearest competitor to our device works with 60% of the dimmers that we've got in our lab, and that is inclusive of iWatt.

Questioner

(inaudible)

Jason Rhode

No, I think relative to the rest of the competitor field, I think they have quite a nice product. But theirs is one of the ones that is in the category where, based on our tests, we see on the order of 60%.

Questioner

(inaudible)

Jason Rhode

Well, it's been the case where originally when we developed the first part that we are shipping, we did so under sort of what you would call semi-custom arrangement where there was an exclusivity period arranged for one of our customers. That period is gone. We're able to promote that device to anybody we want now.

In addition, the second device and the third device we've now developed are all wide general market products. So it's less even about silicon design resources than it is about being able to connect with the customers, give them time to evaluate the devices, and so on. It is a market that is going to take a while to penetrate, even if you had the absolute silver bullet solution because, you know, I mentioned there is on the order of 5 different manufacturers that are really moving the needle, but every one of them has got on the order of a 100 different SKUs.

Designing an LED light bulb, even once you have a very compelling component is just hard. It's a very complicated intersection between power electronics, and lighting, and silicon design that is not trivial. Some of the bigger challenges, in addition to just general dimmer compatibility are being able to get the heat out, fitting all that electronics in the tip of a light bulb, and then being able to withstand very high temperatures, etc.

Pass EMI is another big issue; buzzing, in particular when there is a dimmer in the lobby. Everybody has the experience where you have a light bulb and it makes a buzzing noise, especially with all the magnetics that are enclosed in there. Satisfying all of those sets of requirements takes pretty capable engineers to do that so the ability of manufacturers to propagate a good solution across their product line just takes a long time.

Questioner

(inaudible)

Jason Rhode

Paraphrasing the question, strategically, how do we think about that market? Is it just light bulbs, or does it get broader than that? At the moment, we're very focused on light bulbs. We think the dimmer compatibility issue is the lowest hanging fruit for really helping that market take off.

More broadly than that, our chips actually are applicable into architectural lighting, lumineers, etc. We now have our third part as the earning call was at the foundry. So part number two in addition to the dimmer compatibility, we have the ability to drive two strings of LEDs so we can do a color blend.

You may have the experience of buying one of these light bulbs and their currently a very bright blue light, a great deal of them, which is fine. It makes a lot of light, but it is not what I want in my reading lamp next to my couch.

The second string, what that brings to the table is it can drive one string of very bright, blue light, LEDs, and then add a parallel string of red or amber along with that, and that enables those light colors to be mixed, and result in a more pleasant, warm, white light. That product from us is actually a little more expensive. It adds also the ability to calibrate brightness, so we think that might help our customers be able to play LED manufacturers off of each other a little bit, and help commoditize the L.E.D.s, which is currently the biggest expense in the light bulb.

Longer term and then third device, is really a play of taking some of the cost out of the power electronics, and helping it fit. There is a lot of leg in that product strategy and broader than that, being able to add a little more intelligence to the light bulbs once there is a digital beachhead in there, there is all sorts of things we can do.

Host

I think our clock might be a little bit out of sync with actual time, so we can wrap up right there. Thank you, Dr. Rhode, for sitting down.

Jason Rhode

Sure. It’s my pleasure. Thanks.