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POWI.OQ - Q3 2022 Power Integrations Inc Earnings Call

EVENT DATE/ TIME: NOVEMBER 02, 2022 / 8:30PM GMT

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PRESENTATION

Operator

Good afternoon. My name is Dennis, and I will be your conference operator today. At this time, I would like to welcome everyone to Power Integrations Third Quarter Earnings Call. (Operator Instructions) I would now like to turn the conference over to Joe Shiffler, Director of Investor Relations. Please go ahead.

Joe Shiffler - Power Integrations, Inc. - Director of IR & Corporate Communications

Thank you. Good afternoon, everyone. Thanks for joining us. With me on the call today are Balu Balakrishnan, President and CEO of Power Integrations; and Sandeep Nayyar, our Chief Financial Officer.

During this call, we will refer to financial measures not calculated according to GAAP. Non-GAAP measures for the September quarter excludes stock-based compensation expenses, amortization of acquisition-related intangible assets, and the tax effects of these items. A reconciliation of non-GAAP measures to our GAAP results is included in our press release.

Our discussion today, including the Q&A session, will include forward-looking statements, denoted by words like will, would, believe, should, expect, outlook, plan, forecast, anticipate, prospects, and similar expressions that look toward future events or performance. Such statements are subject to risks and uncertainties that may cause actual results to differ materially from those projected or implied. Such risks and uncertainties are discussed in today's press release and in our Form 10-K filed with the SEC on February 7, 2022. Finally, this call is the property of Power Integrations and any recording or rebroadcast is expressly prohibited without the written consent of Power Integrations.

Now, I'll turn the call over to Balu.

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

Thanks, Joe, and good afternoon. 2 quarters ago, we called attention to a slowdown in the smartphone market and signs that other markets may begin to fade after the strong demand of the prior 2 years. Last quarter, we noted that distribution sell-through had in fact slowed across all of our end market categories, likely signaling a broad-based downturn in demand. We also reminded investors that PI has historically been among the first in our industry to experience cyclical and macro-driven slowdowns. The summer slowdown has given way to a more rapid deterioration in the business environment over the past couple of months. The end demand appears to have declined significantly and distribution sell-through has continued to slow, particularly in our consumer category, which is about 1/3 of our business and is dominated by appliances.

Our revenues for the third quarter were within our guidance range, but below the midpoint, down 13% from the prior quarter, and we expect December quarter revenues to be down more than 20% sequentially at the midpoint of our range. For those less familiar with our history, it's not uncommon for us to experience larger cyclical fluctuations than our peers, because we sell primarily to power supply manufacturers and therefore have an additional layer of inventory between us and the end markets. The same dynamic applies on both the downward and the upward swing of the cycle.

And just as we are typically among the first to see a downturn, we have historically been among the first to see the eventual upturn. And while it's difficult to predict the timing of a recovery, we do see indications that our business is likely to hit bottom over the December and March quarters. For communications category, which was the first category to experience the downturn, distribution sell-through and our direct business were sequentially higher in Q3 and channel inventory fell significantly during the quarter. Across the entire business, cancellations were lower in Q3 than in Q2, and we have seen a modest uptick in turn orders in recent weeks, with many customers already having eliminated much of their excess backlog.

When the broader demand outlook improves, we expect recent market share gains and contributions from new products to enable the kind of outperformance we have historically delivered coming out of a downturn. In the meantime, we will focus on what we control, managing the business for long-term growth and profitability rather than short-term operating metrics, though we do expect to be within our target range of operating margin in 2023. Design activity continues to be robust, several competitors have retreated from the market, and we are not slowing down our efforts to capitalize on the opportunities in front of us.

We talked in depth about these opportunities at our recent Analyst Day, and I encourage anyone following our story to view the replay of the event on our investor website. Our presentation covered a wide range of topics including our unique system-level approach to integration, our history of innovation in high-voltage process and device technologies including GaN, and the contribution our products are making to a cleaner planet.

We also presented a detailed view of our plan to double our addressable market to \$8 billion by 2027, driven by a combination of investments in new products and technologies and big picture market trends creating opportunities in areas like renewable energy, home automation, appliances, advanced charging and transportation.

We expect the largest contribution to SAM expansion from motor drive products, as we expand our BridgeSwitch family to cover a wider range of brushless DC motor applications in the years ahead. Current BridgeSwitch products covering applications up to 400 watts are rapidly gaining adoption at customers in major appliances, as well as air conditioners and ceiling fans. As we mentioned last quarter, new regulations in India are driving a wave of design activity in ceiling fans by essentially forcing the adoption of efficient brushless DC motors. During Q3, BridgeSwitch was also designed in at a top tier European appliance maker for a next generation refrigerator, a design that should contribute meaningful revenues in 2023. The designs we are winning today will not only generate near-term revenue growth, but also pave the way for the higher power BridgeSwitch products in our pipeline.

Unlike discrete solutions, BridgeSwitch and our Motor-Expert software provide a platform solution that can easily be adapted to a wider range of end products by customers once they are familiar with the architecture. We expect an equally large increase in SAM to come from automotive, where the EV transition brings substantial high voltage semiconductor content to passenger cars and commercial vehicles. As we explained at the Analyst Day, we have a content opportunity of more than \$60 today in a passenger car, which we expect to increase by more than 2x as we expand our product offerings in the coming years.

Heavy vehicles like buses, trucks and construction equipment, will have even greater dollar content. While the major revenue ramp is still a few years away, we are making excellent progress establishing ourselves as a key supplier to the EV market, adding almost 200 designs to our opportunity pipeline so far this year. A majority of these projects involve our silicon carbide-based InnoSwitch ICs, which are ideal for next generation 800 volt systems. Our success in converting opportunities into wins has been highly encouraging and speaks to the degree of differentiation we provide with InnoSwitch in terms of ease of use, reliability, space savings and efficiency.

Overall, we have now secured design-ins at 7 of the top 10 Tier 1 automotive suppliers, and we expect to be in production with about 15 end customers this year, a number that should at least triple in 2023. These include not only a wide range of power supply applications at automakers in the U.S., Europe and Asia, but also several designs using our SCALE-iDriver gate drivers in drivetrain inverters mainly at Chinese EV customers.

Another key topic of our Analyst Day was a detailed discussion of our GaN technology, a cornerstone of our product roadmap and also a near-term driver of share gains and higher dollar content. We presented not only the rapid growth in GaN-based product revenues over the past couple of years, but also the \$100 million opportunity pipeline we are working to convert to design wins and revenues. These opportunities cut across a wide range of end-markets, with more than half coming from industrial and appliance applications. In fact, half of our GaN design wins in Q3 came from industrial and appliances.

Going forward, GaN power switches will feature prominently in the automotive and motor-drive products that will drive much of our SAM expansion. We also have GaN-based products in our pipeline that will open up new markets for us, such as data center and comm equipment, another major piece of our SAM expansion roadmap. We also expect growth in the SAM for our high-power gate driver products driven by wider adoption of renewable energy and the efficient DC transmission infrastructure. Our high power business struggled to grow over the past couple of years, as projects were slowed by the pandemic, but we have seen a healthy rebound in this business in the past several months, and it is now on track to grow double-digits this year. We expect strong growth in high-power again next year driven by design wins in solar, wind, and electric locomotives.

In summary, our long-term growth story is on track and we are looking past the current downturn to the exciting future that we laid out for you at our event in September. As a reflection of our confidence in that story, as well as our strong balance sheet and ongoing cash generation, our Board has allocated \$100 million for share repurchases which we expect to begin implementing in the days ahead.

And now, I'll 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. We are well-positioned financially to weather the current downturn, thanks to our strong balance sheet and our lean expense structure, and we believe market share gains, new products and secular growth opportunities will enable us to emerge stronger on the other end. As we manage through the downturn, we will be guided by the long-term mentality that is integral to our culture and which was a key theme of our Analyst Day presentation.

Accordingly, we are adjusting our spending plans, but we'll continue to invest in new products and greater sales reach. We are moderating production, especially the conversion of wafers to finished goods, but we will keep our foundries active to ensure access to capacity when demand recovers. While internal inventories will run above our model for the short-term, our products have long lives and are fungible across applications and customers, resulting in virtually no risk of obsolescence. This approach paid-off when demand came back after the initial pandemic shutdowns, and we are following the same playbook now.

I will now discuss the Q3 numbers and the outlook, before we begin the Q&A session. Revenues for the quarter were \$160 million, within our guidance range, but below the midpoint, as demand tapered down over the course of the quarter. Revenues were 13% lower than the prior quarter. Consumer revenues fell more than 25% sequentially, driven partly by seasonality in air conditioning, but more so by softer demand and elevated inventories in major and small appliances. China continues to be the primary source of weakness in the appliance market, but the slowdown is not isolated to China.

Communication revenues were down more than 20% sequentially, reflecting continued weakness in the smartphone market. Computer revenues were up slightly from the prior quarter, driven by strength in tablet chargers, as well as recent design wins in notebooks with our GaN-based InnoSwitch products. Industrial revenues also increased slightly from the prior quarter, driven by strength in our gate-driver business across a range of applications, including solar, wind, energy exploration and rail.

Revenue mix for the third quarter was 41% Industrial, 32% Consumer, 16% Communication, and 11% Computer. As expected, non-GAAP gross margin was sequentially lower at 57.8%. The sequential decrease was driven by less favorable pricing environment, as well as lower back-end

manufacturing volumes. Non-GAAP operating expenses for the quarter were \$40.8 million, below our forecast and down sequentially by more than \$1 million, driven by slower-than-expected hiring and the timing of spending, which pushed some expenses out to the December quarter.

Non-GAAP operating margin for the quarter was 32.4%, and non-GAAP earnings were \$0.84 per diluted share. Weighted average diluted share count for the quarter was 57.6 million, down 700,000 from the prior quarter, reflecting the impact of shares repurchased in the June quarter. No shares were repurchased during the September quarter, but as Balu noted, our board has allocated \$100 million for additional buybacks, which I expect to put to work in the days ahead.

We had \$363 million in cash and investments on the balance sheet at quarter-end, an increase of \$36 million during the quarter. Cash flow from operations for the quarter was just under \$50 million and we used \$5.5 million during the quarter for CapEx, and paid out \$10.3 million in dividends. Inventories on the balance sheet rose 29 days from the prior quarter to 161 days. As I noted earlier, the long lives and flexibility of our products afford us the ability to build wafers – wafer inventory during a downturn, ensuring continued access to capacity at our foundry partners. I expect internal inventories to remain elevated through the first half of 2023, and then begin to taper back towards our target level in the second half of the year.

Channel inventories at quarter-end were 13.6 weeks, up 2 weeks from the prior quarter. Sell-in exceeded sell-through for the full quarter, though we saw a crossover in September with sell-through exceeding sell-in for the month. Based on our preliminary checks, this also appears to be the case for October and we expect it to continue through the remainder of the quarter, resulting in a meaningful reduction in channel inventories as we exit the year.

Importantly, distribution inventory for the communications category decreased significantly during the quarter, and sell-through was up sequentially, indicating that the worst of the inventory correction in smartphones may be behind us. We expect revenues for the December quarter to be \$125 million, plus or minus \$5 million. And again, we expect sell-through to be higher than reported revenues, as we work to bring down channel inventories.

I expect non-GAAP gross margin for Q4 to be between 56% and 56.5%, with a sequential decrease driven by lower back-end manufacturing volumes and a less favorable end-market mix. Non-GAAP operating expenses for the fourth quarter should be between \$42 million and \$42.5 million and the non-GAAP effective tax rate should be between 9% and 10%.

And now, operator, let's begin the Q&A session.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) And your first question is from the line of Tore Svanberg with Stifel.

Jeremy Lobyen Kwan - Stifel, Nicolaus & Company, Incorporated, Research Division - Associate

This is Jeremy calling for Tore. A quick question, first on the communications. Is there – can you give us maybe any, I guess concrete signs of – or early signs that you're seeing of potential bottoming, besides the channel inventory is kind of the crossover in sell-through versus sell-in. Are there discussions with customers that you can point to, anything that you can give us a little bit more clarity on would be very helpful.

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

Sure. Jeremy, thanks for the question. The Chinese cell phone companies, it looks like most of the inventory at the OEM has been depleted and they have started pulling products from the channel. But in case of Korea, they still seem to have inventory and so they are yet to deplete their

internal inventory. But we think that it's-- the tide is turning right now. We see the overall communications inventory at the channel has decreased significantly, but we still have some ways to go. We are thinking that by perhaps the second half of Q1, we will start getting higher shipments to this market.

Jeremy Lobyen Kwan - Stifel, Nicolaus & Company, Incorporated, Research Division - Associate

Great. Maybe a question for Sandeep. With the weak yen, you're kind of -- you guys are beneficiary of a weak yen with your manufacturing in Japan. Are you taking advantage of that you kind of build some long-term strategic lower-cost inventory at this time? And then maybe is there anything you can kind of forecast in terms of the potential impact to gross margin?

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

Yes. So the way we have always done it, and if you just take a step back just pre-pandemic, we continued to build because we wanted to keep our foundry partners economically profitable, as well as what we know that we always come out of this downturn. And when it comes, we do really well, and that really helped us with the having that inventory. This time it's going to be no different. As we -- I have talked earlier, these downturns take 3 to 4 quarters and typically, this could be a quarter more, but as a result of which I'm expecting that we may have a reversal of this year, where next year could be like the back half of this year, whereas the back half will be a much stronger back half. So from a margin standpoint, I think I've given you the guidance for Q4, for next year I think we should be still in the 55% to 56%, mainly because the communication sector will come back and the mix is going to be a little less favorable next year compared to this year on an annual basis.

Jeremy Lobyen Kwan - Stifel, Nicolaus & Company, Incorporated, Research Division - Associate

And one last question.

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

Sorry, Jeremy. As far as the impact of FX, the recent weakening, we'll have to go through our inventory before we get the P&L benefit. That won't happen until the second half of next year, but you also have to remember that our input costs have gone up, that will also flow into that. At a very high level, they will offset each other to a large extent.

Jeremy Lobyen Kwan - Stifel, Nicolaus & Company, Incorporated, Research Division - Associate

And just one last question, you mentioned competitors exiting or at least withdrawing from the market. Can you remind us how easy or difficult it is for these competitors to try to re-enter if they wanted to, or is it the case that once customers switch, the architecture is different enough that, that switching costs are too high for the customer?

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

Yes. So that's a good question. I think that the level of integration, level of innovation we bring, makes it very difficult for Western competitors to compete with us and make good margins. So it's a question of -- if they can make more margins elsewhere they would rather go elsewhere. That's what is happening right now. In some cases, they have completely decided to close down, like Panasonic has closed down, but many others are retreating from this market, basically they are shipping what they have, but they are not building new products. They look at our product, and it's very difficult for them to think about how to compete with us without infringing on our IP. And as you know, we have been extremely protective of our IP and we've been very successful protecting our IP. So I think we're in such a strong position in terms of being years ahead of our competition and we will continue to innovate. I mean that -- that's never going to stop. So I am pretty confident that this is not a reversible situation.

Operator

Your next question is from the line of David Williams with The Benchmark Group.

David Neil Williams - The Benchmark Company, LLC, Research Division - Senior Equity Analyst

I guess, Sandeep, on the first, if I kind of think about the Industrial revenue which if I'm not mistaken, is one of the higher margin segments. It was up considerably in terms of percentage of business overall, and it seems like that's still hanging in there and is fairly healthy. I guess, as we kind of think about that, can you maybe give us the puts and takes on the margin profile as we kind of think about just that Industrial segment and just maybe any moving pieces there?

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

Yes. Industrial is the highest, but consumer follows behind that closely. And as you saw, the industrial kind of did well, but the consumer was quite weak during the quarter. So that kind of offset. Added to that, you heard, we obviously with the volumes being lower, that had an impact on the margin, and also the pricing environment is not as favorable as it used to be and that has started to also, because we do value pricing has started to also have a bit of an impact and will have some impact in the coming year also.

David Neil Williams - The Benchmark Company, LLC, Research Division - Senior Equity Analyst

Okay. Great. Appreciate that. And then, maybe can you talk about maybe any specific demand trends within industrial that are either positive or negative, is that holding in? And what are the expectations maybe as we go out even past the fourth quarter, but longer-term, how do you see that industry in general for your business?

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

The high power part of industrial, which is roughly, let's say 25% or so, is doing very well. As you -- as we mentioned in the script, the last 2 years, lot of projects, infrastructure projects have been delayed. But it has come back nicely this year. We expect double-digit growth this year, and it looks like next year also would be double-digit growth. These are things like renewables, solar and wind, high-voltage DC transmission systems, traction, that is electric locomotives and so on. So that's doing very well.

The home and building automation so far has done well, but there is a possibility that could soften. I've heard it from other companies. We haven't seen it yet, but that scenario that could soften, and the same is with the tools. But the rest of the market, we think we'll do fine. But the overall Industrial, at least going into Q1, it could be roughly flat, maybe slightly down depending upon as a percentage of revenue.

Operator

Your next question is from the line of Ross Seymore with Deutsche Bank.

Melissa Weathers - Deutsche Bank AG, Research Division - Research Associate

This is Melissa Weathers. I'm on for Ross. I guess for first question, can you talk about like the linearity of demand that you saw throughout the quarter? I guess what changed from the guidance that you gave 90 days ago? Did anything change significantly from when you had your Analyst Day? And I guess it's a good sign that cancellations have dropped quarter-over-quarter, I think if I heard you guys correctly. So how confident are you guys in your visibility that -- that this is sort of bottoming out in the December and March quarters?

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

Well, in terms of the bookings, they have been declining and I would say that, when we started the quarter, we had indicated that we are within the range of what we are -- what we had guided. But what happened throughout the quarter was, there were bookings, but there were also push outs and cancellations, that basically offset. So we never moved to the middle of the range.

As far as going forward, the bookings as I said was relatively low in the last couple of months. As a result, we currently have bookings that is within the range. And based on that, we have given you guidance. But the good news is, there is definitely a turnaround in terms of the turns business. The turns business that we are seeing now is actually more than the cancellations and push outs. So we expect some turns business this quarter, and significantly higher turns business next quarter.

So that's why we are saying, it is stabilizing. Therefore, we think that fourth quarter and the first quarter would be roughly bottom of the cycle. And we also mentioned that the cell phone inventories are coming down very nicely. So we expect that to come back first, and then appliances and industrial. So going into Q1 quarter, our best estimate is, we would be similar to Q4 and then Q2, our expectation is that it will be incremental growth. But second half is where we expect a stronger demand, as this downturn turns into an upturn. That's our best estimate right now.

Melissa Weathers - Deutsche Bank AG, Research Division - Research Associate

That's all really helpful. And then I guess just a follow-up. I just wanted to touch on, you mentioned some softer pricing this quarter and that you expect it to continue into next year. What sort of expectations can we have for that on gross margins? And then also, is that -- is that a temporary headwind just as we work through the cycle, or is there something else going on there?

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

Well, we price it -- price our products on value. That means that the components we replace, whatever they cost is what reflects our price, of course, we get some additional for the integration and so on. So the discrete components, prices are coming down, supply chain issues are improving. At least in China, it has improved significantly. So that has some impact on our value pricing as we go forward. But also we have had impact from manufacturing being lower, because of the lower revenues and lower back-end manufacturing, our absorption is not as good. So that has also had a negative impact on the gross margin. As far as going forward, I will let Sandeep explain for next year.

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

Yes. As I had guided, even at the Analyst Day I had said 56%, but right now I'm guiding to 55% to 56%, because the volumes are much lower. And as I said, the mix is more going towards communication. And as Balu had indicated, the cost increases from wafers will be offset by the yen, more or less, and obviously the value pricing we are expecting to have some impact in the coming year. Putting all that together, the non-GAAP gross margin guide to the best we can do and with the best indication we have for the mix is 55% to 56% for 2023.

Operator

Your next question comes from the line of Christopher Rolland with Susquehanna.

Christopher Adam Jackson Rolland - Susquehanna Financial Group, LLLP, Research Division - Senior Analyst

So I guess just digging into let's say the comms market a little deeper here. So you guys have peaked in the \$60 millions per quarter and probably down now to mid-teens per quarter. I guess first of all, how do we think about that inventory burn versus a downtick in demand for next quarter?

Is it balanced like at 50-50? And then secondly, what do you guys think kind of a cruising rate is or cruising altitude is once everything normalizes for your comms business?

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

That's a difficult question to answer. Let me tell you the landscape, perhaps you can judge for yourself. In China, as you know, because of lockdowns and all of the business-- the challenges they've had in terms of the economy slowing down and so on, many of the consumers are delaying purchase of cell phones. They used to purchase a new phone every 18 months. Now I think they say, okay, I'll keep the phone because I can't afford to buy a new phone. When they will start buying, I don't know. We are going through this time frame where the demand for the phones in China is low.

And in fact across the world, things are slowing down as you know, because of inflation and so on, people are not replacing phones as often. But the actual performance is different for each and every OEM, it differs from one to the other. So Chinese OEMs are doing the worst right now. And then as you know, the other geographies are doing better. So our -- that -- how much that is in distribution? We said some time in Q1, we will -- they will start ordering products.

Now I have to be careful. They are already ordering some products because there is a mix issue. If they need a product that's not at distribution, we still have to ship. Obviously, we are still shipping products, but it is to non -- more to non-Chinese customers and less to Chinese customers. So our best estimate is that it is likely to come back strong in the second half. We will see I believe a -- some revenue coming back in Q1, but higher in Q2, but the bigger change in demand will be in the second half. And that is our best, I would say speculation of when the demand will come back to normal.

Christopher Adam Jackson Rolland - Susquehanna Financial Group, LLLP, Research Division - Senior Analyst

Okay. And then secondly, I was wondering if you had some extra color into the guide from a segment perspective, whether you want to force rank that or just call 1 or 2 out or however you want to do it?

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

If you're talking about Q4...

Christopher Adam Jackson Rolland - Susquehanna Financial Group, LLLP, Research Division - Senior Analyst

Q4, yes.

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

Yes. I think comms and computer will be higher. And you will see the other segment, that's why bit of the margin impact. But I think all 4 segments will be down in terms of the -- in terms of the dollar wise. As a percentage, it's kind of in the direction I gave you.

Christopher Adam Jackson Rolland - Susquehanna Financial Group, LLLP, Research Division - Senior Analyst

Sorry, all of them down in the same on a percentage basis?

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

Well, I would say the Industrial will be down in that -- industrial will be down from where it is and all 4, I would say the direction is down in dollars, but percentage wise you will see comm and computer slightly up.

Operator

Your next question is from the line of Gus Richard with Northland.

Auguste Philip Richard - Northland Capital Markets, Research Division - MD & Senior Research Analyst

Yes. Just real quick, I just want to make sure I get this right. Did channel inventory decrease by about \$15 million in the September quarter?

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

The channel inventory in, in dollar terms, decreased from Q3, are you talking from Q2 to Q3?

Auguste Philip Richard - Northland Capital Markets, Research Division - MD & Senior Research Analyst

Correct.

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

Yes, it went down about -- yes, about \$10 million -- roughly around \$10 million or so.

Auguste Philip Richard - Northland Capital Markets, Research Division - MD & Senior Research Analyst

Okay. And sort of what do you expect the cash burn to be, I'm sorry, the inventory burn in the fourth quarter, how much do you expect to come out?

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

You are talking -- the channel inventory went up.

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

No, no, I was going to say...

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

Yes, that's one. So channel inventory went up by \$8 million.

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

Yes, channel inventory went up in the last 2 quarters, but in Q4, we expect the channel inventory to come down. In fact, we are trying to get that down. So it's higher than we need in the channel. And our expectation is roughly about -- roughly about \$15 million will be the reduction in Q4. Obviously, we won't get to our target weeks until a few quarters later. We can't correct all of it over night.

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

And the weeks calculations get impacted by the denominator.

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

Yes. So even though weeks look big, you have to remember that there is a double whammy, right. The dollar value goes up, but the denominator also comes down and that amplifies the change in the weeks.

Auguste Philip Richard - Northland Capital Markets, Research Division - MD & Senior Research Analyst

Yes, absolutely. And then do you have any sense, I think in the communication market, you do. But for the other markets, your customer's customer, the OEMs, do you have any sense of what the inventory looks like downstream from your customers?

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

We have a rough idea. They've been relatively open. Obviously, we can't do it with all customers, but the top customers, as I mentioned, the biggest challenge we had was in China, and that inventory seems to be -- seems to have come down, because we see them pulling from the channel. And then the -- now more recently I would say from Q2, the China we saw the inventory problem in Q2, but in Q3, we saw a significant inventory correction in Korea, both in the cellphone and appliance OEMs. And they are really correcting very hard right now and that won't be corrected until probably end of Q1, because they do have -- they have built more inventory based on their concerns before during the pandemic.

The whole thing, if you look at it what happened was, they were trying to build enough inventory so that they don't have supply chain issues, but the demand dropped off so abruptly. They were not prepared. So they now are trying to correct it. And China to a large extent is corrected at the OEM level, not at the channel level, but in Korea, it's still there at the OEM level.

Operator

(Operator Instructions) At this time, there appear to be no further questions. I will now turn the call over to Joe Shiffler for any closing comments.

Joe Shiffler - Power Integrations, Inc. - Director of IR & Corporate Communications

Alright. Thanks everyone for listening. There will be a replay of this call available on our investor website, which is investors.power.com. Thanks again for listening, and good afternoon.

Operator

Thank you all for joining today's call. You may now disconnect.