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Cirrus Logic, Inc. (CRUS)

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MANAGEMENT DISCUSSION SECTION

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Good morning and welcome to Day Two at the Stifel 2021 Virtual Cross Sector Insight Conference and the Cirrus Logic fireside chat. My name is Tore Svanberg, and I'm a senior analyst covering analog, connectivity and processor semiconductors at Stifel. It is my great pleasure to introduce Cirrus management, including John Forsyth, who's the company's President and Chief Executive Officer. Natasha Asar from the Investor Relations is also with us. And the format for this particular session is a virtual fireside chat. But if you do have any questions, please type them into the chat function and I will address them as we go along

With that, let's just jump straight into it. And John and Natasha, thank you so much for joining us again at Stifel CSI this year, and welcome.

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

Thank you, Tore. It's great to be here. We always get a lot out of this event. So I'm even looking forward to doing it in person when we get the opportunity, but thank you again for having us here. We've had a good meeting so far today and yeah, I'm very happy to be here.

QUESTION AND ANSWER SECTION

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Q

Excellent. Thank you, John. So there's a lot of detailed questions, but just to get warmed up. Why do we just start with a bit of a simple one? So what makes Cirrus Logic such a unique investment and why is Cirrus so different from a lot of your peers out there?

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

A

Thank you, Tore. Yes. So we specialize in solving really high-value problems in the mixed-signal domain for top-tier customers. And our vision is to be first choice for signal processing. We have focused mainly to-date on the audio part of signal processing. Though more recently, we're branching out beyond that.

And what differentiates us from our peers in the eyes of our customers, which is I think what ultimately really matters is that our ability to execute to what we've committed to them on really challenging problems is unparalleled. So that is reflected, of course, in a lot of R&D investment on our side in very advanced engineering, but everything that goes along with that to ensure that when we give our customers a plan to go solve a really difficult novel problem, that they can take that plan to the bank. And that's what we hear from our biggest customers again and again is that we approach the challenges that they put in front of us in a way that they don't really see from anybody else, and that's where we get a lot of our value.

Traditionally, that's been, as I said, in the audio domain where really we've been addressing their audio needs and continuing to push the boundaries of what you can do performance-wise in a really low-power environment with really constrained amount of physical space for the devices. So we've been doing that very successfully.

But increasingly, we're moving beyond that into spaces such as cameras, power, haptics and so on, always focused on this sweet spot where there's – whatever needs to be done is both difficult and very demanding in terms of the power constraints, the physical size constraints and the latency attached to that piece of processing. That's where we target.

They tend to be higher value sockets. They don't tend to be that many competitors who really want to play in that space or who can. And that's why our customer relationships last a long time and they continue to build and grow and broaden over generations of products.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Q

Great. And maybe to follow up on that, John, so historically the company obviously has been very dominant in audio with your mixed-signal technology. But as you mentioned, you're starting to venture into some new applications and new functionalities.

And so, where do you kind of draw the line there on what you're willing to go after and what you know? Because obviously, there's a lot of other good semiconductor companies out there that have mixed-signal capabilities. So, is it just simply are you going to do – you're going to go after some of the most challenging opportunities out

there? Or do you draw the line somewhere else where you kind of say, hey, this is a big opportunity, we've got the technology, why don't we just go after it?

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

A

Right. I mean I think we always really want to be able to explain to ourselves why it's really compelling the idea that Cirrus would win this socket. And typically that roots back to one or more, ideally more than one of a number of things. Okay.

So, number one, it's going to be a high-value socket typically with a high-value, a top-tier customer attached. We work best. We make a very sizable R&D investment in programs. Things tend to go best when customers are invested to where they – there's a really strong dialogue around solving that problem. And it's not going to come down to like three guys who have the solution at the end of the program and it's whoever's a couple of pennies cheaper.

So we're very selective and targeted from that point of view. But at a technical level, it's also the need to be confident that we're leveraging our R&D strengths, which often are derived from having pushed the boundaries of where to do mixed-signal devices from a process perspective.

So, if something – there are kinds of device and there are kinds of products and sockets that we could consider, but 180-nanometer looks like a real sweet spot for them. And there are loads of people on 180-nanometer. We've made a very sizable investment in 55-nanometer high-voltage devices and then we've got investment in 22-nanometer and so on. And so, we target the areas where we can really leverage that investment and it's really hard to compete if you're on some other process and you have comparatively legacy IP.

The advantages that we derive from that, in some cases, that'll just be about delivering a similar amount of processing in a smaller package. But in many cases, it's about being able to pack in a lot more processing alongside the analog circuits in the chip. And so, when you look at – to use an example, the closed-loop controller device that came to market recently, the benefit that we're providing there is in a really small integrated device in one of the parts of the phone product that really has some incredible physical constraints around it, but which packs in tons of processing, much more than they had previously, which means that when it comes to stabilization, speed and so on, there's a real user experience advantage.

And that's really only possible because of our advanced R&D investment. So we're always looking at is there a compelling logic to where we are being the sweet spot for this kind of product. And if there isn't, then we'll typically shy away from it.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Q

Got it. Got it. And on the same theme of sort of R&D priorities, there's no secret that you have a very large customer in Apple. And very often, investors are a bit bothered by that because of customer concentration and so on and so forth. So how do you, as a CEO, think about that longer term as far as R&D prioritization? Because I'm sure there's always new opportunities with that particular customer and I'm sure you got to do a lot of heavy lifting to obviously...

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

A

Yeah.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Q

...maintain that relationship. But do you have the opportunity to perhaps prioritize other things away from that particular customer?

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

A

Yeah. I mean I don't think those things are – live in an enormous amount of tension. In fact – I mean, first of all, they're a great customer. The products that we have with them are, by and large, incredibly successful.

One thing which is hard to overstate, in fact, is that when they commit to something, it's going to ship. And that is a tremendous tailwind to have from an R&D perspective because we know that a couple of years out. So, from that perspective as well, they're really exceptional customer to work with.

And there is, of course – as we've been growing our business, there have been times and there are points when we could probably address more opportunities just with that customer than we can actually staff. But, of course, they – there is maybe more alignment of incentives than you might think here because, of course, they don't want us to get overstretched.

But also building a successful business in other markets and with other customers does absolutely undeniably fuel the amount of innovation that we are able to – we get more insight, we invest in innovations, and our largest customer becomes one of the beneficiaries of that. If we have some great new idea and some novel technology around that, they are absolutely the first company in the world you would go to and try to sell it, right?

So we've seen real examples of that where – whether it's in the traditional audio space or the haptic space, where we've made investments really, and in innovations driven by insights from our general market business, but our largest customer has also been really excited by those.

So that's the dynamics of how it works. I guess from a broader perspective, like looking forwards, I think we have a kind of – a pretty simple first order prioritization algorithm, which is profitable growth above all else. Sometimes that will take us closer to – in the direction of more customer concentration, sometimes less, but it's founded on a belief that everything is easier to accomplish if you've got profitable growth. If you want to scale R&D and attack some other markets, if you want to take some longer bets on some more speculative R&D, all of that is much more achievable if you've got really good tailwind of profitable growth.

So first order of business is look after that, but the second order of business, which I've been really excited about the progress we've been making in is that we can engage in developments in new areas with our largest customers because they know our capabilities, which take us into new technology domains. And that's a great win-win for them and us, but it also gives us a huge step-up.

So, for example, [ph] we'd be (11:45) making a very significant investment in power conversion development and that gives us a lot of IP, actually will get us to revenue in an entirely new area. And that seems to me – it doesn't happen overnight, but that sets us up very well for then building a strategy to attack other device types, other markets, and so on.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Q

Great. No, thanks for that perspective. And we'll come back to some of the more specific dynamics with your largest customer. But just one last sort of general question, John, what would you say are two or the three things that have really changed for Cirrus since the pandemic? I don't know if you want to choose things that have changed with your customers, things that have changed with your inventory management, supply, things culturally at Cirrus, whatever you want to call out. But I'm sure things are quite different now than before the pandemic.

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

A

Wow. Yeah. Actually restricting it to two or three is the issue. I mean, clearly – and there are undeniably some real positives. I think you realize in these kind of strange situations just how much the investment you've been making in customer relationships really, really matters. We can carry on collaborating with them and supporting them very effectively, but I don't believe that would have been the case if we hadn't spent so much time in the [ph] same room (13:20) over the years.

So, in many ways, it validates that and it helps us. Well, it certainly makes us very eager to get back into face-to-face mode with customers, but that's been very kind of affirmatory about the way we work and the way we approach, as I said, honestly being selective about customers. We'd rather have a few really big customers that we're deeply entrenched with.

I think also a positive has been that we have, out of necessity, had to leverage our field support more. And part of believing that engineer-to-engineer relationships are very important for us means that we do tend to fly people to see customers quite a lot. We've not been able to do that as much.

But by contrast, we've had amazing benefits from our field teams who generally are on the customer doorstep, stepping up and actually finding – being able to attack not just existing stuff, but finding and attacking and winning new opportunities like we've had a meaningful amount of gathering momentum in the [ph] PC space (14:35). And literally throughout all of that, not a single person has flown from HQ to do it and yet the business has been continually growing. So that's quite remarkable [ph] as something (14:47) to think about.

The supply environment, by contrast, has absolutely been a game changer for us in not such a positive way, obviously. So, again, there's a relationship perspective on that, but it's certainly given us – and we've won business. We've picked up business with the constrained supply, but it has changed the dynamics. It's created, I guess, cost and margin pressure from the supply side.

Now, if you have to have margin pressure, I'd rather it was because of costs than because people don't want to buy our stuff. It's absolutely the former. But that is still a significant dynamic in the business, which even 12, 15 months ago just wasn't really a – has been operating as pretty much a fixed function for the past 10 years. So that's a big, big change.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Q

Great. So moving on to some more specific topics and perhaps some more near-term topics, so you've talked about some nice content growth opportunities going forward, not just with your success in closed-loop controller, but also on the power management side.

So, could you elaborate a little bit on that and is this kind of like a onetime thing or could we perhaps see growing content over time? And the reason why I'm asking the question is because, what is it, 15 years ago when you had that codec – no, not 15 – maybe 11 years ago when you started shipping your codec, you start adding more and more functionality and before you know it, the content was perhaps as much as \$4, \$5, \$6, right? So...

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

Right. Yeah, yeah.

A

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Yeah. Pretty long-winded question but, yeah, if you could elaborate on that, please.

Q

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

No, I think it's a great question. So, just to – for the benefit of people, getting everybody up to the same level on what we're talking about there, so we have talked about a new power conversion control device coming in the back half of this year to market.

A

We're very excited about that. It's been in development for a couple of years, but it's been a – on a very aggressive time line in collaboration with the customer for it, and it's a product that includes a lot of new. So it's not replacing anything. It's a new device in the system, which itself is a very exciting attribute for us.

Value-wise, I've said like think of it as about \$1. That's a kind of safe spot to be. And in terms of units and attach rates and so on, because we, A, don't want to ever disclose anything about our customers' devices and also, B, no less than you would expect about our customers' devices, I've been very cagey about that. We're obviously getting into a build ramp where we can see what we're building. And I think to provide a little more color there, what we're seeing is we believe consistent with a one-to-one attach rate with – in new phones, which obviously we're really excited about.

But to the second part of your question, the further opportunities that we see there are, yeah, are at least twofold. So one is growing the feature set and value of that particular piece of content over time. We already have a team working on the IP for the next version of that. That was something where I – and that's a priority for both ourselves and our customer there.

I feel a little bit sorry for the development team because they've put v1 to bed kind of, probably got about a weekend off. And then it really was back to, okay, well, here's the wish list for the next one of these. But you'd much rather it was that way. So it was – that's really exciting.

And then I think given what we believe are some of the benefits that the product's likely to enable in the system I think over time, it's likely that we can branch out from this device to potentially other categories of beyond phones, which they may be smaller or they may have more features or fewer, but it's a new line of business for us and an opportunity to proliferate and expand from this initial win.

So, I think this is clearly the most exciting new thing that we have going on and we can see a lot that can hang off it in the future.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Q

Very good. And just to kind of ease investors' minds or expectations here, because there are examples, of course, in the past where your largest customer did actually start to integrate some power management technology onto their...

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

A

Right.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Q

... [Indiscernible] (20:09) processor. But you said that is all new. So, I mean, you're not replacing any content. So the chances of that happening, at least for the near future, seem to be pretty slim.

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

A

Yeah. This is a brand new thing on the board. And so, I don't see that it has an overhang from that perspective. I would also – I mean to that point, in general, we're very thoughtful about that stuff, in general.

There were a couple of reasons why things might get integrated with the SoC. But for example, in the case of power management, the sheer number of power domains or power islands on the SoC meant that when you look at other SoC like what happened in x86, more of the power management logic got built into the SoC to help with that. Otherwise, you had a fantastically complex set of interactions, very costly and inefficient, as well as complex between the main [ph] PMIC (21:06) and the SoC itself.

So there was a kind of compelling logic there. And there are times when you look at everything you do, if something's truly in – really can live in a purely digital domain, you have to be very pragmatic about that because transistors are basically free on the SoC compared to wherever you're at as a mixed-signal provider.

That's why when it comes to the signal processing side of it, we're really thoughtful about targeting stuff which needs to be close to the analog circuits. So whether that's for latency reason, which is very often the case, or some other reason, there's some stickiness to the digital processing that needs to take place that we'll keep it alongside the analog circuits rather than see it migrate.

Now, of course, at times, there are things which do land on your chip and you think, okay, over time that might migrate. But as long as you're oriented very clearly to know where the long-term stickiness and value lives, then I think, strategically, you'll make sound choices. So that's how we think about it.

For example, the closed-loop controller being a good example, you're doing stuff in the digital domain and you're doing the stuff – you got driving and sensing going on in the analog domain. But in the digital domain, you're doing stuff which needs to happen so quickly that there's no way you are backing that out to the SoC and the software stack running there, and then getting it back to do the number of corrections per second that you're trying to drive.

And similarly, when we look at how the codec has evolved over time, that has actually gained more non-audio mixed-signal content because there is stuff which doesn't naturally get integrated in the SoC because you're not

going to put analog stuff onto that, but there is still a logic to having more integration on the board. And so, actually, the codec starts to serve as a good mixed-signal integration point – mixed-signal hub, if you like.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Right. Almost like mixed-signal coprocessor.

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

Right.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

And by the way, just a reminder, everyone, if you do have any questions, feel free to type those into the chat function. But I'll keep going here.

So, just sticking with power, because I'm really fascinated by this topic, in the past, you've been able to win content in a mobile device like a phone, and then getting it perhaps designed into tablets and other things like that. I think your amplifiers is a great example and even vice versa, right? So could maybe power also have a similar cadence where, initially, you're in the phone, but then maybe some of this circuitry can venture into other applications as well?

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

I think that's certainly possible. I don't think it'll apply to everything. So, we think there are certain characteristics of the device that lend themselves to be where this might be more applicable. So places where there's some level of constraint on the battery size, so you're not carrying a ton of headroom, where you get a big – a kind of pretty significant dynamic range in the power consumption. So big peaks and then this standby.

And obviously, we've been – that was one of our entry routes into that. This is with the boosted amplifiers in the phone, we're kind of responsible for a lot of peak current events in the system and that was part of how we kind of developed a lot of insight and IP around managing that. But for sure, we believe – so it's not every device is the short answer. But for sure, we believe there are other categories of products where this could be very applicable and very relevant, yes, and very beneficial to the user.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Got it. Well, we'll keep an eye on the teardowns in the fall and see if we could figure things out.

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

Yeah. Yeah.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

So, I do have more product questions, but before I go there, I do want to make sure I address the biggest question that probably you get right now from your customer, which is supply.

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

Yeah.

A

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

You talked quite a bit about this on the earnings call. There's no secrets that supply is exceptionally tight. Your largest foundry is TSMC. So help us understand a little bit where the bottlenecks are right now and what are you doing to overcome those, and when do you think supply and demand will just be back in balance.

Q

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

Okay. I think it'll be a while before it's in balance. I mean certainly, for us, I can only speak to what we see and where our pinch points are. But I think we're still going to have a lot of challenges for – as much of calendar 2022 that – as I can see. I think it's still going to be a constrained environment.

A

For us, we've obviously had a lot of constraints on some of our older products, which aren't in TSMC. There are a variety of older foundries, but capacity is pretty low there anyway. And then various parts of the market, which use our devices like automotive kind of turned off for a while last year and this is a pretty well-understood story.

So that, we're just managing week to week. I would say the environment there still seems to be very constrained, but there have been more surprise, small upsides over the past kind of month or two. There was nothing like that in the front quarter of the year. So, I think things are just slowly correcting. It's just going to take a while.

In the case of our largest of the largest part of our business with our major foundry partners, yeah, it's a couple of things. I mean we have very good relationships with them. We have big customers who they don't want to disappoint. But we also really want them to invest in capacity and expand the capacity because we have no intention of standing still.

We can foresee real opportunity to grow our business if we can get the wafers. So we're working with our largest foundry partners, which are TSMC and Global, on getting assurances and long-term commitments around that capacity, which I think, for us, is – when we get designed into sockets, most of our sockets do not – they last a while, and that is a big advantage for us.

There are parts of our business – when you win an Android amplifier socket, you may be back there in six months trying to win the next one. But there are big parts of our business where when you win a socket, you've got several years of that. And to the extent that that – that seems to be beneficial to both us and our foundry partners as something to plan around and say, look, we can see years of demand like this. So we're working very hard on getting those commitments as well.

In the near term, it's more kind of block and tackle week by week. And I think again with our largest foundries, we've seen a similar story of everything went down and then gradually, just little small incremental improvements over time, which are slowly relieving the pressure, but it's still going to take some time.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Q

Got it. Got it. So we're running out of time. But there's a good question from the audience here. Test and packaging have been one of your key competitive advantages in audio. Is this something that you've been able to carry over to your newer technologies, including closed-loop controller and power?

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

A

Yeah. That's a great question. Absolutely, it is and in fact, yeah. So a lot of the problems are very, very similar. A lot of the challenges that we're dealing with look very similar. Being able to leverage that, the teams and the capability and the investments we've made in that and some of the partnerships, are absolutely central to us having been able to win the business that we've won in the high-performance mixed-signal space and what we're shooting at going forward. Yeah.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Very good. So with that, we're actually running out of time. So, I want to thank you, John, so much for participating again. Thank you also to...

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

Yeah. Thank you.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

...Natasha. And we hope to see you in person very soon.

For everyone on the line, thank you so much for joining us on the Cirrus Logic session. If you do have any follow-up questions, you can email me at tsvanberg@stifel.com, and obviously reach out to Cirrus Logic for questions you may have directly to them.

So, with that, that ends our session. Thank you again, John. And have a good rest of day, everyone. Take care. Thank you. Bye-bye.

John Forsyth

President, Chief Executive Officer & Director, Cirrus Logic, Inc.

All right. Thank you so much for having us here today. Appreciate it.

Tore Egil Svanberg

Analyst, Stifel, Nicolaus & Co., Inc.

Thanks. Bye-bye.

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