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Cirrus Logic, Inc. (CRUS)

Q4 2016 Earnings Call

CORPORATE PARTICIPANTS

Thurman K. Case

Chief Financial Officer, Vice President of Finance

Jason P. Rhode

President, Chief Executive Officer & Director

OTHER PARTICIPANTS

Charlie Lowell Anderson

Dougherty & Co. LLC

Suji De Silva

Topeka Capital Markets

Blayne Curtis

Barclays Capital, Inc.

Rajvindra S. Gill

Needham & Co. LLC

Tore Svanberg

Stifel, Nicolaus & Co., Inc.

Chris J. Longiaru

Sidoti & Co. LLC

Rick Schafer

Oppenheimer & Co., Inc. (Broker)

Thomas Sepenzis

Northland Capital Markets

MANAGEMENT DISCUSSION SECTION

Thurman K. Case

Chief Financial Officer, Vice President of Finance

GAAP AND NON-GAAP FINANCIAL MEASURES

- The shareholder letter discussing our financial results, the earnings press release, including a reconciliation of non-GAAP financial information to the most directly comparable GAAP information, along with the webcast of this Q&A are all available at the company's Investor Relations website at investor.cirrus.com

Jason P. Rhode

President, Chief Executive Officer & Director

Q4 HIGHLIGHTS

- Before we begin taking questions, I'd like to make a few comments
- For a detailed account of our financial results, please read the shareholder letter posted on our Investor Relations website

New Portable Audio Products and Revenues

- FY 2016 was an outstanding year for Cirrus Logic as the introduction of new portable audio products and share gains with existing customers resulted in solid financial results
- We delivered record revenue of \$1.2B, up 28% from the prior year driven by strong smart codec and amplifier sales
- We are pleased to have exceeded our long-term revenue target model of 15% y-over-y growth and achieved our non-GAAP model of 20% operating margin
- Revenue for the March quarter was \$232mm, as we continued to experience short-term weakness in portable audio

Demand, New Product Ramps, Tape-Outs and Design Activity

- Despite soft demand for smartphones in Q4, our engineering, technical marketing, and supply chain teams were heavily engaged in new product ramps, tape-outs and design activity

Smart Codec, Chip Design Activity

- During the quarter, we ramped a new flagship multi-core smart codec with a key customer and began shipping our first complete signal chain win with microphones and new mid-tier smart codec and a new boosted amplifier at another Tier 1 smartphone customer
- Chip design activity was also robust as we taped-out a new flagship high-performance codec, a Hi-Fi headphone DAC, a new boosted amplifier and finalized the design of a next-generation mid-tier smart codec

Product Portfolio and Strategic Initiatives

- This past year we significantly enhanced our product portfolio, increased our share with existing customers and OEMs three through 10, gained traction driving key flagship features in the mid-tier devices and introduced innovative products, including those targeting the wearable and smart accessory market
- As we move into FY 2017, we remain keenly focused on a wide range of strategic initiatives that we believe are essential for future growth and will strengthen our position as a market leader

Pipeline of New Products

- As the leading supplier of the complete audio signal chain, Cirrus Logic has developed an extensive pipeline of new products and a compelling roadmap that addressed the technical and price requirements of a wide range of products, markets and customers
 - We believe the company is uniquely positioned to address the rapidly growing audio and voice markets, providing us numerous opportunities to fuel long-term growth opportunities in the coming years

CLOSING REMARKS

- Before we begin the Q&A, I would also like to note that while we understand there is intense interest related to our largest customer, in accordance with our policy, we do not discuss specifics about our business relationship

QUESTION AND ANSWER SECTION

Charlie Lowell Anderson

Dougherty & Co. LLC

Q

I was noticing the shareholder letter, Jason. There was a note about really strong growth in amplifiers you're expecting FY2017. And I wonder if you could talk about the difference between is that at new customers vs. existing customers? And then microphones you also mentioned you picked up win there. If you could just update us on where capacity is and sort of your ability to ramp that into FY2017 and beyond.

Jason P. Rhode

President, Chief Executive Officer & Director

A

Those are definitely a couple of different magnitudes of impact there. Amplifier is a great market for us. It has been since we entered it in 2012. It's been a big and growing piece of our business since then. A lot of great stuff going on in that market as customers seek to make their products louder and sound better when they're loud. I think one use case that pretty much everybody wishes their handset had would just be that the smartphone, or the speaker phone rather would be loud enough you could just use it in a car without having to mess around with Bluetooth or any of that.

So in addition to music, there's voice experience things that drive customers to want to make their handsets louder. So that requires a boosted amp or potentially multiple boosted amps, we've got customers that have been interested in. You can imagine the form factors on these things are incredibly constrained. So, customers are talking about can we make them louder by using two smaller speakers rather than one big one.

In any event, there's a lot of things going on in that market. Traditionally our business has been dominated by one big customer, but we see really good opportunities to broaden that business out in the Android space, so no real comment on things that haven't launched. But we do see good opportunities to broaden our customer base out in the amplifier market. So it's a big and growing market. It's definitely possible for more than one of the suppliers that serve that space to grow. But we're just minding our own shop and making sure we're doing the right things to grow our business, including we kind of allude to in the shareholder letter, migrating the amplifiers down from 180-nanometer.

We're working on 55-nanometer today which is going to give us the ability to not only have a really world-beating cost structure, but also add a tremendous amount of digital features, and also potentially integrate with our 55-nanometer smart codecs some number of years down the road. So that's what's going on in the amplifier space. No real specific comments about what's driving the growth this year. We try not to get too far ahead of our customers. But we're excited about that.

On the microphone side, we're still just doing the business of proving ourselves as a supplier. We've got good wins there. It's not a material contribution to revenue yet. We don't expect it to be for some time to come. But we're investing in the business to prove ourselves as a supplier, and we think once we do that, the opportunities for us to combine the microphones with other products in the portfolio like smart codecs, et cetera, things like the ANC devices where we can optimize the whole chipset as a system really put us in a position that will be difficult for others to compete with. And we think that's a path to a margin profile in the mic business that we would actually like.

Charlie Lowell Anderson

Dougherty & Co. LLC

Q

And then quick follow-up from me. I wondered on, you guys mentioned expecting strong growth in 2017 above your long-term operating model. I wonder if you could speak to we're seeing a lot about slower smartphone in general, even down smartphone. What are you thinking in terms of unit assumptions for the market and your ability to grow in the face of that? Any color there?

Jason P. Rhode

President, Chief Executive Officer & Director

A

We read all the same market prognostications that everybody else does. When we say stuff like strong growth in FY 2017, we have to be mindful and be conservative of all of that. So we're certainly not counting on any amazing unit growth. I generally think the industry tends to be too pessimistic on that front. We're certainly engaged with the right customers, and we think they will all continue to do well.

But relative to that statement, certainly we're not counting on anything amazing happening unit-wise in the market. We're continuing to push on all the various different growth factors that we see, grow our business with our existing customers, broaden out into three through 10, drive down to the mid-tier, a number of other factors. And we think that's what really drives our growth. It's not something where we're overly dependent on unit growth in the market.

Suji De Silva

Topeka Capital Markets

Q

First of all on the customers you're expanding out to three to 10, can you talk about, particularly the China OEMs, how far along they are in trying to match the premium feature set? And how urgent that upgrade is for them to help you kind of drive your products through there?

Jason P. Rhode

President, Chief Executive Officer & Director

A

In terms of really diversifying the business, that's always down the road. But we're engaged with all of the right folks or certainly most of the right folks in that handset manufacturer three through 10 list. We're shipping with some of them today. Some of those wins in the past have been, I would call, a more opportunistic, where they're using a device here, a device there, and some of them make pretty radical changes model by model. But we've got more opportunities that we're engaged with – engaged in with our smart codecs than we've ever had before.

This is really the first full year we've had mid-tier devices on the market, which is really what's more applicable in the China market, or at least the broad swath of it that's going to move any meaningful volume. So really moving to a smart codecs is a pretty big commitment. It takes a while to get in, but it's also not a design-in that a customer takes lightly. It's something that's much more likely to be sticky rather than opportunistic on a model-by-model basis.

The Hi-Fi DAC that I referred to in the opening remarks is directly targeted at China. We've got, as I said, a couple of mid-tier smart codecs that have been out for a little while now and gaining traction there. And a lot of times people start looking at one of those and realize that they don't want to give up on running all the various stuff that some of their higher-end competitors are doing, and they end up migrating before the design is even over to one of our – closer to our flagship devices. So those are all good trends. We're seeing very good growth out of those accounts. It will take a while before they move the needle, but we often don't push very hard on releasing customer names.

But if you're paying close attention to product launches and teardowns and all that stuff, you've already been able to see cases where our smart codecs have been shipping even in a case where they're shipping with one of our competitors, AP, in a kind of broken bundle scenario. So now that those proof points are out there, I think a lot of customers are realizing that they're a little more free to choose premium audio device if that's what suits their marketing needs. So I think it would be tough for that to be going too much better than it already is.

Suji De Silva

Topeka Capital Markets

Q

The other questions on the headset opportunity, which I know was forthcoming. Do you have any update on how that's tracking? And your optimism on that being a large volume opportunity vs. an emerging one this year?

Jason P. Rhode

President, Chief Executive Officer & Director

A

I mean we mentioned headsets are a reasonable part of our growth expectation this year. We're very excited about that transition. It seems like there's a number of market forces that are kind of conspiring to move what has been an analog headset market to be significantly more digital than it was in the past. So something that effectively had no analog – or had no active circuitry in it suddenly needs something like a USB-C interface device conversion circuitry, amplifiers. Obviously I'm speaking about the Android space here. We don't – obviously can't comment on what our largest customer might be doing or not. But it's a neat transition for the market.

So at the high end of the space, we've got our ANC headset device, which we're extremely excited about long term, a number of customers designing with it. It is a very challenging acoustic problem to solve. We've done our part with the chip itself, but it leaves a lot for our customers to work on to really iron out how to make that device fly in a production product. So we're working closely with a number of folks and very confident that that turns into revenue in the long run. But in the nearer term, the much larger section of the market is a little more basic headsets that have the potential to convert from analog to digital and we see very good opportunities with those probably nearer in and larger than the ANC.

Blayne Curtis

Barclays Capital, Inc.

Q

Maybe can you just talk about – your overall guidance into June is flat. Can you just talk about – within that Android, you mentioned a lot of these wins. Can I just – what directionally – is your Android business up or down into June? And then I don't know if you mentioned whether you're going to get any headset revenue in this quarter, but if you could just talk about the timing there.

Jason P. Rhode

President, Chief Executive Officer & Director

A

The bit on Android is kind of mixed bag. Overall, it's – I – overall, I'm happy with where we're sitting. I think the issue with our largest customer in the Android space I think is pretty well publicized about the share split that we've got this year which is significant – which is a lot more typical, I would say, historically vs. last year where we had 100% in the flagships. When we did the Wolfson acquisition that was really never in the expectations that we would get 100%, so it was kind of a bit of a bluebird last year. So I would characterize that business as a little more kind of on a normalized – has kind of normalized this year. So that's obviously a headwind relative to last year, but countering that to a significant degree is the growth that we've seen in some of the other Android accounts.

Our third largest customer, as we indicated, is doing very well. We're very closely aligned. We're doing a lot of cool stuff together and we expect that business to continue to grow. We've got a lot of – we continue to have a lot of opportunity to grow the business in the Android space really across-the-board in the long term to via inclusion of the amplifiers which we're – which I think we've mentioned on previous calls. And letters are – I mean that's a challenging, support-intensive design in.

But once we're in there, we think that'll be a really good and growing business for us. We're investing in it in a pretty big way. I think in a – as time goes by, we will be in a position that would be very difficult for other folks to compete with, so I see very good prospects there on the Android side to continue to grow our business in absolute dollars over the long term.

Blayne Curtis

Barclays Capital, Inc.

Q

And then just one for Thurman. OpEx is up, I think, 9% y-over-y. Can you just talk about what's driving that? I'm assuming it's all these new projects, and how do you think about OpEx for the rest of the year?

Thurman K. Case

Chief Financial Officer, Vice President of Finance

A

It is growing. There is a lot of new projects, and we are continuing to grow R&D. Part of the increase over FY2016 was a full year of Wolfson. So, we're also seeing that carryover. We do expect R&D to grow, continue to grow throughout the year. But we do have a lot of leverage on the SG&A side. And we don't expect that to grow nearly the rate that we will continue with R&D.

Rajvindra S. Gill

Needham & Co. LLC

Q

Just wanted to have a quick comment on the whole analog headset to digital headset transition, particularly on the Android side? A lot of it is based on the attach rates for USB-C ports in order to facilitate a digital transfer. So, I wanted to get your sense in terms of what the adoption rates are that you're seeing first on the USB-C for the Android customers? And then within that what percentage or what's your thought process of those customers have USB-C moving to digital headphones?

Jason P. Rhode

President, Chief Executive Officer & Director

A

That's helpful to be able to clear a couple things up. One is really the transition to USB-C is really more about the connector than it is about the underlying interface. We could do what we proposed to do, we could do over traditional USB, I guess, micro, that horrible connector that you can't ever figure out which way it goes in the port. The problem with that is that if you use it as a headphone connector, it will bend and do all sorts of horrible things. The USB-C connector is obviously – it's much easier to get in the slot, and additionally, it's a much more robust connector.

So as it happens, the Android space is somewhat fragmented into how it's going about utilizing that USB-C. So you're right. It could be a digital interface as it relates to audio. But there's also the potential within the USB-C spec to ship an analog variant over that cable. So the interesting thing about our ANCh headset or really any of the solutions that some of our customers might want to do where they're adding more functionality in theirs – whether it's – well, in particular for an ANCh headset, whether it's analog or digital, we don't care about.

What we care about is that there's a robust connector and that you can get power over the connector so that you can eliminate the cost of the battery and try to drive the volume of these things up. So the ANC piece of it doesn't necessarily relate to the conversion of the USB-C actual physical interface from analog to digital. It's really more about the connector.

Now longer term, it just is kind of clearly the case that a lot of people would like to, once the USB folks kind of get a little bit more of a unified approach to how Android is going to support that and do so in a lower power fashion in the digital domain, there's a lot of value that can be added in those products, whether it's ANC or just smarter voice features or all manner of different things that there's interest in. And so that is a little bit farther down the road, but from a connector perspective, not telegraphing any one customer's plans, but it's pretty hard to find anybody that's not talking about introducing models on the relatively near-end horizon, if they haven't done so already.

Rajvindra S. Gill

Needham & Co. LLC

Q

And just for my follow-up question is really on the competition, on the digital headsets as well as the ANC, the adaptive noise cancellation technology. What's your view on the competition? And any thoughts on kind of what Conexant is doing on its side, noise cancellation technology? Thank you.

Jason P. Rhode

President, Chief Executive Officer & Director

A

The difference between our product and anything that we're aware of that's out there is that our product is fully adaptive. It's all adaptive digital signal processing that's far from a refined art. There'll probably be people getting their PhDs in that exact field a long, long time from now. It's a very challenging system to come up with in the first place, and the neat thing about it is that it enables you to create a number of form factors that are just flat not possible without the adaptability.

So, if you've got an over-the-ear pair of cans, there's a number of different solutions you could choose from there, but that's obviously going to be pretty unlikely to ship in a handset box, both from a size and a cost perspective. And then even the sealed up jobs, whether it's a little silicon ear fitting or whatnot become problematic from a fit perspective. They don't fit everybody. You've got to ship three different sizes, all that kind of thing.

So what our adaptive solution enables that as far as we're aware no other solution on the market does enable is what we refer to as a non-sealed or a leaky ear bud. So a leaky ear bud would be typically the sort that you find in the handset box. So it doesn't seal up your ear canal. It's just a nice ear bud that rests in your ear, and it does all of the noise cancellation electronically rather than relying on passive isolation from the design of the headphones themselves. So that eliminates further cost in the materials surrounding the earpiece. It makes it smaller. It makes it fit better.

Now it's definitely not without its challenges from a design-in perspective because it does rely on having a number of pretty significantly talented acoustics experts who we happen to have a bunch of, but our customers don't all have a bunch of, depending on who we're talking about. And so it is a support-intensive design win. It's a new product of its type. It takes customers a while to figure out their go-to-market strategy, how are you going to test it, how are we going to price it, how are we going to market it. And so that's the kinds of the things that we see customers going around and around on at the moment.

But we're engaged with a bunch of interesting folks. I suspect we will have – we will see – our current expectation is to see products on the market this year in some form or another. We don't expect it to be a huge contributor to

revenue right out of the gate, but it is something that's a real wow factor device that we think can make some meaningful changes out in the industry. So, we've got high hopes for it in the long run.

Tore Svanberg

Stifel, Nicolaus & Co., Inc.

Q

I was just wondering what that exactly means, Jason. So, it looks like now you got one top ten using the whole chain. Is the goal here to get more of those top tens signed up this year? And eventually should we think about those three components eventually being integrated into one solution?

Jason P. Rhode

President, Chief Executive Officer & Director

A

It would be unlikely we would integrate the microphone with the smart codec. Certainly there's possibilities to embed more of the DSP intelligence in the microphones. That's kind of a long-term goal. But in order to do that and win, anybody that is going to move the needle at all, you have to prove that you can be a single source, which I don't know that anybody in the industry has done yet. So we're, from a microphone perspective, we're trying to put one foot in front of the other and prove that we can be a significantly more reliable supplier. So, that's a work in progress that I feel very good about. But it is a work in progress, nonetheless.

The smart codec and the amplifier certainly indicated earlier, but just to be direct, yes, we definitely expect opportunities that after we've migrated the amplifiers down to 55-nanometer, in addition to all of the other competitive advantages, that's going to give us the ability to integrate that with the smart codec and also to embed in standalone amplifiers a lot more DSP capability. Both of those things are pretty meaningful advantages of consolidating around the 55-nanometer node.

So, as to whether we want to ship a chipset of microphones and amplifiers and smart codecs, certainly of course it's definitely easier to grow your business with your existing customers. So any time we get a customer on any one of those devices, then the sales team has got pretty clear marching orders, and a pretty good way to grow their commission check of making sure that whatever device they've got in there today, they're pitching the other ones and trying to find an advantage to ship in the whole chipset.

These products are complicated. Customers value having one supplier to look to, to help them get through the design-in process. It's an incredibly complicated thing involving an intersection of DSP, an electrical design, an acoustics design. We're the largest supplier of that type of device today, and we're well known for it. We're well known for our great support, and we think that's a meaningful advantage for us going forward.

Tore Svanberg

Stifel, Nicolaus & Co., Inc.

Q

And as a follow-up on your amplifier business, so it was up more than 30% even without the benefit of 55-nanometer. So as you start shipping 55-nanometer amplifiers, does this really open up opportunities outside of the smartphone market as well? I mean the amplifier market is a pretty big market in audio, so I'm just thinking automotive and other types of devices.

Jason P. Rhode

President, Chief Executive Officer & Director

A

It does in the long term. I mean in short term, we've got our hands full in trying to serve what our customers are looking for in the handset space, and that's all whether the handset market is growing as people wish it would or

not, that's all incremental. A lot of that is incremental business for us. So, there's good growth opportunities and certainly bigger and nearer than some of the other markets we might go after.

Automotive is a great opportunity for a lot of our technologies in long term, but it's difficult to prioritize that over some of the other things that we see that are driving nearer in opportunities. But yes, over the long term, certainly we would expect to see – I think prior to seeing it in automotive, you'd see us in other things that are low power, battery driven, or just smaller in general as we see some of our technologies migrate out from handsets into wearables and the connected home and things like that.

Chris J. Longiaru
Sidoti & Co. LLC

Q

My question has to do with just first, just the MEMS mic opportunity, because you talked a little bit about it, but is the – I guess the process, because you said no one has all the market, most of that's because of the manufacturing. So is the process there slowly gearing up your testing and your handling part of the business so that you can get to a level where you're servicing more? Or is it more struggling to get the design wins? Because what it sounds like is that there's probably more demand out there than anything else.

Jason P. Rhode
President, Chief Executive Officer & Director

A

We're being very careful with our go-to-market strategy. We're partnering with customers that value the stuff we bring to the table. And we're trying not to bite off more than we can chew until we really get to the point that we're not going to be showing up on the front page of the paper having dealt somebody a supply issue. Pretty much it seems like every quarter somebody's got an issue with microphone supply. And so we've got a very good reputation for execution. We don't want to be one of those stories for anyone. So we're approaching it pretty cautiously. It's a long-term investment for us. There's definitely a capacity element as well.

But we're partnered with some folks. These are, it's a pretty small die. And so we are definitely partnered with folks that can – the folks that we're shipping volume out of today can support a reasonably good amount of volume. And we've got good plans for how we would expand that going down the road as volumes increase. But again, just to be clear, we're talking about microphones because it's a meaningful portion of the long-term strategy. But we're certainly not counting on crazy growth in that space for us over the next year or so.

Chris J. Longiaru
Sidoti & Co. LLC

Q

And just sticking on that part of the long-term strategy, can you just give us a little more color into – you talked about some meaningful contributions from wearable digital headsets, some connected home stuff, that help to offset some of the near-term weakness in audio. Can you give us an idea of where some of that is coming from and what your expectations are for growth in that part of the business as we move to 2017?

Jason P. Rhode
President, Chief Executive Officer & Director

A

Other than, relative to the indications we gave on headsets, I mean none of the products are on the market yet. And again, we're pretty cautious about making sure any of our customers, it's not our job to launch their products. So, we're trying to be reasonably cagey about that other than just generally there is a pretty significant transition going on in the market. And we're pretty uniquely positioned to capitalize on that. So, aside from that and the color that's in the – that you've heard before that's in the IR deck, et cetera, that's kind of the level of detail that we can get into there.

Rick Schafer

Oppenheimer & Co., Inc. (Broker)

Q

Just had a couple questions. First is I'd just like to get your general sense of or your view on where smartphone channel inventories are here, just again generally speaking, and when we might see orders start to pick up seasonally. I mean, would it be later than what's sort of typical for you guys?

Jason P. Rhode

President, Chief Executive Officer & Director

A

I don't actually have any visibility into smartphone channel inventories. Relative to our own inventory, we're expecting to build inventory to support new product ramps. It will happen later in the year. We don't get any further visibility into ends inventory than I guess whatever you guys get, or whatever the yahoos that write news stories about such things get, so.

Rick Schafer

Oppenheimer & Co., Inc. (Broker)

Q

I wasn't talking about the actual phones.

Jason P. Rhode

President, Chief Executive Officer & Director

A

What's that?

Rick Schafer

Oppenheimer & Co., Inc. (Broker)

Q

I wasn't talking about the actual phones. I was talking about the supply channel into smartphone. I was just curious if that supply, if it seemed like inventories there had normalized within the supply channel from the component perspective.

Jason P. Rhode

President, Chief Executive Officer & Director

A

Generally speaking, all of our customers, certainly all of the ones that move the needle know how to run a tight ship. They generally, at least as it relates to us, seem like they run a very smart, modern, lean and mean operation. So I haven't seen any of them get meaningfully over supply on their, on our components. I don't think that's been a huge part of any of our issue.

Thomas Sepenzis

Northland Capital Markets

Q

I might have missed this. But given the midpoint of your guidance for the June quarter, which is up sequentially I think, is that growth coming from the Android space or where is that expected to come from?

Jason P. Rhode

President, Chief Executive Officer & Director

A

I mean it's flattish, call it. It's maybe up modestly, but it's flattish. We do have a number of good factors going on in the Android space. So I wouldn't say it's any one thing that's real remarkable. I talked about in response to a previous question, obviously, I think it's pretty well publicized. We've got some headwinds from the share change at our largest Android customer. I think that has been pretty well understood for a while.

But we are doing a pretty good job of helping to offset some of that headwind with growth with our third-largest customer, which is also in the Android space, with a pretty broad range of wins and a growing portfolio, stuff we're doing there. So, I like our – it was a bit of a bluebird last year that we got 100% share at the biggest Android account, and so now we're on a base that's probably a little bit more sustainable place to grow from, if that helps. So really there's, from a growth perspective, obviously Q1 is really not the story for us this year. It's kind of H2, and all the various good things we've got going on there.

Thomas Sepenzis

Northland Capital Markets

Q

And then OpEx you discussed was up y-over-y, but in the March quarter, it was down significantly, which is not always the case in the March quarter. So is that something that's sustainable? How should we be thinking about OpEx moving forward here?

Jason P. Rhode

President, Chief Executive Officer & Director

A

It's primarily – apologize we didn't give you a ton of time to read the shareholder letter. There's some in there about some of the breakout of the employee, some of its employee costs. Actually headcount went up. But a good bit of that, to be honest, is variable compensation. So we've got a very robust variable comp program. And when our expectations get scaled back, then that obviously scales back the variable compensation payout. And that ratchets back the OpEx quite a bit, which is clearly not what as employees we want to see, but definitely the right answer from a variable comp program.

So we think that's well designed and doing what it's supposed to do in an environment where we have a bit of a softer market. So no, it's not sustainable because we expect to grow a lot in the back half of the year and that will drive variable comp as it should. And additionally much like the challenge that we had in FY 2016 and FY 2017, we expect to grow pretty significantly. We expect to see, in fact, in excess of our long-term model again. And so, that always causes us a challenge on the R&D side to keep up with the hiring. So there's a very real chance if we don't keep our foot to the floor there that we'll fall behind on the R&D side.

That said, as Thurman alluded to earlier, we're a big mature company. We don't need to be adding all sorts of systems or other things to continue to grow. We feel like we've got the right infrastructure in place. So we're keeping a very close eye on SG&A, and that should provide additional leverage on the operating model as we go forward over the next couple years. So – but relative to the numbers we reported for Q4, you can expect OpEx primarily driven by R&D to go up through the year.

Charlie Lowell Anderson

Dougherty & Co. LLC

Q

Just a quick follow-up from me, Jason. I noticed in the shareholder letter, there was a reference to – can you hear me?

Charlie Lowell Anderson

Dougherty & Co. LLC

Q

There was a reference to smart home and virtual reality headsets that I hadn't seen before. And I wondered if you could provide a little color on what you're developing for those markets? And if those are anything that's in the next 12 months, 18 months or if those are longer-term in nature for you?

Jason P. Rhode

President, Chief Executive Officer & Director

A

From a meaningful revenue contribution, certainly they're longer term, which is, if my glass is half full that's a good thing, because we've got obviously a lot of growth dialed in for this year. So it's good to have something in the tank to drive the outer years. A key part of our growth strategy that we think a lot of the technologies we're already developing for handsets and mobile will migrate out very naturally into wearables and smart accessories and the connected home.

We call out connected home. A lot of the things that we're doing are very applicable there, whether it's amplifiers so that whatever smart, connected thing is in your house can respond to you with your voice. Whether it's the noise suppression so that it responds in a loud environment or also on the long term, the voice biometrics investment we're making which is something that again is out there a ways but it's one of the coolest long-term things we've got going. It's a really compelling technology that essentially does for your voice what the thumbprint sensor did for fingerprints. We think we've got technology that can be a similar error rate to fingerprint in the long term.

We don't have any ambition of replacing thumbprint in a handset, although we do think there's a good case for augmenting it with voice in a hands-free environment. But in a connected home there's all sorts of devices that you would like to have be at least a little bit secure where it would be very inconvenient if you had to put your thumb on them all the time. Maybe it's mounted on the ceiling or somewhere where you're not sitting. So we think voice security is a great opportunity there.

So it's really – it's a lot of things that we're already developing for handsets that position us well to be able to sell the same technologies, and some cases the same chips into a lot of other applications which is good because the dreaded Internet of Things is really an amalgamation of a whole bunch of stuff, some small percentage of which are probably really going to take off. So, if we had to invest in that meaningfully to drive any one of them, it would – that would be a challenge. But the really cool thing about being an audio and a voice supplier is almost across-the-board the things that people are asking for are very, very similar. So ideally we can go to market with the same hardware, a small tweak on the software and help people get in the game. So longer term, but very, very exciting things that are happening in that space.

Jason P. Rhode

President, Chief Executive Officer & Director

SUMMARY

- In summary, we are extremely proud of our progress in FY 2016, as sales of our smart codecs and amplifiers drove revenue up 28% y-over-y
- As we move into FY 2017, we are delighted to see that the demand we experienced this past year for innovative audio and voice products across the signal chain continues to gain momentum
- With a diverse product portfolio and extensive roadmap that addresses the technology and price requirements of flagship and mid-tier devices in the mobile, digital headset, smart accessory, wearable, and connected home markets, Cirrus Logic is poised to deliver strong revenue growth above our long-term target in FY 2017

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