

Dialog Semiconductor Q4 Earnings Call

00:00:00

Jose Cano:

Good morning, and thanks to everyone for joining us today. Our call is being hosted by Dr. Jalal Bagherli, Dialog's CEO, and Wissam Jabre, our CFO. In a moment, I will hand you over to Jalal to talk through the company's Q4 and full-year performance. First of all, I must remind everyone that today's briefing and some of the answers to your questions may contain forward-looking statements. These statements reflect management's current views, and there are risks associated with them. You can find the full explanation of these risks on Page Two of the investor presentation in the investor relations section of the Dialog website. The interim report and press release can also be found on our website. I would now like to introduce Jalal, who will run through the main highlights from the fourth quarter and the year as a whole. Jalal, over to you, please.

Jalal Bagherli:

Thank you, Jose, and good morning, everyone. Let me start with a look at the key highlights from the year.

00:01:01

In 2017, demand at the high-end of the mobility segment improved, and across all other segments we shipped 14 percent more chips than in 2016. In total, that amounts to almost 1.7 billion units of products shipped. Investing in R&D is vital to drive long-term revenue growth, and in 2017 we invested in our people and our products, while maintaining rock-solid financial execution. This year, we have delivered double-digit revenue growth, maintained or increased underlying profitability across our business segments, and returned close to \$125 million of cash to our shareholders. Wissam will take you through our financial reports in more detail shortly, but first, on slide four, let me briefly highlight a few areas of our financial performance this quarter. During the fourth quarter, business momentum remained strong, and it delivered revenue of \$464 million.

00:02:00

This performance was slightly ahead of guidance and is the highest quarterly revenue for the company on record, 27 percent above Q4 of 2016. The year-on-year revenue growth was driven by the high-volume ramp of new power ICs, resulting in 35 percent sequential revenue growth in mobile systems, and the first consolidation of Silego Technology into the group. Underlying gross margin and operating margin were in line with our performance during Q4 of 2016. Underlying EPS increased 72 percent year on year on to \$1.34. That is three times more than revenue growth. Cash flow from operating activities was up 46 percent, to \$130 million, whilst we continue to invest in R&D to generate future revenue growth opportunities. Let's move to slide six and take a look at the outlook.

00:03:02

Based on our current visibility and typical seasonal trends, we anticipate revenue for Q1 2018 to be in the range of \$330 million to \$360 million. Good business momentum and a pipeline of key product launches give us confidence 2018 will be a year of good revenue growth. As in previous years, revenue performance will be strongly weighted towards the second half of the year. In line with the expected revenue performance, we expect gross margin for Q1 2018 to be broadly in line with the prior quarter and for financial year 2018 to be broadly in line with the financial year 2017. So, with outlook covered, let's now turn to slide eight to touch on some of the key points of our business. Technical excellence is at the core of our business and rooted on a focused R&D approach.

00:04:02

To ensure we continue to develop new products organically, in 2017 we expanded our design centers in Europe, Asia, and North America. There are now over 2,000 colleagues in Dialog, including employees from Silego, 75 percent of whom work in engineer-related functions. Our talent pool is now based on 33 locations spread across 16 countries. These investments have enabled us to do two things. First, as we can see in the chart, we have been able to increase the value of more sophisticated power management solutions over the medium term. The chart at the bottom of the page reflects the average content per device from our custom PMICs and includes all the platforms we currently serve. Second, the investment in talent across our business enables us to maintain our technology leadership within mobility and IOT. Focusing on mobility first, we pioneered the programmable power management, IC and our know-how, and integration, and power efficiency allows us to deliver best-in-class highly-integrated IC in short-design cycles.

00:05:09

We've also maintained a commanding market share in the smartphone rapid charge market of approximately 60 percent. Although adoption of rapid charge technology through the second half of 2017 did not maintain the pace of previous years, we continue to make good progress, introducing our first USB interface IC and pioneering the use of gallium nitride for mobility. In the IOT space, the complexity of power management in connected devices, like variables and smart watches, is gradually gaining pace as devices become more complex and require better power management. With Bluetooth low-energy, we have built an entire product range of innovative SOCs, which enable our customers a faster go-to market, substantial energy savings, and a smaller phone factor.

00:06:00

As a result, in 2017, we maintained 15 percent market share in BLE, according to IHS October market data and our own estimates.

Heading to Slide 9, let's look at the progress made one of our key strategic objectives, the expansion of our product portfolio. Our R&D programs have contributed to the expansion of our product portfolio. In mobile systems, we expanded our catalog of power management ASSP

products with new charge IC and introduction of our first nano-power solution. We successfully extended our reference platform program, leveraging our technology into the automotive segment, thanks to our collaboration with Renesas and Xilinx. Our connectivity segment introduced a BLE solution -- supported a new 5.0 standard and is successfully engaged with a number of OEMs, with Smart Beat, our audio DSP product, targeting the high-end segment of consumer headsets.

00:07:11

In power conversion, now part of the newly-created advanced mixed-signal segment, we introduced a USB-PD IC and a complete high-powered device and GAN-based solutions, which are available in the market in 2018, targeting the notebook market. With strategic investment, an acquisition we made in 2017 has helped us to expand on market opportunities. Through the acquisition of Silego and the LED backlight in business from AMS, we have extended the breadth of our advanced mixed-signal technologies, contributing to the ongoing expansion of our customer base. And the strategic investment in Energous is gathering momentum following the FCC approval of the WattUp mid field transmitter. The investment helps to address a significant opportunity in the wireless charging market, and we have a full product roadmap ready to deliver.

00:08:03

Let's now take a slower look at 2018 growth on Slide 10. We remain positive about our prospects for 2018. We expect it to be another good year of revenue growth. This confidence is based on our solid presence in our markets and a strong pipeline of new products. Let me summarize the main items. Mobile systems revenue will benefit from the annualized impact of the content growth achieved in 2017. The first signs of revenue from various initiatives, such as our collaboration with Renesas and Xilinx, and the expansion of our ASSP product portfolio -- the BLE market will continue to grow. We expect to deliver another year of strong revenue growth driven by the expansion of Bluetooth, low-energy portfolio and an ever-increasing number of connected devices driving demand. Growth in our connectivity segment -- we'll also see fast revenue from our audio DSP in the second half of the year.

00:09:06

While adoption is steadily increasing, typically across consumer headsets, and the market is expected to grow over the medium term. We expect rapid-charge technologies, like USB-PD, to gather momentum in the second half of '18. The ACDC market continues to grow, and the introduction of new technologies provides us with new opportunities. The same can be set for LED markets. There are older LED backlighting portfolio will help us capitalize on our strong position. Finally, a word on Silego -- this year, our primary focus is to main business momentum with existing customers and introduce the benefits of the CMIC technology to Asian customers. We expect revenue from Silego to grow 15 percent year on year in 2018. Before I hand over to Wissam, let me summarize the key takeaways on the next slide.

00:10:01

We are well-positioned to benefit from structural trends for more efficient power management and power-efficient technologies, primarily addressing mobility and IOT. We have a differentiated product portfolio built through a combination of internal development programs, strategic investments, and acquisitions. Dialog has a number of technologies with leading market positions, and we continue to develop highly integrated products which enable our customers a faster go-to-market. Our expanding product portfolio contributes to the growth of our pipeline of our opportunities. Based on this, we remain confident in our growth prospects for 2018. Before I hand over to Wissam, I'd like to update you on what is happening with the 2019 design cycle of our custom PMICs. Price negotiation on the 2019 primary mobile PMIC have not finalized yet. However, we are making progress to complete the design, and we are planning to sample in the second half of 2018.

00:11:04

Additionally, since mid-Q4, we've been awarded a number of new custom PMIC designs targeting 2019 and later production ramps. With that, Wissam, can I hand over to you, please?

Wissam Jabre:

Thanks, Jalal. Good morning, everyone. First, let's take a closer look at revenue performance on slide 13. Q4 2017 of \$464 million was up 27 percent year on year and slightly above the high end of our November guidance. The year on year increase was mainly driven by growth in mobile systems and the first-time consolidation of Silego into the group. Mobile systems during Q4 was up 31 percent on higher sales volumes and increased content per device, and Silego contributed \$11 million of revenue in the quarter. In Q4 2017, we created the advanced mixed signal segment, grouping the former power conversion segment and Silego.

00:12:07

For the full year we delivered 13 percent year on year revenue growth and the business outside of mobile systems also grew by 13 percent year on year. As you can see in the buy chart at the bottom of the slide, advanced mixed signal connectivity and automotive and industrial all delivered double-digit revenue growth in 2017. Excluding the contribution from Silego, year on year revenue growth for the group was 12 percent. Turning to slide 14 to cover gross margin.

In Q4 2017, underlying gross margin was 46.1 percent, in line with Q4 2016. This is mainly the result of higher leverage from increased revenue, offset by product mix.

00:13:03

This led to an underlying gross margin of 46.7 percent for the full year, an increase of 40 basis points year on year, broadly in line with our guidance. This increase was mainly due to higher revenue and manufacturing cost reduction. Let's now turn to slide 15 to cover operating expenses.

Q4 2017 underlying operating expenses were \$105.9 million, up 27 percent from Q4 2016. This includes the impact from the first-time consolidation of Silego into the group. As a percentage of revenue, underlying operating expenses were down 10 basis points year on year. Underlying R&D expenses in Q4 2017 were up 28 percent year on year.

00:14:04

This increase was the result of consolidation of Silego into the group alongside the ongoing investment in application-specific customer opportunities, supporting the growth and diversification of the business. As a percentage of revenue, underlying R&D expenses were broadly in line with Q4 2016 at 15.4 percent. Underlying SG&A expenses increased by 25 percent over Q4 2016. This increase was mainly due to the consolidation of Silego and the timing and increase of the performance-based bonus, driven by the strong financial performance of the business in 2017. As a percentage of revenue, SG&A was down 20 basis points year on year at 7.4 percent. For the full year, we reduced operating expenses as a percentage of revenue by 30 basis points.

00:15:05

This was achieved while maintaining investment in R&D at approximately 19 percent of revenue, broadly similar to 2016. In 2018, we will continue to carefully manage SG&A costs and invest in R&D projects to enhance our technical leadership and extend our technology portfolio. Let's move on to Slide 16 to take a look at operating profit and earnings per share.

In Q4 2017, underlying operating profit was 28 percent higher than Q4 2016. This was mostly due to the higher revenue in the quarter. For Fiscal Year 2017, underlying operating profit was up 17 percent year-on-year, to \$259.5 million, 4 percentage points higher than revenue growth.

00:16:03

Two of our operating segments maintained a similar level of underlying operating margin in 2017. Mobile systems, at approximately 26 percent, and advanced mixed-signal at 4.5 percent. The star performer in 2017 was connectivity, which improved underlying operating margins significantly, from 4.7 percent in 2016 to 10.5 percent in 2017. The underlying effective tax rate in 2017 was 14.5 percent, almost 10 percentage points below 2016. This decrease was mainly due to a credit of \$9.6 million arising from tax on currency translation differences between functional and tax currencies, and a \$9.7 credit due to the utilization of unrecognized deferred tax assets.

00:17:02

Excluding these two credits, our underlying effective tax rate would have been approximately 22 percent. As a result of the higher revenue growth, increased operating profit, and lower effective tax rate, underlying diluted EPS for the quarter was up 72 percent to \$1.34. For Fiscal Year 2017, underlying diluted EPS was up 40 percent to \$2.92, three times more than revenue growth. From earnings, let's now turn to Slide 17 to take a closer look at inventory and cash.

As we indicated in November, the value of inventory decreased in Q4 2017 and days of inventory declined to 60 days. At the end of Q1 2018, we expect inventory levels to be flat or slightly below Q4 2017, and days of inventory to increase from Q4 2017.

00:18:10

At the end of Q4 2017, cash and cash equivalence balance was \$479 million. A decrease from the previous quarter and year-on-year was mostly due to the \$268 million net outflow related to the acquisition of Silego Technology and the LED backlighting business. For the year 2017, free cash flow was \$205 million, up 5 percent from 2016.

In summary, I am pleased with the financial performance of the business in Q4 2017 and the full year. We have grown revenue through a combination of organic R&D programs and strategic investments while increasing underlying profitability.

00:19:03

We remain a cash generative business. Our financial position continues to strengthen, and I'm confident about our prospects as we move into 2018. With that, I can wrap up the presentation and I will now ask the operator to open the call to questions. Operator, over to you, please.

Operator:

Thank you very much. Ladies and gentlemen, if you'd like to ask a question, please press star-1 on your telephone keypad. If you change your mind and wish to withdraw your question, please press star-2. Please ensure your line is unmuted locally and then you'll be advised when to ask your questions. And that's star-1 on your telephone keypads now, please.

Our first question comes from the line of Mitch Steves from RBC Capital Markets. Mitch, please go ahead. Your line is now unmuted.

Mitch Steves:

Thank you, and thanks for taking my question. Just in terms of the four-year guidance, is there any sort of additional information we should be aware of, even though you have Silego, or it's just a standard mobile system back-half weighted story?

00:20:06

Jalal Bagherli:

Hi, Mitch. It is a typical seasonality that we would see every year, which means it's more of a back-half weighted.

Mitch Steves:

It -- so Silego doesn't change the seasonality of that, essentially.

Jalal Bagherli:

It does not change the seasonality much, no.

Mitch Steves:

Okay. And the second one is more on the ETS line. Given that Silego is essentially integrated according to plan, do you have a long-term kind of gross margin operating margin target for that to lay out?

Wissam Jabre:

You know, with respect to the long term, what we had said at the time when we announced the transaction would still be valid today, which means that the Silego business is expected to grow for -- at around the 15 percent rate, and the gross margin for that business is higher than our average corporate gross margin.

00:21:14

It's more in the 50 percent-plus range. And then in terms of the operating margin, the expectation is for this year it would be slightly lower than the corporate average, as the size of the business is. It's much smaller, but then from next year onward I would expect it to be very close to our corporate average and continue to grow.

Mitch Steves:

Okay. And just one last small one. For the guidance above expectations, is that largely due to mobile systems as well?

Jalal Bagherli:

I think it's -- we can't hear you very well, but I think you're asking what the guidance -- what contributes towards that. I think the -- you know, primarily, most of our business is driven by mobile, so mobile is the main driver, but all other businesses are also looking pretty good for -- in terms of growth in 2018, including Q1.

00:22:13

So, there isn't one that particularly sort of highlights to say it's not necessarily growing so much, but I think -- but mobile systems is the main driver of the numbers, absolutely.

Mitch Steves:

Okay, perfect. Thank you.

Operator:

Okay, our next question comes from the line of Andrew Gardner from Barclays. Andrew, please go ahead. Your line is now unmuted.

Andrew Gardner:

Good morning, gentlemen. Thank you for taking the question. I just was interested in sort of picking up from where we left off with the December call in terms of sort of state of play with

Apple and sort of where you stand around 2019. You know, I take it from the comments that you made in the press release and on the call this morning that, you know, the engagement is there, particularly across a sort of fairly broad range of products and broad range of applications from you.

00:23:08

But just in terms of the key element of -- sort of the system PMIC, can you give us sort of an update as to where things stand? Thank you.

Jalal Bagherli:

Good morning, Andrew. So, I think, you know, again, our backup's constrained by our confidentiality. As such, I will comment to the extent I can. And I think what I will say -- in December, when we discussed this, I guess two updates since then. One is we've had a number of new designs awarded to us since mid-Q4 and into Q1, and these range -- include sort of smaller PMICs as well as main PMICs for a number of applications. And by "a number of applications", I mean across phones, tablets, wearables, computing sort of devices.

00:24:05

And typically, the timing is such that anything awarded now will hit early as 2019, but also 2020 and beyond products. So, the relationship, as we laid out back in December, remains very strong, highly collaborative, and we continue that vein across a number of products. Specifically, I know the main interest is on the system PMICs, the core PMIC for the smartphone application. We said that there would be renegotiation for 2019. We remain so. We remain focused in that we are now past developing IP and evaluation of IP, and we are willing to completing or at least a good way through competing design of the chip for the '19 application.

00:25:01

We intend to sample those chips in the second half of this year, and this is, again, done on a collaborative way. It's not done in isolation. But the commercial negotiation continues and is not finalized. So, that's the update I have in terms of those elements.

Andrew Gardner:

Okay. Thank you very much. Also, just perhaps a quick one for Wissam. On the tax rate, sort of going forward, how should we think of '18, '19, '20, compared to the -- sort of the underlying effective rate you had for 2017?

Wissam Jabre:

Thanks -- and good question. So, as I indicated in my comments, we had a couple of one-offs that impacted our ETR for 2017 positively. I don't expect those to repeat. Those were mainly FX related effects, and they were unpredictable. So, the way to think of it is, you know, with -- if we adjust for those in 2017, we would have been closer to around 22 percent ETR.

00:26:10

And as we've said in the past, we still expect that in the next -- with 2018 and the following few years an improvement of around 50 to 100 basis points per year. So, for this year, I would expect a 50 to 100 basis points improvement from the 22 percent ETR of 2017.

Andrew Gardner:

Okay. Thank you very much, guys.

Wissam Jabre:

And those -- just to make sure that's clear, those are on an underlying basis.

Operator:

Thank you very much. Our next question comes from the line of Quang Tung Lei from Credit Suisse. Quang, please go ahead. Your line is now unmuted.

Quang Tung Lei:

Hi. Thanks for taking my question. I have questions regarding your 2018 gross margin guidance.

00:27:02

If you look at 2017, you also guided to be in line with previous years, and at the end, you said it's going to be slightly above that. Is it going to be similar in this year? Is your guidance more of a conservative or -- if you could give more color on that?

Jose Cano:

So, thanks for the question. So, the guidance is obviously based on all the information we have in our plan for the year. And it's considered basically a collective outcome of all the information we have. We do expect 2018 to be broadly in line with 2017, and that's not necessarily atypical. What we typically see, especially when we start getting into the second half of the year, with launching new products -- at launch, these products are typically not optimized from a manufacturing cost perspective.

00:28:00

And so, there's usually a bit of headwind. And so, by the -- later in the year, when we start exiting the Q4 timeframe and we have very high volumes behind us, we see better improvements. So, at this point in time, I would say the guidance is based on all the best information that we have. And it's broadly in line with 2018.

Quang Tung Lei:

Thank you.

Operator:

Okay. Our next question comes from the line of Veysel Taze from ODDO. Vaysel, please go ahead. Your line is now unmuted.

Veysel Taze:

Yes, thank you for taking my questions. The first one, on 2019, if I may -- if I recall, from the previous call in December, then, I thought that the sample chips for 2019 were already delivered, and the question was to negotiate the volumes.

00:29:02

And now, it looks your communication has changed, saying now, "Okay, we will sample -- deliver sample chips." A clarification on that would be really very helpful.

Jalal Bagherli:

Okay. Veysel, I think there is a, you know, some miscommunication, because I think what I said was the samples for '18 were delivered. Remember, these products won't be released until September of each year, roughly. And so, what I was talking about back last year, in Q4, was samples for the '18 product release, because you need them about a year before your end product gets released. The '19, we were talking about preparing and evaluating advanced IP for potential use in the '19. And what we're saying today is that's gone much further forward and we are in advanced stages of developing those chips for '19. So, I don't -- we're not changing the message.

00:30:04

Veysel Taze:

Okay. And then, you know, from your presentation, you said, "Okay" -- you have scored new design variants at the same time you have for 2019. The main PMIC -- I think it's mainly for the iPhone, right? What you might lose or rather speculation was with the 50 percent. I mean, how should we see the -- if you want to see that downside for 2019, what would you recommend to look at? I mean, do we look at the iPhone shipments and say, "Okay, 50 percent of this," and then you have some new design? Or did you run some downside scenarios which you could help us with?

Jalal Bagherli:

I think it's just so early that, you know, we don't want to talk speculatively so much about '19. We are just starting '18. So, the -- I think some, I guess, analyst evaluation would be that it would be the main socket for the phone.

00:31:06

And as we said, we are discussing the volume, and pricing is not concluded. You know, and we don't know the extent of that. You know, for modeling purposes, you may want to assume, referring back to 2017, that one '17, volume -- you know, shares, if you like. But beyond that, everything remains intact, as previously. And as I said, the architecture of the devices is changing in terms of the end equipment. So, you have one main PMIC, and as you're noticing, '17 we shipped two chips. The second was the smaller sub-PMICs, right? And we think this trend will continue, in the sense that there may be more sub-PMICs, and those are not subject to the conversation I'm sharing today.

00:32:03

So, we may see, for example, in 2020 more sub-PMICs. You know -- and this is what we see as a trend that is getting more distributed. But the core, if you like, PMIC is the one that's in the discussion about, you know, potential sharing. It wasn't the rest of the business or the rest of the system.

Veysel Taze:

Okay. To sum it, it's one main PMIC of what it going to be shared. The rest of the business is not a discussion right now. Is that correct?

Jalal Bagherli:

It is. And we don't know whether it will be shared, you know, what ratio of sharing, if at all. It may be -- so, you know, it's not concluded, so it's very -- you know, I can't tell you more than what I've said.

Veysel Taze:

Okay. Just briefly, really, if I may, two very quick ones. The new areas where you scored new designs, is it also related to the sub-PMIC topic, or is something completely new there in the audio space or analog mixed space or reduced Silego topic?

00:33:09

If you can give a little bit of color around that.

Jalal Bagherli:

I mean, this one specific thing since the middle of Q4 are a number of sub-PMICs, I would. We already have the main PMICs of other products for those years. For example, for, you know -- if you think about the tablet and wearables and computing, we already have the other larger sort of PMICs already for those years. So, the back end of the year was primarily smaller sub-PMICs, a number of them, and I'm sure the continuing collaborative relationship we have -- we are getting more serious access to also other non-PMIC designs. I can't report winning one yet, but, you know, we are looking at other technologies outside PMIC.

00:34:04

With, you know, strong IP that we've created, and we have a good chance to win some of those, and I'll report those as we can. But you know, it's not something that I can confirm today. Silego is -- you know, already has existing exposure to our large customers, and that continues, and [unintelligible] trend. Their technology tends to be outside the phone in other areas that we've mentioned previously when we were discussing the Silego portfolio. So, typically, tablets, you know, notebooks, and wearables are where they score high, and they haven't historically been in the mobile phone business.

Veysel Taze:

Okay. Jalal, just a really very quick one. Are you planning to give kind of a mid-term view for the company? I mean, that seems to be the most decisive one right now.

00:35:03

What is the business beyond your largest customer? Are you planning to give kind of a mid-term target again? And if yes, when can we expect to see something like this?

Jalal Bagherli:

We'd like to do that, but I think we believe we need to also get more clarity on the main business -- because, you know, we feel it's not a complete story if we hold, you know, a mid-term modeling without being more explicit on the biggest component of the business. So, we think, once we got more clarity, it would be more beneficial than just focusing on non -- if you'd like -- mobile or non-PMIC business. So, that is our plan. And you know, we hope to be able to do that sometime this year -- hopefully sooner rather than later. But you know, we will inform all of you once we have that date fixed.

00:36:00

Veysel Taze:

Okay. Thank you very much.

Operator:

Okay. Our next question comes from the line of Robert Sanders. Robert, please go ahead. Your line is now unmuted.

Robert Sanders:

Yeah. Good morning, everyone. My first question was just around the second quarter. You talked about second half, weighting, but clearly your largest customer seems to be continuing to cut into cost production numbers into Q2. So, what does that mean for your Q2 outlook? And then, the second question would just be around gallium nitride. Have you got any update there, in terms of your efforts? And when will you start shipping and when will this become material to your revenue? Thanks a lot.

Jalal Bagherli:

Okay. So, I think all we can say is what we've laid out in the press release, from a forecasting point of view. So -- and that's based on looking at the customer demand, the backlog, and the forecast, et cetera.

00:37:00

Typically, you know, in terms of backlog, we can only comment for the quarter. And you know, they change a lot all the time. So, it's -- what I say about Q2 won't be necessarily true when we get to Q2. So, I'd rather I avoid that question.

It is -- but you know, the shape and profile of the business remains heavily weighted second half over first half, and we've said that for last -- I don't know -- say, four, five years. And every year, it is the pattern. And that's what we report to you and we forecast to you, and I hope that that's -- that's consistent with the data from the past, that we can see it is actually the case -- just because of the, you know, seasonal trends. There's no magic in this. You know, once and when we diversify away from mobile with other products, more of the weighting moves -- that clearly will change. But until such time, we're -- the majority of our revenue comes from the mobile and the second half over first half remains.

00:38:05

There's no mystery to that.

On the second question, on GAN, the -- we've actually broadened the solution. So, I think we talked about GAN as a power device. And then we also have developed new architectures for high-powered device controllers that goes with the GAN, if you'd like. And so, all of those are progressing apace. We've been able to demonstrate the new controller architectures to a number of customers, and some of them have commented that, you know, whilst GAN good solution to go with the controllers, they also like to try with other high-powered devices. So, we're broadening out the applicability of the controller. The GAN device itself, we are going through qualification, reliability data gathering. The reason it takes a little bit of time is because it's not established a process with the foundries as CMOS or other technologies are for years.

00:39:06

And there isn't really a body and history of data, in terms of reliability and qualification. And we just want to make sure we take our time and establish all the variability in manufacturing of gallium nitride. So, there's nothing unusual about that. It's just that it's a new material, new device for us -- and for most of the industry, by the way. So, we believe we will be able -- we have shown samples to customers, but they haven't released. But we expect to do qualified sample releases to customers by, I would say, Q2 this year. So, it's not that far. But as I mentioned earlier, the high-powered device controllers also will be released at the same time as a part of the solution, but they can also be used on their own with, for example, high-powered device technology as well.

00:40:00

They're not only confined to the, again, power device only. So, it's probably a longer answer than you expected, but that's kind of -- hopefully gives you the full context.

Robert Sanders:

That's great. Thank you.

Operator:

Thank you very much. our next question comes from the line of Robin Brass from

H&A. Robin, please go ahead. Your line is now unmuted.

Robin Brass:

Yes, thank you very much, and thank you for taking my question. I have one also concerning -- I mean, I've seen during the last week, especially during the Mobile World Congress, many smartphone vendors are, you know, showing newest developments in augmented reality and so on and so forth. And I guess power management is also a key topic here, to, you know, limit the drain I guess of the battery overall. So, how do you see, going forward, of this development? Is it also, you know, a chance for you to get more design wins, or could it -- is it fair to assume that, let's say, the pie is already split and it's really hard to get any additional vendors in the future here?

00:41:02

Jalal Bagherli:

Hi. So, I think that that's a relatively new area, AR, so it depends on what you actually mean. SO, actual processing of augmented reality and -- or artificial intelligence, depending on which area they go, it takes -- it does take place on the processes and the core processes, and they require power management, more power management capability to manage. So, from a power management point of view, whatever goes into the system or sub-PMICs supports any AR function that they may want to run from a processing point of view. So, that's one element of it, but more of the AR also comes with a wearable -- or at least the AR part comes with some kind of a wearable goggle or glasses, et cetera, and also with controllers. And many of these controllers also open up opportunity for us in nanopower. But also, at least in the last 12 months, we've seen a lot of Bluetooth low-energy take off.

00:42:04

And so, our devices are used in a number of controllers for the -- if you like, what people wear over their eyes while they're watching, you know, AR- or AI-generated images. So, those are the opportunities for us that we see today.

Robin Brass:

But could -- is it also a possibility that you might, one year, another major, you know, smartphone vendor in that sense? Or how do you see basic possibility for 2018 or '19?

Jalal Bagherli:

I will say, as for the headset, yes, for the controller. For the phone, it is not -- you know, people don't have a separate device for powering the AR part. It is -- if you went in a smartphone, it's the power management that powers up the processors, everything, including AR. So, it doesn't change the landscape so much for us in that sense.

00:43:00

Robin Brass:

Okay. And my second question, really quick. Is there any, like, related sales towards Energous

sales in your guidance already included, or how can we see also 2018 when it come to the Energous sales here?

Jalal Bagherli:

So, energy -- as we said earlier, or I guess in Q4, we talked about the FCC. It's a relatively longer designing cycle, because we now have a whole broad product that the customers started to evaluate design in into the equipment. We also said at the time that the two or three very small and relatively fast-moving customers with small volumes are adopting -- the early adopters. So, those are going ahead, and we'll probably see some small revenues in the second half. The larger customers typically take more time, the, you know, more established OEMs, because they have to make sure equipment compatibility across a number of products.

00:44:00

And also, each company or each design has to go through a certain amount of customer certification or consumer certification and FCC or equivalents to FCC in each country to get approval. Now, the path for that approval is now laid out, so it's a lot quicker and easier, but nevertheless, you know, once the design and equipment, et cetera, customized antennas and the other pieces -- they have to actually go through the approval cycle. So, we expect most of that work to be done in '18. I don't expect for the big OEMs to generate revenue this year. We may be conservative in this area, so we have not included a large revenue in our forecast for this year, but that's purely because we don't have visibility, and it's a brand-new technology going into a new market. Now, we may be positively surprised in the latter part of '18 with maybe a large customer adoption.

00:45:01

That's, you know, if we get visibility of that, then we obviously update the market.

Robin Brass:

Okay. Thank you very much.

Operator:

Our next question comes from the line of David O'Connor from Exane. David, please go ahead. Your line is now unmuted.

David O'Connor:

Good morning. Thanks for taking my question. Maybe, Jalal, first the -- for you. So, you're suggesting you can maintain the main apps processor PMIC in the 2019 iPhone, but it may be a bit too early to know the details? I'm just wondering what's the timeline on more clarity emerging on when you'll know, kind of, volumes for that.

Jalal Bagherli:

I don't think I can give more than what I said. So, you know -- because negotiation takes its course. Remember, these products will come out, hopefully September '19. So, that's, like, you

know, quite a long time from now. There's no urgency for tying everything down, necessarily, from the customer's point of view.

00:46:05

And we are developing the products with their encouragement and collaboration, which we will sample in the second half of this year. The -- you know, I -- we have to book capacity at some point, right, for '19. And that usually takes place in Q4. So, there's time between now and Q4 to really tie that down. Now, my personal hope is that, you know, we get this done a lot sooner than that -- but just to lay out the potential.

David O'Connor:

Okay. Fair enough. And then, maybe, like, long-term -- looking beyond that -- what is your expectation, long-term, for the system PMIC? I mean, is your baseline assumption that you will ultimately lose that but can offset any potential content loss by gains elsewhere? I'm just wondering how you think about that in the more longer-term.

Jalal Bagherli:

I think the answer is we don't know, to be honest.

00:47:01

And you know, again, we're talking about one product, which is, you know, admittedly is a large volume and large revenue for us. At the same time, as I indicated, we see the architecture to be evolving into multi-chip solutions. We've already seen a two-chip solution. Our assumption or our current expectation is that this could be a multi-chip solution in the future. And we seem to be, you know, gaining more visibility, more, you know, proximity to the soft PMICs that go into the same platform, to affect that evolved architecture. So, it's hard to, you know, pan out something in 2020, 2021 at this point, because there's a lot that can happen from a comparative market point of view, and architectures evolve and change. So, I don't want to lay out some hard roadmap.

00:48:03

My expectation is that even if we were to share some of the main circuits, there would be additional circuits that we could claim as our own -- as of the smaller PMICs. As I indicated earlier, we are looking at also seriously -- are actively engaged in bidding for other non-PMIC parts going into the equipment, and -- which are all mixed-signal parts. And collectively, that could either counter or at least alleviate any sharing of the main PMIC circuit. That's as much as I can tell you.

David O'Connor:

Okay. That's quite clear. Thank you, Jalal. And maybe one last follow-on for Wissam. So, just looking at consensus, plus 15 percent top-line growth for 2018, would you describe it as consistent with your commentary on 2018 being a year of good revenue growth?

00:49:01

Wissam Jabre:

I mean, look, I would reiterate what we said qualitatively about the year, that it's really -- we expect it to be a year of good growth. You know, from -- in terms of really tying it down to a percentage of growth, I think it's a little bit too early for us to guide quantitatively. But qualitatively, we're -- the expectations are that we'll have a -- we're expecting a good year of growth. I'm not really sure I'm helping you out much with an answer, David, but --

Jalal Bagherli:

David, we always talk very broadly about the year, and we give detailed guidance for the quarter in question. And this is what we're doing again this year. And you can see, if you look at what we're guiding for Q1, there's a significant growth over the same quarter a year ago. So, that's a good start towards that good growth year. And we can only update as we go. This is a very sort of dynamics, cyclical markets.

00:50:03

It's just -- you know, proves to be really the wrong thing to do give detailed guidance so far ahead.

David O'Connor:

Okay. Thank you, Wissam.

Wissam Jabre:

You're welcome. Thank you.

Operator:

Okay, we have a question from the line of Günther Hollfelder from Baader Helvea Günther, please go ahead. Your line is now unmuted.

Günther Hollfelder:

Thank you. In the press release, I think you repeated that you recognized that Apple has the resources and capability to design a PMIC of its own. So, I was just wondering -- so -- right now, your visibility, you know, whether -- you know, Apple will use a PMIC of its own in products. It's still pretty much untrained. And if it's pretty much related, then this visibility with the volumes discussion you expect during the year?

00:51:02

Jalal Bagherli:

Yeah, I mean, we [unintelligible] that earlier is, you know, we are in commercial negotiation, and you know, once it's finished, and I can be more certain of what our share of volume of that particular circuit. Until then, I have to assume that there's a sharing of products for the September '19 bids for internal design for that one circuit. So, that's all the information that I can reliably share with you. Beyond that is, you know -- I have no visibility to any other way

that might evolve. Just, suffice to say -- you know, again, the relationship remains strong, and the number of awards we get is higher than ever we've had in terms of number of products that we're starting to develop -- not finishing, just starting to develop -- numerically, more ICs than ever before and more departments and more products than ever before.

00:52:03

So, we're very positive on the relationship. And you know, the relationship -- it evolves like any other relationship, you know, as we've been there over 10 years, and things change in this industry. It's a fast-changing industry, so it's magic that, you know, we've maintained and grown for 10 years. And we are an adaptive and agile company. That's what we take pride. And as things change, we'll change with it, and we'll survive, because we are accustomed to change, and the company can react to that shape of change.

Günther Hollfelder:

Okay, thanks. And the second-last question. On the average content per device you provided on page eight, if you have, like, a, you know, like a second power management related to chip or a sub-PMIC in one device, is this charge diluted to the average selling price, or is it adding to the average selling price?

00:53:02

Wissam Jabre:

Yeah, so -- let me take this one. So, the chart itself represents the weighted average of all the various products that are sold to our largest customer, and so it is a little bit of a sort of mix of products that are -- some of them are more valuable and more expensive than others, and some are less. But the quick answer to your question is the -- from a content-per-device, the answer would be no, it's not diluted. Actually, it would be accreted.

Günther Hollfelder:

And I think for mobile systems you reported 13 percent sales growth, so there was quite a strong unit growth, and then the noticeably high in this number. I was just wondering what application, you know, whether phones or wearables, computing -- what's the driver behind this unit growth?

00:54:01

Jalal Bagherli:

So, I think you'll see unit growth in wearables. You see unit growth in tablets for the first time after several years. Tablets turned around and had growth in '17. And I think in other areas we also see -- have seen growth in terms of computing devices, not to the same extent, but there was growth also in computing. And you know, the good thing is our contents also increased in the -- all the aforementioned product lines forward. Our visibility for content was in wearables, in computing, and also in tablets. So, you know, we feel very good about both the volume and the content.

Günther Hollfelder:

Okay, great. Thank you.

Jalal Bagherli:

You're welcome.

Operator:

Our final question comes from the line of Robert Sanders from Deutsche Bank. Robert, please go ahead. Your line is now unmuted.

Robert Sanders:

Yeah, sorry, just a quick follow-up question, Jalal.

00:55:01

You mentioned that you would like to get more into a broader range of mixed-signal ICs. So, I would assume things like audio, display, touch, these kind of things. So, you know, on the one hand, that's a great thing, because it increases your TAM. But on the other hand, you know, it requires more R&D resources. So, do you -- how ready are you, do you think, to compete with companies like Cirrus Logic or STMicro for the power management business, for their display -- at Apple, for example -- or Synaptics. I mean, are you -- how ready are you to have the necessary resources and IP to compete with those guys? Thank you.

Jalal Bagherli:

All right. Thanks. That's a good question. I think, Robert, you know, if you look at where we play, we typically -- the problem is, you know, these titles are pretty broad. So, when you say somebody is in audio, there is a massive chain of parts that go into an audio signal profiting chain. So, just because I say, you know, I'm interested in audio doesn't mean necessarily I'm after Cirrus Logic's circuit or, you know, Maxim, or whoever.

00:56:06

There are parts that make up the chain. Similarly, for other areas like chargers -- the phone chargers, again, there are different versions. There are different parts. For example, there could be the supplementary chargers, master chargers, quick chargers, inside the phone. I'm talking not the TA. And where we play typically is we don't go after something, necessarily, where we start from 0, because that doesn't give me any competitive advantage. So, we try to find narrow areas where we do have prepared IPs, either through other developments already or focused development to get into a specific custom circuit where we do have competitive advantage. So, we're not trying to go head-to-head with existing, if you'd like, almost semi-catalogued parts.

00:57:04

That's not the intention.

So, the areas we focus are areas that we do have a substantial amount of existing IP, which may not be apparent to the outside world. But you know, we've had audio -- for example -- development in Edinburgh for a number of years. We have audio development for algorithm and DSP in Holland, in Den Bosch for a number of years. We don't bring them out necessarily to the market attention as standalone stuff, because they are combined or integrated into other solutions. So -- but it doesn't preclude us from playing in that market. We have base technology. Similarly, on chargers, you know, we have very advanced technology of chargers for the phone. And we talked about high-voltage chargers in 2017. So, some of those capabilities are already developed. You recall, also, we developed some products for the -- our partnership with Spectrum in China, for example, over the last year.

00:58:07

Now, included in that there's a number of new areas to do with, for example, OLED display drivers -- the parts that would be released to market there -- fast-charging integrated. We have capability of haptics developed for that customer. So, all of those will give us, if you'd like, cornerstones of the IP that we could bring in to a new solution for another customer very rapidly.

Robert Sanders:

That's helpful. Thanks.

Operator:

Okay. So, we have no further questions. So, I'll hand back over to Jose.

Jose Cano:

Thank you, George. Thank you, everyone, for joining us today. As usual, if you have any further questions, please don't hesitate to contact me or a member of the FTI team. Thank you.

00:59:00

[end of transcript]