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

Hey, good morning, and welcome, everyone, to the KeyBanc Technology Leadership Forum. I'm John Vinh. I cover semis here at KeyBanc Capital Markets. We're pleased to have Thurman Case, CFO; and Carl Alberty, VP of mixed-signal Products from Cirrus Logic joining us. The format of this session will be a Q&A fireside chat. If you have any questions, feel free to submit them online at the bottom of your web page, and I'll do my best to get these questions during the chat.

Welcome, guys. Maybe we could start with Thurman. Been getting just a lot of questions. Maybe what maybe surprised people a little bit is just some of the gross margin commentary that you talked about going into the next calendar year, that gross margins could be trending below your target model. Can you walk us through specifically what's driving these higher costs? Is it related to the wafer pricing agreement or expansion with GlobalFoundries that you had talked about? And then to what extent are you able to pass these higher input costs on to your customers at this point?

<<Thurman Case, Chief Financial Officer>>

Sure, John. Well, I think what we said was that the current capacity constraints – we expect those to continue through this year and into 2023. And the result of the constraints, we're seeing increased pricing now, and we have seen it going up. And that includes higher wafer pricing beginning in Q4 FY2022, and that's when our normal price adjustments with our foundries normally occur, and that contributed to the timing that we gave when we answered the questions.

And our long-term model is still 50%. So just based on the visibility that we have now, we expect gross margins to be slightly below that in FY2023, and this includes any thoughts we may have to pass on some of those costs to customers and other factors that are part of our normal process of managing the supply chain. So also, to your answer on really what drove that and noting that it was our foundries, it was across the board with our foundry. So this was not specific to the global agreement or specific to any one foundry partner.

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

I see. Thurman, just a follow-up on that. The outlook on gross margins is still kind of roughly two quarters out. Are there any sort of opportunities for you guys to drive any sort of operational cost improvements, better renegotiate some of the pricing related to your supply chains, the kind of get the gross margins a little bit higher? And when you talk about kind of gross margins kind of being below target for the year, is there an opportunity as we progress through the year for you guys to get back to target? Or are you likely going to stay below for the full year?

<<Thurman Case, Chief Financial Officer>>

I think, again, there's a lot of things that we can do. I'm going to let Carl take the second half of the question, but I'll start off. I mean there's a lot of things, supply chain efficiency, product cycles, a lot of different things that can affect our margins. And we certainly have worked that always. So – but when we came out and when we say that we will be working on those things, all of those were taken into account for us to come out and say publicly that we expect to be slightly below 50% in FY2023, at least based on our visibility now.

So it isn't something that we aren't sure or you're never positive, but it's not our expectation that will be better than that or we likely wouldn't have talked about it. And I'll let kind of Carl talk about some of the challenges around customers and products and so forth with this.

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Thanks, Thurman. And thanks, John, for hosting us today. I mean to Thurman's point, I mean these are unprecedented times, as we're all aware, in terms of the supply chains and just the staggering demand for products as it relates to capacity. So that's definitely across every facet of our supply chain, driving challenges relative to cost. But fundamentally, nothing has changed with our products or the competitive nature of our products.

I mean we largely service consumer markets, in particular handset, which have and will remain to be super competitive. But there's nothing fundamentally that shifted in our product strategy or the pricing strategy for our products as it relates to how we differentiate and position and ultimately compete for sockets. It's just we've had some headwinds on the supply chain front in terms of just costs, and we're doing our best to manage that.

And we will continue to optimize those margins to the extent we can across every angle that we can pursue to – again, to try to optimize the profitability. But I think it's important to note that our – the fundamental nature of our products and how we compete hasn't changed, so.

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

Great. Thank you. Last gross margin question, I promise and I'll move on and talk about the rest of your business. But just maybe this is more of a long-term question. I understand kind of the environment that we're in is unprecedented. But I think a lot of investors are extremely encouraged by kind of your increased focus on kind of the mixed-signal business. I think also just the view on mixed-signal, right, is it tends to be more analog, kind of lagging edge and there's less digital content.

As a result of that, the view is that potentially, is there an opportunity for that to be a little bit more gross margin accretive versus your core audio business, which obviously is a little bit more focused on kind of leading edge and has more digital content there?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

It's a really good question, John. I mean I certainly see a lot of the expansion, the growth in our SAM and the growth in our kind of adjacent revenue areas of focus, and in particular, high performance mixed-signal. I mean, these are complex, really uniquely differentiated, innovative products. And we've been working closely hand-in-hand with our partners on the foundry side to develop the right process technology to ultimately build the right product with that balance of analog and digital circuits.

So we've obviously been shipping a 55-nanometer with our amplifier products for quite some time. That is the baseline process technology fueling our power conversion and control, our more recent kind of battery related technology investments. And so we're aggressive for analog and mixed-signal process technologies, but certainly on the trailing edge or the lagging edge of anything that's highly digital.

So I think over time, we will certainly see things maybe shift back to a more kind of "normal" dynamic in the industry, where we can work closely hand-in-hand with our partners to position ourselves best to win for a given socket. I mean, obviously, right now, the market dynamics are just very different, and so we've got these headwinds on cost and cost increases. But I think over time, that will settle out, and I think our investments and our process technologies will coexist to be a really good, compelling advantage as they have been for us over the last few years.

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

Okay. Hey Carl, maybe we can switch and talk about Lion Semi, pretty interesting acquisition that you guys just recently announced. Maybe I was wondering if you could just talk about the technology and maybe what kind of drew you to kind of Lion Semi. And how does Lion Semi kind of fit into the rest of your mixed-signal businesses? And are there any sort of complementary fits with kind of what you're working on currently, especially around the power conversion IC?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Yes. I mean it's a super exciting time. I mean we were – we've been talking a lot over the last couple of years about just growth and expansion into adjacent technology spaces. Obviously, that started with haptics and sensing more recently, last year, the closed-loop controllers. And now we're on the verge of generating revenue from the power conversion and control. And this last domain, this power and battery domain has been an important area for us for quite a bit of time, just as we've talked about in previous discussions, like needing to understand how to treat the battery well and the downstream effect that multiple audio amplifiers and haptic drivers have on the battery and the subsequent performance impacts downstream has helped us develop that scale.

That positioned us really well to capitalize on the opportunity for power conversion and control. And so when we saw the Lion technology and their portfolio of products, it was instantly viewed as a really important piece of the overarching puzzle and a really complementary piece that would help accelerate our internal road maps. Obviously, we're – as I mentioned, we're getting ready to ramp this new power conversion and control IC, and there's a robust road map of IP developments beyond that to fuel next-generation components for that line of products. And so the Lion technology is part of that puzzle. I mean it's not directly in the same exact function, as obviously the Lion technology is really related to fast charging in a really efficient, low heat kind of way, but it fits in really well.

And just given my comment earlier on needing to really understand how haptics and audio amps impacts the battery and how they all kind of fit together in a power and battery architecture, it fits in really well and already seeing opportunities to see collaboration across the different product lines, to optimize solutions and chipsets that kind of, again, really deliver better end user features, be it audio experiences or faster charging times or more, kind of realistic tactile experiences with haptics. It all comes together really, really nicely and help supplement new SAM dollars for us to go target, in addition to the power conversion and control stuff we've already talked about. So yes, it's exciting times.

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

Great. One thing that I was curious about, Carl, is, as you know, labor market's pretty tight. And then if you look at kind of chip designers, it's even, more tighter. It's hard to really find really good kind of analog guys out there. But when you look at the skill sets of kind of the engineers and the designers that you're hiring at Lion Semi, is there an opportunity to apply those skill sets to other projects in the – in your group?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Yes, certainly. I mean that – the team in general. Obviously, it was a small start-up. So they will get to benefit from the scale that Cirrus Logic can bring. And we do view this as a very strategic investment area for us, both the organic efforts that we've had ongoing and now the acquisition of the Lion team. So being able to add more talent to those areas is important. And we've recently – I mean, obviously, we've often been targeted to have designers in one location to the extent we can control that. And obviously, Lion brings an additional location for us. We've also recently staffed up a team in Arizona, which is a pretty good density of talent in that power and battery kind of domain.

And so, to be clear, the Lion team has a set of strategic initiatives and product investments and customer engagements that they have to remain focused on in terms of execution, which is another encouraging thing to see in that team, like really customer focus, really technology and innovation-focused, but focused on keeping customers happy. And you do that in consumer markets by executing.

So certainly, we don't want them to take their eye off the ball in terms of existing commitments and products. And over time, we'll start to overlay the two IP portfolios to figure out exactly how all those pieces come together to fundamentally just accelerate products and solutions into the hands of customers. So I certainly view it as an opportunity for us to look at the overall investment and the personnel involved. And by having additional locations and locations that have, in particular, talent in these domains, it bodes well for us in terms of adding that kind of specialty talent that's pretty hard to find. And it will be even harder if we were expecting them to all be in Austin. So yes, it's – I think it's going to be a really big shot in the arm for us relative to just acceleration of IP and product road maps.

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

Great. Also wanted to clarify the fast-charging capabilities that you acquired, my understanding is that they build a DC to DC converter that goes into the phone. You talked about it's compatible with wireless and wired charging to support the fast charging capabilities. But we're also seeing a lot of these GaN fast-charging tubes kind of hit the market. And I just wanted to clarify, is the technology that Lion Semi has compatible with these GaN fast chargers that are hitting the market? Or is there some sort of compatibility that has to be built into the charger as well?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Yes, it's a good question. I mean our technology is going to be agnostic, whether it's a traditional wall war, a GaN, fast charger or a wireless charging infrastructure. I mean at the end of the day, they're going to work hand-in-hand with each other. And the power coming out of the wall or the voltage coming out of the wall or what's in the phone, either one of those could be a limiting factor. So with more proliferation of GaN-based chargers, we see that as an opportunity for more adoption and more proliferation of higher-voltage, fast-charging circuits.

So we're certainly seeing those chargers pop up quite a bit with third-party accessory makers, but also some of the OEMs starting to look at those shipping as accessories or shipping in box. So ultimately, we see the proliferation of GaN-based chargers to be a good thing, to where we can work together at a system level to ultimately optimize efficiency and thermos relative to fast charging the battery. So yes, it's – we're pretty agnostic, but it's a positive to be working with those kinds of technologies.

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

Great. On the revenue synergy side, maybe can you just talk about kind of the customer overlap that you have with Lion. And obviously, it sounds like Xiaomi is a kind of a key customer for them. But with your kind of much deeper and broader customer relationships, is there an opportunity, I would assume, to start cross-selling this technology? And are you able to share just kind of how some of the customer feedback and conversations have gone since you've acquired Lion?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Yeah, sure. I mean there's certainly opportunistic for cross-selling, and in particular, as I mentioned earlier, there's opportunities on portfolio and road map planning for – if we control these various pieces of the puzzle, how do we optimize them with one another? Yes, there's certainly overlap on the Android side of the customer base, and the feedback we've received from customers has been overwhelmingly encouraging and positive. Again, a small, really focused team focused on innovation, competing with really big incumbent suppliers but differentiating with efficiency and thermals, that matter a ton relative to the value and the marketability of these fast-charging circuits.

So we're super encouraged by the feedback from customers and super encouraged by the Lion approach to just really caring about customers and that service piece and the execution portion. So we're obviously wanting to support that and help them execute on their existing initiatives and then also be able to take a step back, like I mentioned, and look at the road map for how we plan products because it's a lot of the same customers that we're selling amplifiers or haptics and sensing products to, that are certainly interested in these fast-charging circuits. So I think there will be a lot of benefit for us coming together and having that under one umbrella, no doubt.

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

Great. I thought it was interesting that you guys highlighted PCs on your last call. It sounds like this is kind of a really interesting emerging opportunity for you. Can you give us a sense of where this PC business is today and where this PC business could be one or two years from now? It sounds like it's something you're pretty excited about.

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Yes, we are rather excited about it, and we've been seeing trends in the higher end of the laptop market now for a couple of years, trends that look a lot like smartphone trends from several years ago relative to thinning, and ultimately the need for boosted amplifiers to deliver louder sound. And so our products that were obviously built and tailored around smartphones became much more relevant to laptops as some of these trends became realized in actual form factors and the kind of higher-end space of laptops. That's just been accelerated with COVID-19, working from home and people, and ultimately our – the big OEMs, demanding better audio and voice experiences because people are spending so much more time engaging with audio, video and these types of engagements.

So I think that's done nothing but accelerate some of the demands for higher performance solutions. And that cuts across the audio circuits for speakers, the more emerging spaces like haptics and touch sensing. And certainly, that's within the purview of the Lion technology as well, in terms of fast charging and the power and battery architecture and subsystems. So that's all really, really encouraging.

So over the last 12 months, things have accelerated quite a bit. We were fortunate to be in a position where we could take advantage of other suppliers not having enough capacity, and you couple that with some of the big customers demanding better experiences for audio and that sort of thing. And we were in the right place at the right time, and we capitalized on that. So we've seen a meaningful amount of growth in that space over the last year and a number of products on the horizon that can help accelerate growth opportunities in that PC space.

And so if we looked at the total PC market over the coming few years, that SAM is approaching close to $1 billion when you cut across all the different technologies that we're – that we have opportunity to go after. So it's still early days, but we've seen some really great traction and customer pickup of some of these kind of unique audio solutions, and there's a bunch of steps to follow on the back of that as well.

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

And when you look at the incremental content opportunities in kind of PC notebooks compared to mobile, is it comparable in content? Or is there a greater content opportunity in notebooks compared to smartphones?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

I mean if you squint it a little bit, you would see similar attach rates, right? So most are going to have a codec of some sort. On average, you're seeing more speaker amplifiers per device. So on average, you see more in a laptop than you would in a handset. But they're in that same range in terms of ASPs per socket. The codecs tend to be on the kind of mid-tier to lower tier range of ASPs. So in that, anywhere from $0.75 to $1.50 kind of range. So you see a good overlap in content opportunities with the audio side of things. Haptics is certainly an emerging space where there could be opportunities for more content they need to see in a handset. But certainly, that's in its infancy in terms of adoption by OEMs. And then a little bit further out, the power and battery stuff, I think represents an exciting opportunity and one that we'll continue refining as we execute on some of the near-term initiatives.

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

Great. And then just one last follow-up here on just positioning in terms of where your wins have been. What segment of the notebook market is this more focused on enterprise, consumer, gaming type of platforms or across the board?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

I think our long-term view would be we would exist kind of in the same areas that we exist in other parts of the consumer market. So in the mid- to upper tiers. I think we're seeing revenue and opportunities today that are more mainstream. Whether that will shake out over time and be sustainable over time is a question. But there's no shortage of demand from the major OEMs for improved audio experiences and to kind of capitalize on the same acoustic challenges that handsets have been facing for years.

So again, longer term, we would kind of position ourselves in the mid- to upper tiers of the market. But that's – again, that feeds into that almost $1 billion SAM when you cut across all the different technology areas. So we certainly don't want to chase the mainstream kind of low end part of the market, much like we don't choose to focus on that in the handset space, so.

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

Great. I think John, on the last earnings call, had commented that the expanded wafer capacity agreement that you put in place represents a pretty big step-up in terms of capacity for next year. I'm wondering if you guys can give us a sense of what's driving that. I know you probably can't get into too many specific details, but can you talk about just the, kind of the product areas? Is this something related to more power conversion IC opportunities? Is this fast-charging-related, mixed-signal, close of controller-related? What's driving that big step-up in capacity that you guys are putting in place?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Yeah. I mean, in terms of the agreement that we had talked about recently, I mean that is primarily focused on our 55-nanometer BCD technology, which services most of our audio amplifier business, our haptics business, as well as some of the newer emerging power conversion and control. The fast charging is separate from that agreement. And so we're seeing – okay, at the core, we're seeing further market share gains with our amplifiers and haptics and sensing products. And then obviously, the ramping of our power conversion and control IC requires a number of wafers.

And so that's certainly fueling demand for more capacity, which is why we felt it was so important and strategic to ensure that our top line and business growth opportunities were not limited by our capacity. So we felt good to put that in place, to give customers more security and feeling comfortable on their partnering with us to not have that be a limiting factor. So again, we're seeing growth in our kind of core amplifiers, haptics and the more kind of new coming or not now ramping products in power conversion and control. And it's also worth mentioning, you said control – closed-loop controllers, that also is a unique technology to what we had announced previously, so.

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

Great. On the audio business, you guys had reclassified your reporting segments, to obviously reflect kind of your increased focus on mixed-signal, which makes sense. But

I'm wondering if you could talk about your audio business, which is still a significant portion of your revenues. How should we think about the long-term growth opportunity in audio going forward? Is this going to be more of a stable business going forward with kind of you guys increasingly focusing on mixed-signal? Or is there still growth to be had, what should we think about in terms of what the growth drivers are of the audio business?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Yes. I mean, I would generally characterize audio as a reasonably stable, albeit growing opportunity for Cirrus. It's certainly not growing at the pace of some of the adjacent technology moves we've made with the high-performance mixed-signal investments. But as you mentioned, it's a sizable part of our core business, and so it will continue to grow. Obviously, we've got market share gains and opportunities that are in front of us as well as some of the things we were talking about just a minute ago in terms of PC and other non-handset consumer products, where we've been picking up share over the last couple of years, in accessory products, be it TWS headsets, watches, wearables AR, VR.

So I mean, there's a number of those applications that are still reasonably immature and not giant, and so we remain excited about some of the prospects for growth based on those application spaces is growing. But I think audio will be a reasonably stable and slow growing opportunity for us. It definitely – there's definitely growth opportunities that we are pursuing. And obviously, the mixed-signal, the high-performance mixed-signal opportunities in front of us are all incremental and new, and I think there will be some significant rapid growth in some of those areas, so.

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

Great. On M&A, Carl, if you look at your balance sheet, you still have the capacity to look at other potential acquisitions. Where is your appetite right now to do additional acquisitions? Or are you going to be focused on kind of the near to medium term on kind of digesting and getting Lion Semi integrated at this point?

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Well, we certainly don't want to do anything to compromise, making sure we do the current one correctly and support that team as best we – as best we can, to again execute on their initiatives. I mean, again, execution will be a critical component of what we talk about with Lion and anything we do going forward. So I mean our appetite will remain, like eager, to look and evaluate all of those options. Again, we wouldn't want to do anything that would compromise our ability to execute on the Lion acquisition in terms of getting that up and running and integrated, but it doesn't fundamentally change our view on interest and finding other ways to accelerate road maps and bring things into this kind of high-performance mixed-signal domain that would allow us to capitalize on market share growth within the SAM that we've identified, which is super exciting, so.

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

Great. Looks like we have time for one more question, maybe this is a question for Thurman. It looks like this year, we are looking at kind of on schedule kind of normal product cycles versus last year. Maybe things were a little bit delayed. But in terms of the second half, should we be thinking about just normal seasonal trends into the December quarter? And maybe can you just help us understand what is kind of normal seasonal for December quarter?

<<Thurman Case, Chief Financial Officer>>

Sure. Well, I think, if you look at what we saw, if you take a look at our guidance for this particular quarter, it was a big step-up from Q1, probably at the higher end of what we normally see. We always say that also, when you're looking at the end of September versus the beginning of October, some kind of movement during those periods is possible. But we would expect the profile to be generally right. It may not be – you can't look at every year and say, hey, there's a certain percentage because that can vary every year. But September, December are going to be our largest – or going to continue to be the largest, what that difference might be from a big step-up in September, we haven't guided out that far. But – and then March, certainly would be a step-down. Even though that can get offset a small amount by Lion, because their larger quarters are December and March, it won't be – that won't be a significant change this year.

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

Got it. Okay. With that, it looks like we're out of time. Thank you, Thurman, thank you, Carl. Great catching up with you guys.

<<Carl Alberty, Vice President-Mixed-Signal Products>>

Yeah, congrats John.

<<Thurman Case, Chief Financial Officer>>

Appreciate it, John. Have a good one.