

Dialog Semiconductor

Jose Cano:

Thank you. Good morning. Thank you for joining us today. Our call is being hosted by both 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 second quarter performance. First of all, as usual, 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 a full explanation of these risks on page two of the investor presentation. The interim report and the press release can also be found on our website. I would now like to introduce Jalal, who will run through the business review. Jalal? Over to you, please.

Jalal Bagherli:

Thank you, Jose, and good morning to everyone. We have continued to make very strong progress during the second quarter, posting revenue above the high end of our guidance range, including underlying gross margin and operating margin, and delivering continuous strong cash flow generation. Last week, we announced, also, our new organizational structure and management team. Let me outline the thinking behind those changes on slide four.

In support of our growth strategy, and the transformation of our business over the coming years, we've made a number of changes to our organizational structure. These changes align with our focused R&D approach and pursuit of business opportunities. The key management changes to note are Vivek Bhan, previously our senior VP of Engineering is now leading the new Custom Mixed Signal Business Group. Tom Sandoval, who previously led our sales organization, has been appointed SVP of Automotive, leading the thrust of the group's efforts into the automotive end market.

John Teegan, who previously led the Configurable Mixed Signal Business Unit, will now lead group's Global Sales. And finally, Alex McCann, who joined the group in May 2019, from Analog Devices, will lead our Global Operations. He brings over 20 years of semiconductor operations experience to this new role and will add enormous value to our management team.

In line with these organizational changes, we have reduced the number of reporting segments from four to three -- namely, custom mixed signal, connectivity and audio, and advanced mixed signal. Further detail on the associated reporting changes can be found in last week's announcement.

We are well-positioned for long-term growth and I'm confident that the business has the right structure and leadership to execute on our strategy and create shareholder value. As you all know, we have sharpened our strategic focus on fast-growing segments of our target end market. So, let me highlight some of the key growth vectors we see across these markets, on the next slide, slide five.

The number of connected devices continues to grow. We are focused on expanding our footprint in consumer IOT. Following the acquisition of FCI, we launched our first low-power Wi-Fi device, which complements our existing portfolio of Bluetooth low-energy SoCs. Venstar, one of the largest global thermostat suppliers, has adopted our low-power Wi-Fi device, enabling over a year of battery life for its customers.

Leading OEMs continue to launch new connected devices. The most advanced member of our group's low-energy family was adopted by Samsung Galaxy Fit Fitness Tracker, ensuring seamless smartphone connectivity and extended battery life.

And as consumers demand a higher quality audio experience, we continue to target the consumer headset market with our SmartBeat Audio IC. Our new audio technology performed strongly this quarter, with revenue more than doubling year-on-year.

Lastly, our configurable products strongly complement our connectivity and audio solutions. In the last 12 months, we have won several design opportunities where we combine streaming, and connectivity, and audio products.

In the mobile end market, we continue to see growth opportunities with our largest customer on a range of mixed signal products not covered by the license agreement. In Q2, revenue growth from our largest customer, excluding main PMIC products, trebled year-on-year. Design win momentum is continuing there, and we are expecting revenues from new contracts to be realized over the course of the next three years.

In Q2, we launched a new CMIC device with industry leading LDO regulator. The device has the lowest noise performance and is attracting strong customer interest from camera module makers in mobile phones.

In Automotive, OEMs are increasingly focusing on developing vehicles that are connected, autonomous, and electric, and this is drawing an increasing need for power management and power efficient technologies. Many of these are standard technologies, such as power management, LED backlight, and Bluetooth low energy, providing us opportunity to leverage our expertise into this end-market. Very recently, we have started a project develop a custom solution for a Tier 1 auto supplier based on our LED backlighting technology.

Finally, in Computing and Storage, there is an increasing need for custom power management solutions for gaming applications and solid-state drives. Additionally, we are seeing increasing adoption of CMICs and LED technology. In this particular area, we have recently kicked off a customer project using complex LED drivers for notebook screens. On slide six let's look at how we expect Dialog to transform over the coming years.

We are building a diversified mixed signal business with an increasingly balanced end market exposure. We expect customer concentration to reduce organically from 70 percent to between 35 and 40 percent by 2022.

Following the licensing agreement with Apple, revenue from the main PMIC will steadily decline over the coming years, but we are offsetting approximately two-thirds of this with two key initiatives. First, expanding our business into other end markets, i.e., IoT, automotive, and computing and storage; and second, growing the remaining business with our largest customer with a broader range of mixed signal products.

Our business model will continue to deliver sustainable underlying operating margin between 18 and 23 percent and strong cash flow generation. This puts us in a strong position to pursue inorganic growth opportunities and drive further upside. So, before handing over to Wissam, let me summarize on slide seven why we remain well positioned to create shareholder value.

The success of Dialog starts with the core set of capabilities grounded in deep mixed signal expertise and power efficient technologies. These have become increasingly important in today's connected world.

We are building on that strong foundation while sharpening our focus on fast-growing segments of IoT, mobile, automotive, and computing and storage. The closed agreement with Apple positions Dialog for robust earnings and strong cash generation with visibility through to 2022 as we continue to win new design engagements with our largest customer. Lastly, we're investing in the pursuit of our growth strategy while returning cash to shareholders. We have delivered a strong set of results and we're busy working on opportunities to further expand the business over the next three years. Wissam, over to you please.

Wissam Jabre:

Thanks, Jalal. Good morning, everyone. Before I cover the financials, I just want to briefly remind you of the changes to our reporting segments. We have reduced the number of reporting segments from four to three, custom and mixed signal, connectivity and audio, and advanced mixed signal. The automotive and industrial segment no longer exists. Automotive motor controllers are now reported with all our other custom power management products in the Custom Mixed Signal segment. Audio products are now reported together with Connectivity in the Connectivity and Audio segment, and standard power management and industrial lighting products are now reported in the Advanced Mixed Signal segment. Now, let's take a look at an overview of our financial performance on slide nine.

We will go into more detail shortly, but there are four points I would like to make here. Q2 2019 underlying revenue of \$336 million was slightly above the high end of our May guidance range and up 14 percent year-on-year. Our underlying gross margin was in line with our May guidance at 49.7 percent, 140 basis points above Q2 2018. We delivered underlying operating profits of \$82.1 million, almost double Q2 2018 and underlying operating margin of 24.4 percent. And lastly, underlying diluted EPS almost doubled year-on-year to 86 cents. On the next slide I would like to give you some additional color on our revenue performance during the quarter.

On the right hand side you can see the breakdown of the second quarter revenue. I would like to highlight two key points.

First, if you look at the blue section of the chart, Q2 revenue from our largest customer, excluding main PMIC products, was over three times higher than in Q2 2018. Design win momentum continues in this part of the business, and we are expecting revenue from new contracts to be realized over the course of the next three years. And second, our key growth products, outside of our largest customer, continue to perform well and are attracting increasing interest from customers. The combined revenue from Advanced Mixed Signal, Connectivity and Audio -- excluding FCI -- and the Automotive products, now reported under Custom Mixed Signal, was up 5 percent year-on-year. The star performer in the quarter was Connectivity and Audio, which was up 25 percent year-on-year.

As anticipated in May, demands for Bluetooth low energy products improved significantly due to new product launches in fitness trackers and smart watches. We expect Bluetooth low energy to perform well during the second half of the year, particularly in Q3. And for the third consecutive quarter, revenue from new audio products performed strongly, more than doubling year-on-year, as consumer demand for a better audio experience requires more complex audio solutions.

In Advanced Mixed Signal, we delivered 26 percent sequential growth. Revenue from AC/DC charging products grew 52 percent sequentially, as our customers increasingly adopt USB-PD Type C rapid charge technology. PMIC demand also increased sequentially, and we anticipate year-on-year growth to accelerate in the second half of the year. And lastly, LED lighting products performed strongly in Q2, up 51 percent sequentially, led by backlighting products.

The main drivers of the strong performance in the quarter, compared to the midpoint of our guidance range, were the increasing volumes and content in several platforms of our largest customer, as well as the strong performance in Connectivity and Audio.

On a year-to-date basis, underlying revenue for the group was up 1 percent year-on-year, at \$631 million. We are delivering on our plan to expand the business with our largest customer, outside the technologies included in the license agreement, and remain confident in the prospects of our key growth vectors for the second half of the year.

Turning to Slide 11 to cover gross margin. Q2 2019 underlying gross margin was at a record level of 49.7 percent, up 10 basis points sequentially and up 140 basis points year-on-year. As anticipated, the ongoing license revenue contributed positively to our gross margin performance by approximately 90 basis points. The remaining year-on-year increase was due to product mix and lower manufacturing costs.

On a year-to-date basis, underlying gross margin was up 190 basis points compared to the same period last year.

Let's now turn to Slide 12 to cover operating expenses. Q2 2019 underlying operating expenses were \$98 million, down 3 percent from Q2 2018, mainly due to lower R&D expenses, partially offset by first-time consolidation of FCI into the group. As a percentage of revenue, underlying operating expenses in the quarter were down 500 basis points, from 34.2 percent of revenue in Q2 2018 to 29.2 percent in Q2 2019.

Underlying R&D expenses in Q2 19 decreased 5 percent year-on-year, to \$67.5 million, including the savings from the transfer of over 300 employees to Apple as part of the license agreement. Compared to Q2 18, we had approximately \$6 million of headwind from higher amortization and lower capitalization of development costs.

Excluding this, underlying R&D expenses were 13 percent below Q2 2018.

Underlying SG&A expenses were up 1 percent from Q2 18 and \$30.5 million, mainly due to the first-time consolidation of FCI into the group. As a percentage of revenue, SG&A was 110 basis points below Q2 2018 at 9.1 percent, mostly due to the higher revenue.

On a year-to-date basis, operating expenses were down 2 percent year-on-year to \$201.7 million. R&D expenses were down 3 percent year-on-year and SG&A expenses were up less than 1 percent, mainly due to the first-time consolidation of FCI into the group.

Turning to slide 13, to cover operating profit and EPS. In Q2 2019 underlying operating profit and margin improved significantly year-on-year. Underlying operating profit was up 95 percent and operating margin was up over 10 percentage points to 24.4 percent. The increase in operating profit was mostly the result of the higher revenue, lower operating expenses, and \$12.5 million of income from engineering contracts relating to the Apple license agreement. At the bottom of the slide, you can see the breakdown by business segment.

Underlying operating profit in connectivity and audio increased significantly to \$6.8 million and underlying operating margin improved to 14.5 percent while we continue to invest in growth. During the quarter, we continued to invest in our Advanced Mixed Signal business resulting in a lower underlying operating profit year-on-year. Underlying operating profit of -- for custom mixed signal increased significantly to \$66.6 million and the underlying operating margin improved to 30.4 percent compared to 19.3 percent in Q2 18. This improvement was mainly due to the higher revenue and lower OPEX.

Lastly, corporate delivered \$3.5 million profit compared to its \$7.7 million last in Q2 2018. In addition to the ongoing license revenue, corporate costs decreased by approximately two-thirds year-on-year to approximately \$2.5 million. On year-to-date basis underlying operating profit was up 37 percent year-on-year and operating margin improved by 540 basis points. Underlying effective tax rate in Q2 2019 was 20.5 percent, down 50 basis points from Q2 2018. Underlying diluted EPS in Q2 2019 was 86 cents, 91 percent above the previous year and growing over six times faster than revenue. On a year-to-date basis underlying diluted EPS was \$1.35, 38 percent up on the first half of 2018.

From earnings, let's now turn to slide 14 to take a closer look at inventory and cash. Inventory level was broadly in line with the previous quarter at \$156 million representing an 11-day decrease in our rate of inventory. This includes approximately \$4 million of inventory from FCI. Excluding this, inventory balances would have been approximately 2 percent below the previous quarter. During Q3 19, we expect inventory levels to increase sequentially in line with seasonal trends and days of inventory to decrease.

Cash flow from operating activities during the second quarter was approximately \$300 million materially above Q2 2018, mainly due to the proceeds from the license agreement with Apple.

Let me drill down on this item so you get a better understanding of its impact in the Q2 cash flow from operating activities. The three main components were first, out of the \$300 million from the license agreement 28 million correspond to the asset transfer and was reported as a cash inflow from investing activities. Second, there was an additional outflow of approximately \$8 million relating to transaction costs; and third, as you would have seen on the cashflow statement, the \$300 million pre-payment was recognized at fair value of \$289 million and reported as an in-flow from financing activities.

The below-market element of \$11 million was reported as cash inflow from operating activities, which means that the net impact of cash flow from operating activities from the license agreement and pre-payment was approximately \$275 million. Free cash flow for Q2 2019 was \$290 million, materially up year-on-year.

At the end of Q2 2019, our cash and cash equivalents balance was slightly over \$1.1 billion, up 56 percent over the previous quarter. The key items behind the increase in the cash and cash equivalents were \$600 million from the closing of the license agreement, \$112 million outflow for the settlement of the 2018 share buyback. This launch started in early November, and resulted in the purchase of 3.9 million shares, over 5.2 percent of the share capital, at an average price of €25.37. And \$45 million for closing the acquisition of FCI, Silicon Motion's mobile product line.

In line with our capital allocation framework, we continue to return cash to shareholders. On the 5th of June, we announced a new launch of share buyback under the 2019 authorization, for a minimum of €125 million and a maximum of €150 million, and a maximum maturity date of 5th of December 2019.

In summary, during the second quarter, we delivered another solid set of results with revenues slightly above the high end of the guidance, record gross margin, and operating profit. Our earnings accelerated while we invested in growing the business and returned cash to our shareholders.

Before we open the call to questions, I would like to talk about the Q3 outlook. We anticipate revenue for Q3 2019 to be in the range of \$360 million to 400 million, and gross margin to be broadly in line with Q2 2019. We have narrowed down our full-year guidance, and we expect underlying revenue for full-year 2019 to decline from 2018 by mid-single digit percentage points and to be second half weighted. Based on this expected revenue performance, we anticipate FY-19 underlying gross margin to be above FY-18.

Megan, you can open the line for questions, please.

Call operator:

Thank you. As a reminder ladies and gentlemen, that star, followed by 1, to ask a question. If you do change your mind, please press star, followed by 2. Please ensure that your lines are on mute locally. We currently have six questions on the line. Our first comes from Sandeep Deshpande of JP Morgan. Sandeep, your line is open.

Sandeep Deshpande:

Thanks for having me on. Can I ask a question regarding, you know, the kind of trend you're seeing at -- with Apple, at the moment? I mean, where is this coming from? Can we try to understand? Is it that you've got new -- multiple new products, which is causing it, or it is because of the multiple sub-PMICs that you are selling that is causing this strength? And then, secondly, in terms of your business associated with charging, I mean, you've seen a big recovery in that business. Do you expect that business to continue to grow into the second half of this year, sequentially? Thank you.

Jalal Bagherli:

Okay. Good morning, Sandeep. So, on the -- specifically, strengths with our largest customer, I guess there's two pieces that we've pointed out in our slides, the license business and then the growth business -- and, which, I think Wissam referred to on slide 10.

So, if you look at the legacy -- or the licensed business, the orange piece, I think that is, you know, remains pretty substantial, and that's driven by, essentially, the -- mostly iPhone and iPad products. We have PMICs there for generations, and these continue to sell well. And that drives that segment. The blue section, which is the new sub-PMIC and other mixed signal devices we do for them. And that showed very strong growth over a year ago. It's tripled, as we said. And that is driven by accessories and multiple sub-PMICs in iPhones, but if I take accessories for example, you know, things like air pods, we have chips in there. We have chips in Mac's, you know, doing relatively well and also the sub-PMICS -- in the iPhone. So, we have constant expansion in a number of areas, but I will say general by strength of multiples sub-PMICS and accessories.

So, that's the Apple strength. The charger recovery -- most of our charger exposure is in Korea and in China. China was pretty slow in the Q1 and partially through Q2 it started to pick up and we saw very good growth sequentially on the AC/DC part of the business. Overall, it's been kind of flat as of a year ago, but sequentially grew very well -- 50 percent or so -- and driven by fast-charging or rapid charge as it's called, and this was driven both by Samsung and also the pickup in the China market. Now, in terms of second half where we're sitting today we are seeing new products going to production for the chargers, so we think that it will be higher than H1 and it's causing it to pick up in H2 as people prepare new product launches with USCPD and other fast-charging in anticipation in preparation for Christmas.

Sandeep Deshpande:

Thank you.

Call operator:

Our next question today comes from Mitch Steves of RBC Capital Market. Mitch, your line is open.

Mitch Steves:

Yes. Thanks for taking my question related to -- I first just kind of just wanted to get your high-level take on what the M&A strategy is going for given that you guys are continuing to make some smaller acquisitions; and secondly, this is a little bit of a tougher one, while I agree that there's been a lot of upside from like the -- the sub-PMIC, given the fact that Apple is trying to buy more chips and the acquisition of Intel's business, I guess what is the likelihood of additional design risk for any of the products that you guys are making?

Jalal Bagherli:

Okay. So, the first one on the M&A side, you know, we remain open for business in terms of the appropriate M&A target that we may find and we are active on, a number of targets at any point in time. But we take our time and until we are convinced something adds value to our portfolio and value to our shareholders. So -- but, you know, we are I will say more active than we were say a year ago, two years ago in that sense. The market is tied to a number of targets, so we also look at start-ups, we look at carve-outs, and other things.

So -- so, I think you've seen what we've done in Q1. I will say that that is probably the smaller end of things for us and we may do a number of these or -- but, you know, hopefully we will do -- we'll find targets which are a little bit larger than that, but we remain very poised and active in this area. We will update as we actually, you know, manage to execute on a good acquisition. The second one, the Apple upside, I think, you know, we have a license agreement, so we are very clearly delineated the areas of what is products which are legacy and will decline, and will be insourced, versus products which is outside in our -- if you look at the blue color on the bar chart of page 10 -- and that -- those remain available to us and as a proof -- I mean, the revenue increase shows the products that we already designed and are going to production now, but you know, as a proof point we -- in every quarter we're gaining new sockets to work on, so I don't -- and each one of these will have revenue tail of, you know -- first of all, it takes one year to eighteen months to design and then -- so the revenue tail of, you know, two or three years when they go to production.

So, my expectation is that's to continue because every quarter we'll have new licensing and new agreements and new contracts. So, I don't think there is a likelihood of necessarily design out. They're very broad-based also they're not all power. We now get -- we are now working on products to do with display-related mixed signal. We're working on signal change for audio in some cases. We are looking at things to do with charging area. So, there is a broad range of things, in addition to sub-PMICs. So, I don't think every one of these are -- become a core requirement for our customers to try and insource everything. So, that remains very highly unlikely, because we are much more diversified outside the license agreement.

Call operator:

Our next question today comes from Andrew Gardiner of Barclays. Andrew, your line is open.

Andrew Gardiner:

Thank you. Good morning, guys. I just had one on the outlook, perhaps, for Wissam, in terms of the linearity of revenue through the year. I think the -- revenue guidance, at face value, it

seems to suggest a decline in the fourth quarter, right up through the third quarter. So, slightly abnormal seasonality. Now, I think one of the points you're making -- your mix, particularly, with Apple, is changing. But I just want to make sure I'm understanding that progression into the fourth quarter correctly.

And then, also, again, on the gross margin outlook, you continue to do a very good job in terms of driving gross margins higher -- consistently in the 49 percent range so far this year. Yet, you're still only saying, for the full year, that it's going to be more than last year's 48 percent. It seems to give a lot of wiggle room there, in terms of fourth quarter. Are you just being cautious, or, again, is there something sort of mix wise that, you know, could come up in the fourth quarter to leave slightly less upside? Thank you.

Jalal Bagherli:

Yeah. So, Andrew, let me just make a point about your first question, which is the outlook for the Q4. And then I'll ask Wissam to comment on the linearity aspect of it. So, the point -- the broader point for everybody on the call is just to remind you that, you know, the new phones from Apple, right, that are going to be launched, do not carry the main PMIC from Dialog from this -- whenever it is that they launch it -- let's say September, at some point. So, that affects Q3 into Q4. You know, what we are reporting is legacy PMICs in the orange, and then the blue is all the sub-PMICs. So, Q4 is the first -- Q4 relative to say, a year ago, where we're not carrying any core new PMICs for the phones. So, with that, I just want -- just wanted to highlight that, before Wissam talks about the overall linearity.

Wissam Jabre:

Thanks, Jalal. So, yes, Andrew. Just to follow on Jalal's point, when you look at the provided full-year guidance, which is down mid-single digit points, it does imply that Q4 will be lower than in Q3 from a linearity perspective.

Namely -- to move on to the -- your second question, which is as to the gross margin, we did -- you know, we've seen good tailwind on margin in the first half, as you noted. The first half was around 49.6 percent. And we're guiding pretty much flat to Q2 for the third quarter. There is no reason to believe there's anything specific in Q4 that's going to be different, but it's a little bit early to provide any guidance for Q4 at this point.

As we prepare, typically our guidance for the quarter -- we do take a balanced view, and this is why we're sort of comfortable with the guidance for Q3. And obviously, in November, we'll be adding more color to what Q4 would look like, as well as if there's a need for us to be a little bit more specific on the year than would be implied from the Q4 guidance.

Andrew Gardiner:

Understood. But just as the changing mix with Apple, as the -- as you guys have said; it's pretty clear. The new phones don't have any main PMIC. In terms of the gross margin mix there, from the different businesses, there's limited difference to you, on a product-by-product basis at this point?

Jalal Bagherli:

Yeah. I mean, we don't expect major shifts in the gross margin variation due to mix. You know, the goal was a little bit of variation. We don't expect much difference, if that's what you're trying to ascertain. There is no fall-off any cliffs anywhere.

Andrew Gardiner:

Okay. Thank you, again.

Call operator:

Our next question today comes from Sebastian Sztabowicz of Kepler-Cheuvreux. Sebastien, your line is open.

Sebastien Sztabowicz:

Yes. Thanks for taking my question. I've got one on the connectivity business, what do you see the competitive landscape of being in Bluetooth Low Energy or in connectivity, generally speaking? With Infineon working on the acquisition of Cypress, with the ambition to provide the kind of integrated product in the mid-term with microcontroller connectivity, sensors, and powers. Do we think this is something that could render a bit more pressure -- competitive pressure in the market mid-term? And my second one is on the CMIC business. What unique development of the CMIC business in Q2 and in H1, and what could we expect for the back half of the year for CMIC? Thank you.

Jalal Bagherli:

On the connectivity I think the -- you know, we perform really well in the quarter, very, very good actually this year has been good, so we have a 26 percent growth in the Bluetooth-related area in the year-on-year over a quarter ago, and sequentially we had a very big growth on -- I think over 60 percent growth in terms of Q1 to Q2 for Bluetooth. So, we're continuing to rapidly grow this segment for us, as we've indicated, and it has been growing for -- from the date we've launched it four or five years ago, every year in double digits. So -- so, I think that in terms of comparative -- it depends how you position your product in the market. You're less -- you know, we are less exposed to the broadest market, the general market. We're more targeting specific segments and work with large customers in those segments.

So, for example, we have specific products for wearables, we have developed also products for more medical type products, and all of these are showing strong growth both now and in the future. So, we recently announced the designment of Samsung, for example, for the fitness tracker, this is the very first of the fitness trackers, and they're using our advanced Bluetooth technology. You know, we don't make Bluetooth chip that just do Bluetooth. I mean, these chips are multi-cores. They got a two-arm cores, one running Bluetooth stack and the other running all the application. Software, it also integrates center-interfaces, power management, all on one chip.

So, they are pretty differentiated is not a commodity -- Bluetooth - and hence the, you know, higher ASPs that we can achieve. If we look at the market, I think we are outperforming the both market growth and the largest players in that market. The -- our -- make a distinction it was other people doing, for example, you mentioned I think Cypress. So, they have good products. Typically, their products are more for mobile markets as opposed to IoT and is combo Bluetooth

and Wi-Fi. So, I don't think we're not competing in those segments as for what goes inside the mobile platforms. We tend to connect things to mobile using our Bluetooth.

So, we are differentiated in what we do. On the CMIC side, I think, you know, we -- the quarters it depends on product launches for this business. So, I wouldn't say very big, you know, growth in the first half, but we expect growth in the second half as some of the products that have designed in get launched. We have a high number of design-ins in Asia now that we -- you know, that this -- didn't have before.

So, for example, multiple sockets, you know, notable designs in Korea, in China alongside our Bluetooth, for example, in -- sorry, not Bluetooth. I'm sorry, our audio products in stereo headsets a number of places, which is new. In SSD's for storage and also there are in many of the notebook the majority of notebooks that are made in Asia with intel-based CPUs, they carry our CMICs and that partly actually is the reason why we expect growth in the second half because first half was pretty slow for -- for the PC market partially due to some shortages of CPUs. But I think that's getting resolved and in the second half will be stronger.

Sebastien Sztabowicz:

Thank you.

Female Speaker:

Next question today comes from Stephan Houri of ODDO BHS. Stephane, your line is open.

Stephan Houri:

Hello, good morning. Just a quick question on the OPEX, to understand what's going to be the dynamic going forward, because you have alluded to the fact that there was a headwind on the R&D side. So, I just wanted to have a view of the more normalized level of OPEX you are expecting going forward, given the license agreement with Apple. Thank you.

Wissam Jabre:

Hi, Stephane. So, yeah. So, the headwind, I noted for the Q2 actual, was driven by the lower capitalization and higher amortization of development costs, which is around \$6 million. Now, when you look at our quarterly OPEX for Q2 on an underlying basis, in total around \$98 million, that reflected the effect of the transfer of assets and employees for the vast majority of the quarter. And so, if I look forward to the Q3, Q4 timeframe, I would say we're probably going to be within plus or minus \$2 million of the -- where we were in Q2, actual. So, this is -- for the foreseeable future, okay, for the next couple -- for -- this is what I see -- our normalized OPEX.

Stephane Houri:

Okay. But we should not expect any downsizing -- additional downsizing of the OPEX, going forward, for 2020 and '21?

Wissam Jabre:

So, the way to think -- and maybe, if -- I'll make more comments, then, on the second half of '19 -- as I said, we're going to be probably within one or two million of where we landed in Q2 on OPEX -- on an underlying basis, while absorbing the FCI acquisition. So, that's -- so, that

naturally has a bit of savings in it. I think, with respect to '20 and '21, this is a little bit premature to discuss. I mean, we're looking still -- we're still trying to get Q3 executed. I think, when we get to Q4 and beyond, then we'll be in a better position to talk about '20 and '21.

Jalal Bagherli:
And maybe the --

Stephane Houri:
Okay.

Jalal Bagherli:
-- another -- maybe the -- a lot of designs, we've been designs we are winning have an element of R&D, so perhaps it will probably offset.

Wissam Jabre:
Yeah. That's a great point. So, to Jalal's point, as we continue to win some of the designs that have NRE attached to them, those would be acting as an offset to OPEX, and so, giving us a bit of a benefit to the earnings before interest and tax.

Stephane Houri:
Okay. Thank you very much.

Wissam Jabre:
You're welcome.

Female Speaker:
Our next question today comes from Adithya Metuku of Bank of America-Merrill Lynch. Adithya your line is open.

Adithya Metuku:
Yeah. Good morning, guys. I have two questions. Firstly, just on the USB-PD type C market, how big is this as a part of your charging business? Also, I wanted a few comments on, you know, what your positioning is in this market and who your main competitors are here. And secondly, just on the PMIC business, can you give us some color on how big Apple is as a proportion of the PMIC business now? Thank you.

Jalal Bagherli:
Hi, Adi. Good morning. So, the USB-PD market is just sort of taking off. So, it's not the largest part of our -- actually, anybody's business, because it's, you know, just one or two customers switching to that. But it will continue to grow in the second half and into next year. And the rapid charge, as a broader topic for us, is the biggest part of our AC/DC revenue, if you'd like.

So, part of that is just the PD, but we expect that to continue. If you'd like -- a lot of the rapid charge revenue will convert to a USB-PD rapid charge; so, if you want to think about it that way.

So, it's probably -- rapid charge, I would say, is 70, 80 percent of our AC/DC charging business. And USB-PD, gradually, over time, will become the new rapid charge, if you'd like. So, that's probably how to think about that.

In terms of PMIC, we continue to have our largest customer active, I guess, with that line of business. I would assume around 50 percent sort of exposure there, but just bear in mind that those products are stand-up products in the sense that they're not designed specifically or customized specifically for the customer. So, we treat them as standard products as opposed to what we talk about -- let me talk about Apple revenue in the R&D blue section of our charts. Those are cost on specific parts that are of no use outside that equipment or any other customer. So, these are dedicated products. The PMICS, even the ones we sell to Apple, we are -- we sell to other people as well. So, they're more of the standard products, just with that view in mind.

Adithya Metuku:

Understood. Just a quick clarification just on the USB Type PD. Who do you think will be your biggest competitor here?

Jalal Bagherli:

I think -- so, on the USBPD specifically, you're asking, as opposed to the Rapid Charge?

Adithya Metuku:

Yes.

Jalal Bagherli:

Okay. I think probably Power Integration is one that I know is active -in the U.S. I'm not sure whether ON Semi also competes or not. ON Semi Power is compared to in AC/DC and in rapid charge. I don't know whether specifically they compete in USB PD. They probably do. So, I will say on ON Semi and Power Integration.

Adithya Metuku:

Okay. Understood.

Female Speaker:

Our next question today comes from David O'Connor of Exane. David your line is open.

David O'Connor:

Great. Thanks for taking my question, guys. Just a couple on both sides, going back to your display-related win, what is the technology there that you're leveraging within that display relations win? And then maybe on -- going back slide 10, again, where you have that orange Apple-main PMIC business, can you talk about what may be the costs associated with that today? And then maybe lastly just on the CMIC side of things again, can you say here with the content gain is for instance going from one generation of smart phone or say iPhone to the next, how should we be thinking about the content gain there on the CMIC side? Thanks, guys.

Wissam Jose Cano:

Sorry, David, can you repeat the second and third questions please?

Jalal Bagherli:

So, let's do one at a time on the -- let's just start with the first one.

David O'Connor:

Okay.

Jalal Bagherli:

So, you were asking what the display -- what we said about the backlight display drivers for display?

David O'Connor:

No, the display-related win that you spoke about earlier as your main customer. Can you talk about what technology that you're leveraging there into the last display-related win? And the second question was on slide 10 regarding the legacy Apple main PMIC business. Can you just weigh the -- maybe what costs are associated with that? And then lastly, on the PMICs side of things, if you could give us an example of the things that the content gain are seen from one generation of Tier I smart phone to the next. That would be helpful. Thanks.

Jalal Bagherli:

Okay. So, I don't think the -- we mentioned the -- oh, you mean on - okay, so I see what you mean. So, I mentioned that we have a number of mixed signal products outside PMIC. I think that's what you're referring to and I mentioned that our display-related or audio-related, right? So, the display is relating to drivers and the -- you know, and power management for new types of displays but that's kind of what I was referring to. The legacy PMIC I think with -- I think we have -- clearly, we have to sustain products, so we have products sustained costs because many of these products are already in production, but they have an operation sustainment cost, you know, in terms of returns or maintaining the quality level or improving yield, that kind of stuff. So, these are the types of costs, but I don't know if you want to comment more on that or --

Wissam Jabre:

Yeah, I mean the type of costs is really sustaining the business and making sure we deliver the best quality product to our customer. The way to think, if I understand maybe why the question, the background of the question, I mean, the way to think of the -- our OPEX sort of going forward is no different than what we've said in the past with respect to our long-term model. You know, on an R&D perspective we're still -- we think of our underlying spent in the long-term models to be between 17 to 19 percent of revenue and from an SG&E perspective, it's 8 to 10 percent of revenue. So, the way to think of our long-term model has not changed since we've published and discussed it over the last few quarters. We will expect, in the long run, to have 25 to 29 percent of revenue in OPEX. I don't know if this helps to give you a little bit more color of -- on how to think of the model, going forward.

Jalal Bagherli:

And the PMIC, I don't think we ever said that our CMIC is in any iPhones. So, it's clearly not in iPhones. The -- but in terms of content gain in the phones, specifically CMICs -- the configurable products parts -- we have designs in Asia with some smartphones and also in headsets that gets shipped with smartphones. And also, more recently, we released a product which uses our very highly efficient LDOs with very low noise performance, in a Silego or a CMIC configuration.

There's a new product they released, which we are sampling to lead customers, and this product is not released yet to volume production yet. It's brand new, so we expect that to start production back of -- towards the end of Q4. And that product is already with the activity traction with seven different smartphone models. All of these are -- actually, these are mostly in Asia, but also some in North America. So, but these have not gone into production yet. They will start going into production at the back end of this year and in -- by the first half of next year. So, that's more of the camera-related activity for phones.

David O'Connor:

Very helpful. Thanks, guys.

Jalal Bagherli:

Thank you.

Wissam Jabre:

You're welcome.

Call operator:

As a reminder, that's star, followed by one, to ask a question. We've no other questions on the line, so I will hand back for any further remarks.

Jose Cano:

Thank you, Megan. I think that's all from us today. Again -- once again, thank you for joining us on the call. And if you have any further questions, please don't hesitate to reach out. Thank you.

Jalal Bagherli:

Thank you. Good-bye.

[end of transcript]