

Company Name: Cirrus Logic Inc. (CRUS)

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<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Well, good afternoon, everybody. I appreciate everyone coming to the last session of the day. My name is John Vinh. I cover semis here at KeyBanc Capital Markets and we're honored to have Thurman Case, CFO; and Carl Alberty, who is VP of Marketing at Cirrus Logic. Thanks for coming guys.

<<Thurman K. Case, Chief Financial Officer, Vice President of Finance>>

Sure.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Great. Maybe the first question, we could talk about is – Thurman, on the call, you guys put up some pretty solid results, you beat the quarter. Guidance is largely in line, but kind of your outlook on the full year seemed that still would be somewhat conservative. It's down kind of 10% with what your previous outlook was. And I know this is not a constant growth of the year, but sounds like you guys are feeling pretty confident that you're really not losing any sort of market share and you'd also baked in some assumptions related to accessories and products. I was wondering if you just give us a little bit more color on just why the conservative on the full year outlook just given kind of the strong near-term results that you guys just recently put up.

<<Thurman K. Case, Chief Financial Officer, Vice President of Finance>>

Well, I think as you mentioned we see that – as we went into the year, we thought and talked about possibly a flat year. Last quarter, we talked about then being down generally 10%. This time we didn't really reiterate the 10% and there's a lot of moving parts on that. But essentially when this year isn't a content gain and I think that's the biggest driver of what we're talking about.

And, so really what revenue is going to be dependent on is going to be volumes. And so, I don't think anybody in the room or anybody even our customers or anybody really knows what smartphone volumes are going to look like through this particular phase. And so for us, you add that to – we have some headwinds with some accessory, digital accessory things and we also have again other customers that are smartphone makers that are also in the same situation on not knowing exactly what the volumes are.

So, given that, we felt that we would leave out – we gave guidance for the quarter and we wouldn't really talk specifics about the rest of the year. And we'll see how the volumes go because there's just not a lot of clarity on that at this point in time. And we think that

there is certain uncertainty going into the year given what the smartphone market has done over the last couple of years.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Okay. Generally your business is very strongly seasonal in the back half of the year. I'm just wondering if you could just talk about what your visibility at this point looks like. I know we also have to wait for what sell-through looks like, but what is your visibility generally looks like into the second half of the year? And, how do they compare the contrast kind of previous years at this point.

<<Thurman K. Case, Chief Financial Officer, Vice President of Finance>>

You're talking about the second half of the calendar year.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Yes.

<<Thurman K. Case, Chief Financial Officer, Vice President of Finance>>

Yeah, okay. So as we go into September, one of the things it's characterized by what the September and December quarters can look like is, we're going to have a lot of volumes at the end, maybe the last two or three weeks of September. We can also have a lot of volumes at in the first – I don't know a couple, two to three weeks in the December quarter. And because of our size any significant movement in an order from either pulled into the September quarter or pushed out into the December quarter can change that profile some.

And this year it's compounded a little bit by the fact that you have the Chinese Golden Week is right at the back-end of September. And so, there can be some different behavior from the OEMs on how they're going to build inventory whether they're going to build more in the September quarter before the holiday or after and is that all baked into their forecast and so forth.

And so, generally, the September and December quarters though – these movements from quarter-to-quarter don't necessarily affect our annual number. And we would still expect from a general standpoint at least from our visibility that September and December are going to be higher quarters, a little bit higher than possibly the March quarters, but again it's hard to forecast I would say.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Okay. And then the other thing I just wanted to follow-up on is it sounds like that you're confident that fiscal 2020 you guys get back to growth there. It sounds like you're confident that that's going to be driven by content. Can you just maybe also talk about

that? What your level of visibility is? Do you already have design-ins today that gives you confidence that you're going to get back to growth in fiscal 2020? And maybe talk about what's driving your visibility and confidence around content growth?

<<Thurman K. Case, Chief Financial Officer, Vice President of Finance>>

Well, we're not going to get specific about content growth with any customers this far out. Really, I think if anyone who knows Cirrus Logic or has followed us for us to make a comment that we feel that FY2020 will be a growth year then there has to be a good reason and has to be something different than just waiting to see how many phones are sold or volumes. So, we do have content opportunities. We have customer expansion that we see in 2020. We have new products that have come out that we see selling in 2020. And so, overall, our visibility is more around what we know that our customer relationships and what we see in terms of products and end markets. So, at this point in time, we feel good about that.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Next question is for Carl. I think on your recent call, Jason was pretty clear to dismiss that there is – some of the market speculation that there was an opportunity for you guys to support ANC in a wireless earbud form factor anytime soon. But I think through kind of the opportunity related to it, it seems like there is significant value added that's possible. My question to you is technicalologically over a longer period of time is this something that's even feasible just given the battery form factor and what we're talking about here.

<<Carl Alberty, Vice President of Marketing>>

Yeah, I've been enabling the style of ANC, the continuously adaptive ANC, which is really required for a non-sealed kind of ear bud form factor. I mean that's an incredibly challenging signal processing intensive kind of application. But on the long-term view, we definitely feel like there is an opportunity to develop products and instantiate ANC technology and basically all have such form factors, inclusive of that kind of purely wireless untethered style headphones. Obviously, in that form factor, every single microwatt counts, because the batteries are so small. And so that requires customer and collaboration around just the trade offs on performance, features and functionality and of course power.

So, I think on a long-term view, we would characterize that opportunity as feasible. We've got the building blocks across the different mixed signal kind of IP and signal chain to go develop that. We have products in hand today kind of core, DAC and high-performance ultra-low power headphone drivers that are really well suited for individual kind of purely wireless headphones and are kind of more advanced next generation process technology and the IP we're developing for that space gives us the kind of building foundation to go build more sophisticated signal processing components for that kind of purely wireless form factor.

On the near-term basis, we continue to develop headset related products that service wired and wireless. None of them are truly optimized in terms of power for the untethered form factor, but we do have several designs in ANC headphones from leading OEMs that are wireless, but they tend to be the over-ear, on-ear or even wired together kind of tethered wireless headsets. But on the long-term basis, yeah, the feasibility we think is there.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Questions? Great. Maybe we'll switch to Voice Biometrics. And Carl, maybe can you update us on kind of progress that you're making on Voice Biometrics? What are the milestones you guys have achieved this year? And how are we tracking to the expectations of commercialization's product, I think you guys have talked about kind of the fiscal 2021 timeframe? Is that still the right timeframe you'd be thinking about?

<<Carl Alberty, Vice President of Marketing>>

Yeah, I mean, the team is doing a tremendous job in terms of execution to the plan. The plan is largely on track and in line with the kind of revenue contribution in that fiscal year 2021 timeframe. I mean major milestones this year, I mean, are pretty major. I mean we've delivered our first kind of SoC or biometric voice kind of signal processing component with all the associated firmware algorithms and development boards and everything that goes along when the customer eval.

So we have silicon in hand, firmware and algorithms running on silicon and we have it in the hands of the leading Android OEM. And that, again, this is one of those very long lead technology items, because it's currently nonstandards based, not currently deployed in an embedded form factor and just comes with a massive learning curve for us internally. We've been going through that for the last three years and we're now starting to bring a customer along with that and kind of collaborating around, how do you deploy it in the public, how do you test it and how do you build the right database of samples to authenticate users again.

So there's a pretty big hill to climb, but by and large the team is executing really well. We're on track to the development plans we have internally. And like I said, we've got it in the hands of the customer. So that engagement is encouraging and positive. We've been pretty restricted in terms of customer engagement, just not wanting to get too far ahead of ourselves and overcommit to any customer, but we are now starting to engage interest with the second Android customer as we start to kind of get closer into that productization phase. So that's still really early, I mean, just initial conversations, but I think it's indicative of the progress and comfort we have internally in terms of starting to really get serious about doing product developments with the customers.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

That's great. Maybe you mentioned Android; can you maybe just talk about kind of the opportunities that you're seeing on the Android side? If we look at your Android related revenues, has that continued to grow this year despite it being a transition year with some of your other customers? What are the opportunities from a product side? I think you've talked about kind of boosted amps, haptics. Are there are other opportunities that you see kind of growing your Android business?

<<Carl Alberty, Vice President of Marketing>>

Yes. So for sure the Android business on the whole is growing and the momentum is picking up significantly. So just over the last six months – if you go back maybe a year, we've introduced multiple new products that have been much more tailored to the Android market and the requirements for high-tier and mid-tier smartphones, in particular to new boosted amplifiers that have been built and fabricated in our 55-nanometer process. So that process switch, which was a couple years in the making enables ultra-low power really small form factor amplifiers, which for us allows us to integrate DSP capability, which enables faster time to market, more kind of turnkey solutions, which is the kind of desire to engage a model with a lot of the Android OEMs.

So those products that launched in the back half of last calendar year started showing-up end products in the market this year, so really big momentum drivers in terms of penetration of kind of leading Android mid-tier phones as well as the more recent flagship Chinese handset. And so those are good really building blocks for the amplifier product line in general and we expect that design win momentum to continue through the back half of this year with new models getting introduced this fall and then into next year.

And so that's a really key driver on the audio amplifier space. So, in the high-tier, we're seeing more model switch from single channel to dual channel and kind of that's bigger adoption of these higher voltage boosted amps into the mid-tier. The other exciting space that you referenced is haptic drivers, so that's been a fantastic opportunity for us to kind of move adjacent into an application space that can leverage the underlying IP we've built with those boosted amplifiers and use it in a different space to drive incremental opportunity for new content and handsets.

So today that's largely a reflection in the high-tier as smartphone OEMs extend the usable screen space on the front display. They want to get rid of the home button, which inhibits the lower part of the screen from being used, and then ultimately get rid of the mechanical switch that that home button uses. For that reason and plus other mechanical and kind of reliability challenges. And so that represents a great opportunity for us to leverage our boosted amp IP and incremental opportunity for content gain in that space.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Great. I also just wanted to follow-up you on digital headsets. Maybe talk about where, the sort of traction you're getting there. I know for awhile you had seen an opportunity

with the transition to USB-C on mobile. How is that starting to ramp for you? And is there kind of a similar opportunity that you're seeing on Android that you had seen at least in the iOS side with the proliferation of kind of dongle adapters and things like that?

<<Carl Alberty, Vice President of Marketing>>

Sure, yes, I mean, that's a market we've talked about for quite some time. And I think we've more recently talked about the market frankly evolving slower than we would have expected or maybe aspired for it to do. But I think as you look back just over the last six to nine months, the number of new models and new SKUs within the Android ecosystem that are eliminating the traditional 3.5 millimeter headset jack continues to go up. And therefore increased kind of discussion and design activity around the option for doing digital USB-C to 3.5 millimeter adapters and then of course, a multitude of different headset options that use the USB Type-C connector.

So those conversations are definitely picking up, I mean, that market overall is highly fragmented. Not every phone and every tier ships with or without a headset, whether it's a traditional 3.5 millimeter or not. So that just makes more conversations happen. But by and large those conversations are picking up. We've got good customer collaboration and design activity for both USB Type-C Hi-Fi adapters, as well as headsets. That is inclusive of our – sort of a more high-end feature such as the continuously adaptive ANC. So slower moving than desired, but finally starting to show some signs of life. It is kind of encouraging.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

On the smart speaker side, maybe also will talk about kind of where you are there? What are the opportunities that you see there ahead of you? I think last year you had talked about qualifying kind of a reference design for Amazon, it's kind of ecosystem. Are you starting to see more opportunities there?

<<Carl Alberty, Vice President of Marketing>>

Yes, I mean, there's certainly a massive amount of design activity in that smart home kind of market category, smart speakers, digital assistant enabled speakers, for sure are the fastest growing kind of subsegment within that smart home category. And yes, we've got a lot of design activity, I mean, spanning our entire portfolio. So all of the premiums or all of the branded smart speakers, the top ones in the market are either using components or software solutions from Cirrus Logic, or are engaged in active kind of design conversation, which is encouraging. That ranges anything from codecs and data converters to the more recent conversations around more voice processing. So that smart speaker space is pretty hot for sure. We've got a lot of voice processing related solutions for that.

So the collaboration in the two-mic reference design we did for the Alexa Voice Services enabled products, continues to get picked up by all sorts of customers, we've got a pretty

broad set of support partners to help drive those across the finish line to enable more products in the market. We're poised to introduce higher performance, more capable versions of those reference designs.

And again have direct ongoing kind of design conversations with the OEMs themselves to really make the user experience better. I mean, there's leaps and bounds of improvement that have happened over the last few years. But we think there's a lot more to layer on top of that, including things like longer term the voice biometric technologies such that the speaker can know who's speaking to it and set up a profile based on that, or allow certain levels of kind of function and features based on knowing who the user is. So that's really a hot space and there's good design activity going on.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Any questions?

Q&A

<Q – John Vinh>: Hey Carl, I want to talk about AI. I know it's a term that's over used these days, but I know you guys acquired some specific IP several years ago on AI. And I think the applications to voice are obviously, pretty relevant. Can you just talk about what are the AI opportunities that you see today? What sort of challenges and problems are you trying to solve today with your AI and IP technologies?

<A – Carl Alberty>: Yes, I think you started – I mean it's a bit of a catch phrase. And so starting out is a stuff to just figure out what people specifically mean by AI and all the different kind of underlying technologies that go into that. So I think about to be clear I mean, we have – I mean, we definitely have a very, very keen interest and seeing how that sort of capability unfolds, especially as it relates to voice. And you're right, we have made a couple tuck-in acquisitions over the last few years that help to kind of productize and commercialize some of the more machine learning kind of techniques for doing signal processing.

And so that continues to be developed in terms of IP development for the voice processing applications. And the way it gets instantiated is what AI means to Cirrus Logic as a company, isn't 100% crystal clear, but there's really good customer conversation around the voice, I mean, our vision is that voice as an input to a device will proliferate across every device that's connected. And so there's a stronger pull and more demand from a lot of customers we talk to have a lot of more local, on-device signal processing.

Obviously, there's going to be compute-intensive processing that happens in the cloud. And we're trying to live right close to that edge and drive all the voice capture and all the signal processing, leading right up to that, which we do believe on a long-term basis will include techniques that are included in what people described in AI. But that's again a

longer term kind of part of the vision for how voice-enabled devices become really compelling user experience devices.

<Q – John Vinh>: Great. I want to talk to you about kind of long-term growth. Lot of companies put up kind of long-term growth models. From your perspective, I think, we've seen a couple things, right. One is your cadence in growth cycle seems to be every other year, but consistently you've been able to hit that sort of cadence. If I look at all the different opportunities, you've outlined in Android, smart home, smart speakers, AI TVD, it seems like we're still in the kind of the very early innings of kind of voice and audio. Is there any way for us to think about what appropriate long-term growth rate for you guys is?

<A – Thurman K. Case>: Well we haven't talked about that yet and we haven't specifically set a target on what our annual growth rates are. Certainly, we're focused as much on operating profit as anything else and we wouldn't – we've talked historically that we would like to see operating profit at least in that 20%-ish range. And our growth would need to continue to support that over the long period of time. But other than that we haven't said are there any specific top line percentage growth.

<Q – John Vinh>: Okay. Related to operating profit, you have curve kind of your OpEx investment this year in terms of your outlook for the year just given kind of your revised outlook on the top line side. You've got obviously a lot of projects and things in your place. Are you still confident that you'll be able to hit all your R&D milestones, with kind of revised kind of OpEx outlook that you have for the year at this point?

<A – Thurman K. Case>: Yes, because we're still committed to investing in R&D. So the outlook that we've talked about this year is really associated with not cutting back R&D as much as just evaluating our utilization of resources, looking at discretionary spending and things like that. But when you look at our overall business model, investment in R&D is pretty much lifeblood for us in terms of staying on the innovation edge.

So we would continue to see that grow and we'll still really maintain a tight rein on SG&A going forward as we move past this year and beyond.

<Q – John Vinh>: Okay, I think we have time for one more question. Last question from me, for you Thurman or Carl or for both of you is, you've obviously given me with a lot of investors saying and that would allow investors over the last several quarters. But what do you think is the biggest misperceptions that most of the investors have of Cirrus Logic?

<A – Thurman K. Case>: From just a general standpoint, I think, that they believe that a slowing of the smartphone market is really going to stagnate our ability to grow in the longer term. And I think that's a misconception. We have a lot of opportunities to expand content. We have, as Carl, I think, mentioned multiple places where we can expand content with the existing customers and with new customers, which doesn't necessarily need significant volume growth of the smartphone market as a whole to grow.



And also that our technology has opportunities in adjacent areas, I think, haptics is one that we're already talking about. But there are more of those where it's not all going to be related to what you see today. So I think the misconception is really tying us strictly to smartphone and its ability to grow or not grow as we move down – move forward. Carl?

<A – Carl Alberty>: Yeah, I mean that's a really good answer. For sure, there's a ton of market share that we have, even on the flat market. And I think we're starting to see the evidence of that with some of the more near-term amplifier and haptic driver design wins, there's some really fun stuff on the horizon.

And to Thurman's point, I mean we've become over the last 10 years, 12 years a super-trusted, incredible supplier of signal processing, low power components. And I think there's a huge opportunity for us to leverage that into spaces like we have with haptics, to try to drive additional content, long-term. And there's a whole ton of exciting new, emerging applications beyond mobile that will play right into our strength and we just need to keep capitalizing on that and executing.

<<John Vinh, Analyst, KeyBanc Capital Markets, Inc.>>

Okay. Thanks guys.

<<Thurman K. Case, Chief Financial Officer, Vice President of Finance>>

Thank you everyone.

<<Carl Alberty, Vice President of Marketing>>

Thank you.