

Power Integrations First Quarter 2023 Earnings Conference Call – May 4, 2023

Balu Balakrishnan - Power Integrations, Inc. - President, CEO & Director

Thanks, Joe, and good afternoon. Last quarter we said that our Q1 results would reflect difficult macro and cyclical conditions, but that channel inventories would continue to fall and that Q1 would be the bottom of the cycle, with the recovery beginning in Q2 led by the smartphone market. Those projections are proving true, and while the slope of the recovery is uncertain, we are confident that Q1 was the bottom and that a cyclical recovery is underway. Meanwhile, we continue to make excellent progress on secular growth opportunities such as motor drive, automotive and GaN, among others, and I'll touch on each of those in a moment.

First quarter revenues were in line with our guidance at \$106 million. Sell-through exceeded sell-in by a wider-than-expected margin of about \$18 million, driving a significant reduction in channel inventories. We also had our strongest quarter of bookings since the first quarter of last year. Bookings and sell-through were especially strong in March, likely reflecting a surge of activity following the Asian holidays and China's reopening. The percentage of business booked and shipped within the quarter has increased and is approaching pre-pandemic levels, suggesting that business conditions continue to normalize.

We expect revenues of \$122 million in the second quarter, plus or minus \$5 million, a sequential increase of 15% at the midpoint. We expect another reduction in distribution inventory, which should bring the channel close to normal levels exiting the second quarter. While it is too early to forecast beyond the current quarter, the lower channel inventory should set the stage for a second half that's well above the first in terms of revenues. Smartphones were the first to correct and are leading the way out of the downturn, but we expect broader improvement later in the year as the inventories normalize in other categories.

Throughout the downturn, we have remained focused on long-term growth rather than short-term operating metrics. That includes continued investment in our proprietary gallium-nitride technology, a centerpiece of our growth strategy. Power Integrations was the first to market with high-voltage GaN in 2018, and we have remained the industry leader ever since. Recent M&A activity offers an indication of the value of our proprietary GaN and the differentiated products we are designing around it.

Our GaN offerings are unique in multiple ways, most obviously at the product level where we incorporate GaN Switches into a highly integrated system in a package, such as InnoSwitch. Our products eliminate the difficulties of designing power systems around discrete GaN devices and cut overall component count by about half in most designs.

Our GaN is also differentiated at the device level in terms of cost, performance and higher-voltage capability. While most of the players in GaN sell discrete devices made with foundry technology, our GaN is proprietary and purpose-built for our system-level products. We have full control of the technology with a robust road map for cost reduction that will achieve parity with silicon within the next couple of years.

At our analyst day last year, we also presented a roadmap to take GaN to higher voltages, and we announced the next step in Q1 with the launch of our first product featuring 900-volt GaN switches. The new 900-volt InnoSwitch ICs enable us to bring the benefits of GaN to a wider range of industrial and appliance applications and to better serve geographies with unstable grid voltages. We have also added a 900-volt GaN option to our InnoSwitch3-AQ family, our first GaN products for the EV market. These products deliver twice as much power as silicon in the same form factor, a

crucial advantage as EV architectures evolve to more -- to power more systems from the main battery and car makers increasingly look to eliminate the 12-volt battery altogether. 900-volt GaN provides ample design margin for 400-volt EV systems, complementing our 1700-volt silicon carbide products, which are seeing tremendous success in 800-volt EVs.

Overall, we continue to be excited about our progress in the EV market, which we estimate will be a \$1 billion SAM for us by 2027. We are on track for mid-single-digit millions this year in terms of revenues and, more importantly, design-in activity is accelerating with a 50% increase in opportunities added to our design funnel compared to the first quarter of last year. These opportunities are geographically diverse and encompass a mix of EV start-ups as well as traditional automakers and their Tier 1 suppliers.

We are finding attractive opportunities not just in passenger cars, but also heavy vehicles where our SCALE EV gate-driver boards are designed for traction inverters in electric buses and trucks, construction vehicles and other heavy vehicles. Rules recently enacted in California require 50% of all heavy vehicles to be fully electric by 2035, while Europe is also moving to require drastic reductions in CO2 emissions from heavy vehicles. SCALE EV drivers are a plug-and-play solution for heavy vehicle inverters, eliminating up to a year of development time and expense. Overall, our level of excitement about the automotive opportunity continues to grow, and we expect it to be a material contributor to our revenue within the next few years.

Another key element of our growth story is motor-drive, where our BridgeSwitch ICs offer simpler and more efficient alternatives to driving brushless DC motors. We are excited about the level of design activity on BridgeSwitch and the customer adoption of our Motor-Expert design and control software. This combined hardware/software solution radically simplifies BLDC systems, reducing component count by 50% compared to discrete solutions, while its exceptional energy efficiency eliminates the heatsinks required with legacy power modules.

In Q1, we won a design for a washing machine pump at a top-tier European appliance OEM, which is now in mass production. A major Chinese OEM is going into production in Q2 with a split air conditioner design, that customer's second high-volume program using BridgeSwitch. Both OEMs are long-time customers for our AC-DC products, demonstrating the importance of our strong customer relationships in appliances, which are helping us overcome the industry's cautious approach to adopting new technologies.

We continue to be bullish on the opportunity for BridgeSwitch in the India ceiling fan market where recent regulations are driving transition to brushless DC motors. We expect a revenue contribution in the second half from a recent design win in that market. We are also seeing opportunities in heat pumps, which are growing in popularity, especially in Europe as alternatives to gas furnaces.

In our high-power business, which sits in our industrial category, we are continuing our momentum with double-digit year-over-year growth in Q1, following growth of about 20% last year. Renewable energy continues to be an important growth driver in high power. In Q1, we secured a high-volume design win for utility-scale inverters at a major European supplier to the solar power industry, which should contribute significant revenues in 2023 and beyond.

Before I turn it over to Sandeep, I would like to acknowledge two members of our board of directors, Bill George and Necip Sayiner, who will step down from the board at our annual meeting later this month. We are grateful to both of them for their service to our stockholders, and I would add a special thanks to Bill George for his service as the chairman of the board for the past five years. We are pleased to welcome Ravi Vig, former CEO of Allegro Microsystems, who joined the board on April 1 as we announced earlier this year. Effective at the annual meeting, I will take over the role of

chairman of the board, and the role of lead independent director will be taken up by Bala Iyer, who chairs our Audit Committee. With that, I will turn it over to Sandeep for a review of the financials.

Sandeep Nayyar - Power Integrations, Inc. - CFO & VP of Finance

Thanks, Balu, and good afternoon. While the cyclical correction has been painful, we are pleased that things are playing out as we expected. As usual, we were among the first in our industry to see the downturn, and we are now among the first to emerge with a recovery beginning in Q2. As we anticipated, smartphones are leading the way out after having been the first end market to correct and with other end markets to follow. While the pace of the recovery is still to be seen, we expect the second half of the year to be significantly better than the first half, not only in terms of revenues but also margins and internal inventories, which are trending in the right direction starting with the June quarter. I will speak to that in greater detail as I review the Q1 numbers and the Q2 outlook.

Revenues for the first quarter were \$106 million, in the middle of our guidance range and down 15% from the prior quarter. As expected, the decline was driven by the industrial and consumer markets, which fell by 25% and 20%, respectively. Industrial softness was broad-based and reflects elevated channel inventories. The decline in consumer was driven mainly by major appliances, where revenues have fallen by nearly 2/3 from their peak in Q2 of last year. The weakness in appliances likely reflects a number of factors, including the pull-in of demand during the pandemic, softer housing markets and the effects of China's anti-COVID measures on domestic consumer demand.

The computer category was flat sequentially, while the communication category, which is primarily smartphone chargers, was up slightly from the prior quarter. The relative strength in communication reflects an improved inventory position at both customers and distributors. In fact, channel inventories associated with smartphones are now slightly below a normal level in terms of weeks.

Overall, on a backward-looking basis, weeks in the channel fell to 11.8, down from 13.5 at the end of December. As Balu noted, the reduction was more meaningful in terms of dollars with sell-through exceeding sell-in by about \$18 million for the quarter. We expect another significant reduction in Q2 with weeks in the channel likely approaching normal levels by quarter end.

Revenue mix for the quarter was 34% industrial, 28% communication, 24% consumer and 14% computer. Collectively, the communication and computer markets increased by 7 percentage points from the prior quarter and have increased by 15 points over the past two quarters. This less favorable mix, combined with the impact of lower production volumes, resulted in lower gross margin coming in at 51.5% on a non-GAAP basis. I expect gross margin to tick higher in the June quarter and then to improve more meaningfully in the second half as the benefits of the weaker yen flows through the P&L, mix turns favorable, and back-end production volumes increase.

Non-GAAP operating expenses for the quarter were \$41.1 million, up slightly from the prior quarter, reflecting the resumption of FICA taxes and the comparative impact of the year-end shutdown in the prior quarter. OpEx was below our guidance, reflecting the pace of headcount addition and the push out of some spending into the second quarter. Non-GAAP operating margin for the quarter was 12.8%, and the non-GAAP effective tax rate was 7.2%. Non-GAAP earnings were \$0.25 per diluted share.

Cash flow from operations for the quarter was \$16.6 million. We used \$4.1 million during the quarter for CapEx and paid out \$10.9 million in dividends following the dividend increase we announced last quarter. Share repurchases totaled \$1.7 million for the quarter, and we had just under \$80 million remaining on our authorization at quarter end. Inventories on the balance sheet increased by \$7 million during the quarter. We ended the quarter at 248 days of inventory, with lower sales obviously

impacting the days calculation. As we have stated in the past, the fungibility of our products across applications and customers allows us to build wafer inventory during downturns to ensure continued access to foundry capacity and to be ready for a sudden recovery in demand. March was clearly the peak quarter in terms of inventory days, and I expect a steady decline over the next several quarters.

Turning to the outlook. We expect revenues for the second quarter to be \$122 million, plus or minus \$5 million. Sell through should once again be higher than reported revenues as channel inventories continue to fall. I expect non-GAAP gross margin for Q2 to improve slightly to about 52% with a less favorable mix more than offset by a benefit from the weaker yen. As noted earlier, I expect a more significant jump in the second half of the year, driven by the yen, higher back-end production volumes and a more favorable mix, reflecting a recovery in consumer and industrial. Specifically, I expect non-GAAP gross margin to reach or even slightly exceed the high end of our target range of 50% to 55% for the second half.

Non-GAAP operating expenses for the second quarter should be about \$44.5 million, up from the first quarter reflecting annual salary increases, which took effect in April, as well as the timing of expenses that were delayed from Q1. I continue to expect non-GAAP OpEx to grow roughly 8% for the full year. Importantly, the recovery in revenue and gross margin should drive non-GAAP operating margin back in our model range of 25% to 30% in the second half of the year. Finally, I expect non-GAAP effective tax rate for the second quarter and the year to be around 8%. And now operator, let's begin the Q&A.

Question And Answers

[Ross Seymore](#) - [Deutsche Bank AG](#)

Q. Congratulations on hitting the bottom and popping up. I just wanted to ask two things on revenue and then a follow-up question on gross margin. On the revenue side of things, can you just talk a little bit about how much less channel inventory burn that will be sequentially to cause that pop up to \$122 million. And then the other part of the question is, once we get past the inventory burn, where do you think is the normal level of revenue if you were shipping to the end demand at these points.

Sandeep Nayar - Power Integrations, Inc. - CFO & VP of Finance

A. So if you remember, I had guided that our sell-through would exceed sell-in around \$15 million in Q1. We actually did better than that at \$18 million that the sell-through exceeded sell-in. What I expect for Q2 is again that sell-through will exceed sell-in by roughly \$12 to \$15 million roughly in that range. And what that will do to the channel inventory is we will get back to the normal levels of approximate, slightly above the normal level of 8 weeks to about 9 weeks. What has happened is that you're seeing -- as we had said earlier, that the communications segment had started to normalize. And in fact, this quarter, the weeks in the channel of communication are lower.

I think that will start normalizing for other segments with industrial being the last to do so. And if you remember, I had talked about in revenue terms that in consumer, a year ago, we had a pull-in of demand, and we have seen the downward trend in consumer from Q2. The pull-in of a year is now going to have an annualized effect in Q2. So that's why we expect in Q3 and Q4, consumer and industrial to start popping up, which also reflects in the margin guidance that I'm giving.

[Ross Seymore - Deutsche Bank AG](#)

Q. Got it. Thanks for that color, Sandeep. I guess I'm going to actually change my mind and ask a revenue question for my follow-up, then I'll let other people ask. What's your view on true end demand? Because by your math, that 122 is a nice step up, that probably goes up another \$12 million to \$15 million all else being equal in the September quarter. That's a nice jump as well. But at some point, we're going to get to the level where true end demand starts to matter. I know, Balu, you started off saying the slope of that is difficult to predict. But what's your feeling as kind of the guinea pig in the cycle about what the true demand level is? Is it rising? Is it falling? How should we think of that once this inventory dynamic normalizes?

Balu Balakrishnan - Power Integrations, Inc. - President, CEO & Director

That's a great question. I wish I could answer this precisely, but it is really hard to tell at this point. We are very comfortable second half will be significantly stronger than the first half. In fact, I think the second half will have a significant year-over-year growth as well. And a lot of that is related to the inventory is getting to be normal by the middle of this year and also the design wins that will go into production in the second half. We have several design wins in BridgeSwitch and also in smartphones and notebooks and so on. So there are really 2 or 3 aspects. One is just the inventory situation getting better.

Number two is we are gaining share. We've done as always, during the downturn, we gained share. So we'll come out of it stronger. What is the most difficult part is to see whether the demand itself will come back. Now I have to believe the appliance demand has been subdued for quite a long time now. It's almost a year now. So it has to, at some point, come back. People will have to replace appliances, buy new appliances and so on. So I'm somewhat optimistic that will come back. And smartphones, as we all know, is not going -- is not growing as such. I mean, this year, I think it's expected to decline in high single digits. But the only growth I can see there is our ASP growth, because the newer designs are higher power and therefore, they have higher ASP, plus we also have more content within the charger because we have other products like ClampZero and MinE-Cap and so on. So -- and then also you have to remember that as people transition more to USB PD, thanks to EU regulations, we will be, again, increasing our ASP. We have by far, the most integrated solution. We are the only ones providing a single-chip solution that includes the USB PD protocol, which means that our ASP would be higher even for the same power level.

So those would indicate that, at least for us, there will be growth in all of the segments because of the share gains and the ASP growth. But as far as the demand itself goes, it's really hard other than I would say, I mean, my gut says that the appliance should come back to some extent. But the rest of the market is hard to tell. And of course, cellphones is well known that on a unit basis, it will be lower.

[Ross Seymore - Deutsche Bank AG](#)

Q. Your crystal ball is clearly better than mine, Balu. So thank you for that color.

[Tore Svanberg - Stifel, Nicolaus & Company](#)

Q. Yes. Thank you. And let me echo the congratulations on Q2 guidance. I was hoping maybe we could dig deep -- a little bit deeper in consumer and industrial. So are you seeing signs that it's bottoming? Do you have a good feel? I mean I understand the channel inventory comment, right? But just wondering if you're starting to see backlog emerging for the second half or not? Just to get a little bit more color on those 2 segments and the bounce that you're expecting in the second half.

Balu Balakrishnan - Power Integrations, Inc. - President, CEO & Director

A. Yes. Let's talk about the consumer business, which is primarily appliances. For almost 3 quarters now, several of our large customers have literally stopped ordering. In fact, one of them hasn't ordered any parts at all because they are aggressively trying to bring the inventory down. But it's clear to us that the inventory situation will get corrected by the end of Q2 because we see orders already placed for Q3 and Q4 in appliances. So that tells us that the inventory situation is going to get normalized by the end of Q2, and we'll see the benefit of that in Q3. What is difficult to see is the end demand because that's not transparent to us. So we -- again, my gut feeling is the end demand will be slightly better. I don't know exactly how much because it's been such a long time that all the pull-in related issues would be pretty much gone, I believe, but it's really hard to tell. But we are comfortable that the appliance business is going to come back nicely in the second half.

Now when you go to industrial, it's a little bit more complicated. The slowdown we have seen is primarily in areas like home and building automation, which has a flavor of consumer and housing kind of products, you can think about because these IoTs go into homes. But we've also seen a very broad-based demand reduction, which primarily is related to inventories. There's a significant amount of inventory built in our channel. You have to remember, most of these are distribution customers, the industrial customers. Now there is a highlight in industrial, which is our high-power business.

Our high-power business grew 20% last year, and we expect it to grow again this year and primarily driven by renewables. I think we just talked about a design win, major design win with a solar power inverter manufacturer in Europe. And this is utility-scale solar. As you can see, a lot of people are installing renewables worldwide, and we are benefiting from that. So that's roughly about 1/3 of the market, and that's doing well and will grow. It is the remaining part of industrial that's unusually soft, and a lot of that is related to just inventory.

[Tore Svanberg - Stifel, Nicolaus & Company](#)

Q. That's very helpful. And as my follow-up question for Sandeep. Sandeep, with the 300 to 400 basis point improvement in gross margin expected for the second half versus the first half, how much of that is coming from the yen, right? Because I mean, that's clearly self-help, right? Whereas the mix, that's probably where you can control it a little bit less. So just trying to understand that 300 to 400 basis points, how much of it is coming from the weaker yen.

Sandeep Nayyar - Power Integrations, Inc. - CFO & VP of Finance

A. Yes. So it's not only those two, there's three things. There's also the volume impact. Every 10% change in yen gives us a point. So you can just see when the yen when from the 120s to the 140. You've got a couple of at least 2, 2.5 points coming from there. And then you've got the volume and the mix, as you know, with volumes coming back in consumer and industrial will get us to the higher end. So if you really think about it, the story actually ties not only in revenue but margin because it's all correlated. Now the yen movement happened more towards the end [of last year] and because the level of inventory was so high, we're going to see a slight benefit in Q2, but the main benefit comes in Q3.

[Tore Svanberg - Stifel, Nicolaus & Company](#)

Q. Great. And just last on the topic there. Your inventory is at 142, I mean, I assume that you did take the opportunity at the low end to buy some raw material and some wafer in...

Sandeep Nayar - Power Integrations, Inc. - CFO & VP of Finance

A. Yes. I don't time it, but I think it's more to keeping our capacity. And the partnership we have with our foundry partners is very long-term. Even when the pandemic happened, you remember we went to 180 days. And we are not afraid of that. But I think what will happen to our inventory as the volume increases, we will taper down this—our inventory levels down. And hopefully, by the end of the year, we'll be somewhere in the 150 to the 170 range, and it still sets us very well for 2024 because if we have the second half that we are expecting, it will bode very well for 2024.

[David Williams - The Benchmark Company, LLC](#)

Q. Congrats on finding the bottom here. It's great to hear the optimism. I just wanted to maybe touch a little bit from a geographic perspective. And believe you talked a little bit about China and some of the improving trends there. But just wonder if you could give us any color on what you're seeing from that geographic perspective. It was better, worse? And maybe how things have fared so far into the second quarter?

Balu Balakrishnan - Power Integrations, Inc. - President, CEO & Director

A. Great question. We ask that ourselves. So we did see a significant increase in bookings in March -- month of March, that was the strongest month of bookings. And part of that, we believe, is related to the long Lunar holiday, where a lot of companies shut down for a lot more than usual and also the opening up of China that literally that caused some of the temporary surge in demand. The question is how sustainable it is. Now if you look at the April bookings, April bookings is good, not as strong as the March. It is a more normal pattern, I would say. So it remains to be seen whether the demand in China is going to come back.

What we are hearing is that a lot of the people in China are spending more of their money on travel and the services, like restaurants and so on, not so much on goods. So I think we'll be in a much better position to answer your question in the next conference call because we'll have another 2 months' worth of 2 or 2.5 months' worth of additional information that will tell us whether China for demand for goods is going to come back. But having said that, we have taken everything into consideration in our guidance. So we're very comfortable with the guidance.

[David Williams - The Benchmark Company, LLC](#)

Q. Great color. And then also just kind of on the automotive space that you've been a little, I guess, less optimistic about kind of that monetization and when you thought that would turn to revenue. You're making a lot of good progress there, and you seem very encouraged maybe more so this quarter than typical. Is there anything that's changed there from your perspective? Are you seeing design-ins being pulled in more quickly? Or just maybe more traction there? Anything that's giving you more encouragement in the auto sector?

Balu Balakrishnan - Power Integrations, Inc. - President, CEO & Director

Absolutely. What has changed is the number of opportunities is growing a lot faster than I anticipated. The interest level on our products are very high, but probably the most important, the conversion of an opportunity into a design win is a lot higher than we've ever seen in any other market. Typically, if you had 100 opportunities, we would convert maybe 1/3 of that into real business. But in automotive, we are seeing it's at least 2x from that. 60% to 70% of the business is getting converted into design wins. And if I take specifically the InnoSwitch, the SiC InnoSwitch, that is the 1700-volt InnoSwitch, I would say the conversion rate is even higher at 80%. And the reason

for that is there is no other solution that's even close to our solution. There is really no other compelling solution.

So that's what has changed our view of automotive market. We are more optimistic about automotive than we were -- we ever were. And so we expect the revenues to grow very nicely, but not in the short term. As you know, automotive takes at least a couple of years, depending on the application. In some cases, it may take longer than that if you're in the drivetrain and so on. But at least in power supply applications, you won't see a significant change in this year or next year, but it -- we could see an improvement in the following year, but the real revenue is going to come from revenue growth is going to come around 2026, as we have said before.

[Christopher Rolland - Susquehanna Financial Group](#)

Q. Hey guys, thanks for the question. You may have answered this. I just want to make sure that I got it right. So pre-pandemic, you guys were like \$400 million to \$500 million, call it, \$500 million a year. You guys peaked out at \$700 million a year. And I guess, would you think that normalized in the near term would be kind of \$600 million a year. And that -- I think you said \$150 million to \$170 million, was that a quarter that you were trying to get to. So do we kind of think about that as a normalized revenue range for you guys, \$600 million to \$680 million was that what you were discussing?

Balu Balakrishnan - Power Integrations, Inc. - President, CEO & Director

A. Well, what we are saying was that the demand picture is not very clear to us because of the inventory being depleted at this point. So we don't actually see the end demand. And sometimes, even our customers don't know exactly how it's going to come back. So it is really difficult for us to say what the real demand is. Obviously, we'll see that once the inventory goes down to normal levels, which we expect to happen sometime in the middle of this year, we should start seeing real demand. But I'm really afraid that I don't have a clear-cut number for you.

Sandeep Nayyar - Power Integrations, Inc. - CFO & VP of Finance

A. At this point. Chris, the way I think you are a precise number we don't have. But I think what we're feeling very good is consumer and industrial will start tapering back to some reasonable levels, providing us the growth that we are expecting in the second half, and we are expecting the second half to be meaningfully higher than the first half.

[Christopher Rolland - Susquehanna Financial Group](#)

Q. Yes, certainly understand. And then your message on comms was pretty clear. I was wondering with the other segments. It sounds like maybe industrial is a little slower than the other 2, but if you could kind of force rank that for us as we accelerate into June here, just to understand directionally and kind of the speed at which these guys will come out.

Balu Balakrishnan - Power Integrations, Inc. - President, CEO & Director

A. Well, the communications declined first. The downturn started with communications in the second quarter of last year. And so it's the first one to come out of it, and we are already seeing that. We saw that in Q1, and we see that again in Q2. That's one of the reasons our mix is a little bit unfavorable. The next thing that's going to happen, I believe, is the consumer. But that from what we can tell, the inventory situation won't get normalized until end of Q2. So we should see a nice jump in

consumer in Q3. Industrial was the last one to slow down, and it's the last one that will come back. And again, a portion of that in industrial is doing very well for us, which is the high power, which is about 1/3 of the industrial. It's the more fragmented part of the industrial is the one that has significant inventory in the channel. But we are optimistic that will get normalized probably just after the middle of the year. That will be the last one probably in Q3, it will get normalized.

[Christopher Rolland](#) - [Susquehanna Financial Group](#)

Q. Excellent. Thank you guys. Appreciate that.