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POWI.OQ - Q4 2020 Power Integrations Inc Earnings Call

EVENT DATE/TIME: FEBRUARY 02, 2021 / 9:30PM GMT

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CORPORATE PARTICIPANTS

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

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

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

CONFERENCE CALL PARTICIPANTS

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

David Neil Williams Loop Capital Markets LLC, Research Division - VP

David Wayne Haberle Susquehanna Financial Group, LLLP, Research Division - Associate

Karl Ackerman Cowen and Company, LLC, Research Division - Director & Senior Research Analyst

Ross Clark Seymore Deutsche Bank AG, Research Division - MD

Tore Egil Svanberg Stifel, Nicolaus & Company, Incorporated, Research Division - MD

PRESENTATION

Operator

Ladies and gentlemen, thank you for standing by, and welcome to the Power Integrations Fourth Quarter Earnings Call. (Operator Instructions) I would now like to hand the conference over to your speaker today, Joe Shiffler, Director of Investor Relations. Thank you. Please go ahead.

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

Thank you, Mike. 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 exclude 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, forecast, anticipate, 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, 2020, and our most recent quarterly report on Form 10-Q filed with the SEC on October 29, 2020.

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

Thank you, Joe, and good afternoon, everyone. Fourth quarter revenues comfortably exceeded our expectations, increasing 32% year-over-year to $151 million. The growth was broad-based, with all 4 end markets up double digits from prior quarter. Non-GAAP operating margin expanded to 25%, non-GAAP earnings were $0.60 per diluted share and we generated $46 million in cash from operations.

Reflecting our strong cash flow and healthy balance sheet, our Board of Directors has increased the quarterly dividend to $0.13 per share. This marks our third dividend hike in the past 4 quarters, with a total increase of 37% over that time.

For the full year, while revenues for the analog semiconductor industry grew just 3%, our revenues grew 16%, with growth in all 4 end market categories. The consumer category, our largest end market entering this year, grew about 10% in 2020 and finished strong, up nearly 20% year-over-year in the fourth quarter. Appliances were the main growth driver, reflecting robust demand as well as continued share gains at a broad range of customers in Europe, China, Korea, Japan and the U.S.

The impact of share gains continues to be magnified by rising dollar content in household appliances driven by features such as network connectivity, LED lighting and other electronic intelligence as well as tighter energy efficiency standards.

Our InnoSwitch products, which are gaining significant traction in appliances, drive dollar content even higher by providing a greater level of integration than earlier products. We are also seeing strong interest in our GaN products and our BridgeSwitch motor driver chips at many appliance customers, which points to continued growth in dollar content going forward.

In the industrial category, demand for high-power products was constrained in 2020 by pandemic-driven delays in infrastructure projects. The lower revenues in high-power were offset by growth in home and building automation, battery-operated tools and broad-based industrial applications, resulting in a low single-digit growth for the overall category. Going forward, we expect our industrial business to benefit from a broad range of secular trends such as renewable energy, high-voltage DC power transmission, electrification of transportation and tools, smart homes and buildings and fixed USB charging receptacles.

The communications category provided the largest incremental revenue contribution in 2020, growing more than 30% for the year. The smaller computer category grew even faster, up nearly 50%. The common denominator across these categories is the rapid adoption of advanced chargers for smartphones, tablets and notebooks. Over the past couple of years, Power Integrations has demonstrated a commanding lead in terms of technology and product design for advanced chargers, and that advantage is now translating into rapid growth in market share and revenue.

Adoption of advanced chargers accelerated last year and shows no sign of slowing as the 5G rollout continues. Even as 5G phones require higher power chargers due to their larger batteries, many OEMs are pushing power levels even higher to offer much faster charging as a way to differentiate their products. Meanwhile, thanks to new technologies like USB PD and the move to an accessory model at certain OEMs, we are seeing an unprecedented wave of innovation in charger designs at OEMs and aftermarket suppliers. This includes an increasing number of chargers to power 2 or more devices and a robust pipeline of designs with our GaN products. That includes our GaN-based InnoSwitch products as well as our new MinE-Cap ICs, which use GaN technology to reduce the size of the charger by enabling smaller input capacitors.

We won several designs with MinE-Cap in Q4, including a 65-watt design utilizing MinE-Cap along with GaN-based InnoSwitch and our energy-saving CAPZero ICs. While not necessarily typical, such high-value designs exemplify the sea change that has occurred in the charger market over the past several years. Not long ago, chargers were commodities, and cost was the only variable that mattered. Today, OEMs are thinking strategically about chargers, either as a value-added feature or revenue-generating accessory, and a wave of third-party aftermarket brands has emerged as well.

We have seen this change coming for quite some time, and we were ready for it thanks to R&D investments we have made in technologies like GaN and revolutionary products like InnoSwitch. Our investment in GaN, which began almost a decade ago, is a great example of the long-term thinking that has been a cornerstone of our success.

Our approach to managing through challenges of the pandemic is another. While some of our industry peers reduced head count or cut salaries in the early stages of the pandemic, we continued to invest in our people, giving normal salary increases and expanding our workforce by 4% last year, with the largest increase coming in R&D. In fact, we hired a number of highly capable people let go by industry peers in the early stages of the pandemic.

We also invested in capacity and infrastructure, spending more than $70 million in capital last year, including nearly $50 million on construction of new facilities for our European operations and updates to our San Jose headquarters. We also built inventory as demand softened in the early stages of the pandemic, rising to 178 days at the end of the June quarter. Building inventory is something we can afford, knowing that our products have long shelf lives and are fungible across applications and customers. It brings stability to our foundry relationships, helping to preserve our capacity, and enables us to satisfy customers when demand surges as we are seeing today.

While lead times have extended for some of our newer products and the distributor inventories are below normal, we have been able to keep customer production lines running despite an unprecedented surge in bookings in the recent months.

Finally, before I turn it over to Sandeep, I'd like to acknowledge Raja Petrakian, who is leaving Power Integrations for personal reasons after 6 years as our VP of Operations. Taking over for Raja is Sunny Gupta, who was previously in charge of operations at Renesas and also at Intersil before its acquisition by Renesas. He has more than 25 years of experience in operations and quality engineering in the semiconductor industry, and he is the ideal person to lead our operations team going forward. We thank Raja for his contributions to our success and his help in ensuring a smooth transition as Sunny takes over.

And now I'll turn it over to Sandeep.

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

Thanks, Balu, and good afternoon. As usual, I will focus my remarks primarily on the non-GAAP results, which are reconciled to GAAP in our press release tables. Fourth quarter revenues were $151 million, up 24% sequentially with all 4 market categories growing double digits, as Balu noted. Communications was up mid-30s, driven by the ongoing strength in power charging for smartphones.

Computer revenues were up more than 20%, driven by continued growth in tablets as well as monitors, and server standby power supplies. Consumer revenues were also up more than 20%, reflecting the strong demand in the appliance market, while industrial revenue grew low double digits sequentially, driven by home and building automation as well as broad-based industrial applications.

Revenue mix for the quarter was 34% communication, 31% consumer, 26% industrial and 9% computer. Mix was a slight headwind with respect to gross margin, which fell by 20 basis points to 50.1% on a non-GAAP basis. Non-GAAP operating expenses were $37.9 million, up $2 million from the prior quarter and modestly above our expectations, primarily reflecting the timing of R&D projects. Non-GAAP operating margin for the quarter was 25%. For the full year, non-GAAP expenses were only up slightly, setting aside the impact of last year's litigation settlement which was recorded as a negative expense.

Other income for the quarter was about $600,000, down from the prior quarter due to the lower interest rate environment. The non-GAAP effective tax rate for the quarter was 5%, resulting in non-GAAP earnings of $0.60 per diluted share. Cash and investments on the balance sheet increased by $5 million from the prior quarter, ending the year at $449 million.

Cash flow from operations for the fourth quarter was $46 million, while capital expenditures were $35 million. The higher CapEx reflects the need to pull forward some capacity additions, especially in assembly and test, as a result of the ongoing surge in demand. That brought our total CapEx for the year to just over $70 million, including roughly $15 million for building construction. For 2021, I expect our base CapEx to return to the normal run rate of 5% to 6% of revenue, plus an additional $12 million to $15 million for the completion of our construction projects.

The other notable use of cash in the fourth quarter were $7 million for dividends. As Balu noted, the dividend will go up by $0.02 per share in the first quarter, which is an increase of 18%. Internal inventories fell slightly in terms of dollars, and were down 33 days from the prior quarter to 122 days. Channel inventories also fell during the quarter as sell-through once again exceeded sell-in. We ended the quarter at 3.2 weeks, a level which we consider to be unsustainably low, and we expect some level of replenishment to occur in the March quarter.

Looking ahead, we expect first quarter revenues to be flat compared to the fourth quarter, plus or minus 5%, with continued strength in cell phone offsetting seasonal declines in the computer and industrial categories. We do believe that the current strength in cell phones reflects some level of over-

building by OEMs looking to capture the Huawei handset business and that a slowdown is likely to materialize at some point, perhaps as early as the June quarter. Nevertheless, we believe that when the dust has settled on the Huawei situation, our OEM customers will have increased their share of the handset market, magnifying the share gains we are achieving through our success in advanced chargers.

For the March quarter, we expect communication to increase as a percentage of the mix with industrial revenues being seasonally lower, resulting in a lower gross margin. Specifically, I expect non-GAAP gross margin in Q1 to be approximately 49%. However, I expect the March quarter to be the low-water mark for the year as mix should improve in a more favorable direction beginning in Q2. The stronger Japanese yen versus the dollar will be a headwind in the second half of the year, though I expect this impact to be largely offset by cost reduction initiatives. As a result, I expect our full year gross margin to be around the 50% mark.

Q1 operating expenses should decline modestly compared to the fourth quarter to about $37.5 million on a non-GAAP basis. After very modest expense growth in 2020, I do expect a rebound in 2021 with travel and events resuming at some point during the year and with a full-year impact from the hiring that we deferred to late 2020 and early 2021.

Other income should remain around $600,000 in Q1 and stay at a similar level going forward. The non-GAAP effective tax rate for Q1 and the full year should be around 7%, barring any potential changes in tax law under the new administration. Finally, I expect the diluted share count to rise by roughly 200,000 shares per quarter throughout the year. And now operator, let's begin the Q&A session.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Your first question comes from Karl Ackerman from Cowen.

Karl Ackerman - Cowen and Company, LLC, Research Division - Director & Senior Research Analyst

Sandeep, for my first question, it's on the industrial business. Given how important that is to the mix and the gross margin leverage as we go throughout the year, could you talk about the visibility for the high-power area of the business over the next few quarters?

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

So as we had talked about earlier that because of the pandemic, things had kind of slowed down a bit, and I think that seems to be the theme. We still are very well positioned, but I think the projects resuming because of the pandemic may not be at the same pace, it will be at a slower. We still expect our industrial segment to grow. And in fact, for the year, we expect all our 4 segments to grow in the coming year.

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

So let me also add, in the longer term, the high-power business has a very bright future because when you look around the world, there are a lot of investments being made in renewables and electrification. For example, China just recently announced a zero carbon plan and they are planning to invest something like $16 trillion to get the country to zero carbon by 2060. And with the new administration in U.S., we believe renewables and energy efficiency will become center stage, and that will also help. Of course, Europe has always been the leader in pushing renewables and electrification. And so all of those, in the long term, are very good drivers. In the short term, we have a challenge because of the pandemic, which continues to impact our ability to not only design in the products, even where we are designed in, the infrastructure projects are delayed due to the pandemic.

Karl Ackerman - Cowen and Company, LLC, Research Division - Director & Senior Research Analyst

Yes. Appreciate that. For my follow-up, we've heard several suppliers across the supply chain having raised prices, particularly given the shortage across foundry. I know comm's mix plays a role, but is your margin outlook also a function of higher prices of wafers or other input costs? And if so, could you talk about your strategy regarding the trade-off between pricing and volume commitments from your customers?

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

We have not increased our prices because we have long-term customers. However, our prices have been firm this year. We haven't had a normal yearly decline to the same extent, so that will definitely help. But in terms of our cost, it has gone up slightly because when you try to push the capacity to the limit, there's always some extra cost. But at the moment, we are not pricing -- passing it on to the customers. But as I said, we do say we're not decreasing the price as much as we normally do.

Operator

Your next question comes from Tore Svanberg from Stifel.

Tore Egil Svanberg - Stifel, Nicolaus & Company, Incorporated, Research Division - MD

Congratulations on the strong results. Balu, you talked about more and more of these chargers now supporting multiple devices. And we're seeing reduced MPD that you can now have as many as 2, 3, 4 interfaces to charge devices. How does that really impact the dynamics for the business? Because I assume in a device like that, you would have quite a bit more content.

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

Thanks, Tore. Yes, the advantage of multiple ports for us is that typically, each port will require 1 of our InnoSwitch products. So if we have 2 ports, there will be 2 InnoSwitch products, and that's actually the most efficient way to build a multiport design. So that is the benefit, our ASP essentially doubles if it's 2 ports and triples if it's 3 ports. So that's a huge benefit.

The other benefit is, when you go to multiple ports and you want to keep the size reasonable, you end up having to increase the efficiency significantly. That means you have to use our GaN-based products. And typically, multiport chargers are also higher power, so by definition, they will have to use GaN. And GaN has a much higher ASP than our silicon-based InnoSwitches. So that also helps.

The last one is our MinE-Cap product, which reduces the size of the input capacitor, that also becomes very important in multiport designs, again, for size. And usually, in addition to all of this -- by the way, MinE-Cap also uses GaN to reduce the capacitor size. But in addition to this, we typically also have a CAPZero. Because once you get to something like 65 watts or higher, then the input current becomes an issue. So you have to use CAPZero to meet the no-load consumption. And so we get to sell something like 4 different chips, and 3 of them could be GaN in a 2-port design. So that's a huge ASP increase for us.

Tore Egil Svanberg - Stifel, Nicolaus & Company, Incorporated, Research Division - MD

That's great context there. And I'm starting to see some adapters at 200 watts. I mean, I don't know if that's just the marketing approach by some charger manufacturers. But my understanding is PD is limited 100 watts. So is that perhaps a proprietary standard and is that something that you would be shipping into?

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

The 200-watt charger is actually a 2-port charger. Each one of it is 100 watts, which is within the USB PD standard. However, some of the OEMs, especially in China, do not use USB PD. They use their own protocol, which we don't care which one or what do they do, whether they use USB PD or not because we are orthogonal to any protocol. So it is true. It is true that some OEMs are working on 200-watt, 2-port designs. And the phones that connect to them can handle the 100-watt input to reduce the charge time quite dramatically.

Tore Egil Svanberg - Stifel, Nicolaus & Company, Incorporated, Research Division - MD

Very good. One last question for Sandeep. Sandeep, inventory days at 125. Do you think you'll be able to get those up a little bit this quarter? Or are things so tight that, that's going to be pretty tough?

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

So I think with the weeks in the channel being so low and the demand still being there. If you remember, I talked to you about the Q4, Q1, Q2 dynamic before, which is exactly playing out as I thought. You saw Q4 turning a little hot. So I think it'll take a little longer to do, but we are -- we've got absolute capacity, and we are making sure that we meet all the demands of our customers. So I think it will take a little while. But it's within our model. And as you know, going up 10 to 20 won't be a problem in days terms. So if we can, we would like to keep it that way so that we can meet any more upside demand.

Operator

Your next question comes from Ross Seymore from Deutsche Bank.

Ross Clark Seymore - Deutsche Bank AG, Research Division - MD

Congrats on a really strong year and even smarter close to the year and beginning to this one. So the supply side of the equation doesn't seem to be impacting you guys at all. I know you're very strategic about how much supply you hold. But the channel is lean now, your inventory and your books are a little bit leaner. Is there any supply constraint issues that you're seeing limiting the revenue growth within the next quarter or 2 quarters?

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

From everything we know, we believe we can meet the demand -- the actual demand of the customers. They are obviously talking very closely with us because they want to make sure they get the parts. They are actually very surprised we are able to meet their demand. And when I say demand, I have to be very careful. Not necessarily everything they want to build inventory, but what their actual demand is. How much inventory they can build, the safety stock inventory, will depend upon the demand going forward and how quickly we expand our capacity. But our goal is to make sure that we don't hurt any customer, and we've been able to do that for multiple reasons. One is we built a lot of inventory. If you remember, we are at 178 days at the end of June. That's really, really helping us.

The second benefit of that is we kept our foundries running even during the downturn so we were able to preserve the capacity. So if there is an area where we are expanding capacity, that's in the back end. These are the testers and assembly equipment, and those take a much shorter lead time. So we can expand that as the demand increases, and we are doing it as we speak. So we think we'll have more than enough capacity on the back end by the end of this quarter. But our goal right now is to keep as much of the inventory with us so that we can serve all the customers. As soon as we allow our customers to build inventory, our inventory spread around the world, that does not allow us to serve all customers well. So our goal is not to do that. We will only allow them to build inventory once we have satisfied all of the underlying real demand. So we've been able to do that in Q3 and Q4, so our customers are very happy. And we will continue to do that until our ability to ship is significantly higher than the demand.

Ross Clark Seymore - Deutsche Bank AG, Research Division - MD

And then just on the handset side of things, the wireless side. Can you talk a little bit about how seasonality shifts? Is seasonality even a useful framework, but how it shifts now that we're talking out-of-the-box kind of retail a la carte chargers, whether they be multiport or otherwise?

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

Well, there is only 1 OEM who has gone out-of-the-box in a broad sense. There are 2 other OEMs who have gone out-of-the-box only at the high end of the phones. And in fact, one of them, which is in China, they went out-of-the-box and they said that if you want a charger, they'll throw that in free. In other words, you can buy a phone without a charger at the same price as the one with the charger. So guess what the customers are going to do. So I think in the short term, the impact is relatively small and known. But in the long term, it's not clear that it's going to be a negative for us. And the reason I said that even though if everybody shifts to out-of-the-box, the number of units will go down, but we have exposure to the entire product line. Even the low end will have the ability to use a faster charger, and we believe most people will end up buying faster chargers. So in some sense, the attachment rate of the fast charger will be a lot higher relative to the slower chargers that are cheaper. So that's one aspect.

The second aspect is the out-of-the-box is really promoting, or the aftermarket guys are taking advantage of it and the aftermarket volume is growing very rapidly. It's just amazing how fast it's happening. And so that means that the OEMs are saying, "Hey, wait a minute, I want to have as attractive a charger as the aftermarket so that they can capture the gross margin on these accessories." So there is now a strong incentive for OEMs to build attractive chargers that compete directly with aftermarket chargers in terms of size, in terms of power, in terms of multiple ports, which means that our ASP is going to be much higher in these out-of-the-box chargers because now they are competing with aftermarket chargers.

So overall, we think our content will go up, our dollar profit will go up. And so we actually think this is good for us long term. This also means that the higher power chargers will become a larger portion of the business, in cell phone charger, SAM, if you will.

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

So Ross, what Balu indicated is the trend for the future. In the short term, I think the dynamic that I talked about, the Q4, Q1, Q2 with the Huawei situation will definitely play. And that's why we talked about the impact of seasonality and the changes can happen because of that dynamic. But what Balu indicated is the long term, that the out-of-box is actually a very good thing for us with the move to the power level, higher power level.

Ross Clark Seymore - Deutsche Bank AG, Research Division - MD

One clarification just on that topic that you just mentioned. What is it that you're monitoring that gives you the pause to kind of caution people about that -- multiple people going for multiple shares, et cetera, et cetera. Is it the difference versus seasonal buying patterns, just the sheer magnitude that these customers are buying? Just a little bit of color without obviously customer names, about what's leading you to give that incrementally cautious commentary on an otherwise awesome reporting guide?

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

Well, we know exactly the total number of cell phones at each and every major OEM, it's well-known information available in the open market. So it's easy for us to look at how much share Huawei is losing. And we know that total number is going to multiple people. So it's easy to figure out how much of that will likely go to different people. Now, we don't know exactly how much share gains each one of the OEMs we serve will take, but the total. So using that, we are able to make sure we are shipping -- we are not overshipping too much. Obviously, it's really hard for us to figure out how much each one of them need. But we do know that overall, what the demand is going to be. So we can manage that reasonably well.

Operator

Your next question comes from David Williams from Loop Capital.

David Neil Williams - Loop Capital Markets LLC, Research Division - VP

Congrats on the quarter. I wanted to see if maybe you could touch a little bit on the importance of the GaN products within your portfolio. And how much business do you think that you've been able to capture because of the GaN? And then maybe if you could just, kind of the magnitude of the ASP differential between silicon-based and a GaN-based.

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

It is very clear to us is GaN is on an extremely fast growth rate -- growth ramp right now. In 2020, we roughly -- we actually doubled -- slightly more than doubled the revenue versus 2019. And this year is -- it will be more than double. It could be as much as triple the revenue for GaN products, I should say. The large portion of our GaN design, our GaN revenue, I'd say, maybe 50% of it is from aftermarket chargers. But what we're finding is increasingly, the OEMs, for the reasons I mentioned earlier, are beginning to use GaN to differentiate their products in terms of size, efficiency rate and so on and multiport to compete with the aftermarket guys so that they can get the business, the lucrative accessory business. So I believe this year, we will get significant -- we'll make significant inroads into OEM business, where they are building high-end chargers for accessories.

But beyond that, we have customers in 20 different applications outside of cell phones that we're shipping into. Right now, we are shipping into about 100 as of Q4, we shipped to 100 different customers, our GaN products. But even beyond all of this data, I believe, as a technologist and an engineer, that GaN is here and it will replace silicon above a certain power level. Our GaN is very cost effective. It's proven to be very reliable in the field. We haven't had a single failure related to GaN in the field so far even though we have shipped a lot of GaN. And we think that above -- roughly above 30 watts, GaN is more attractive than silicon for all of our products. So almost all of our new products now will use GaN, and they are using GaN as we speak. So we are building significant capacity because we think that GaN will offer us a differential advantage over our competitors. And that's already being proven in the cellphone market, but also in the consumer market like TV and appliances and also industrial market, and of course, computer market where we are winning number of designs in notebooks with our GaN technology.

David Neil Williams - Loop Capital Markets LLC, Research Division - VP

Great. That's very helpful. And then lastly, if I can, just kind of thinking about the automotive segment. I know that's a long-tailed design cycle. But have you seen maybe any acceleration in qualifying for -- in automotive, just kind of given the constraints that we're seeing within the market today? Has that helped you at all? Or any difference there?

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

Actually, those short-term issues won't make any difference because the design cycles are so long in automotive. We are working with multiple OEMs and we will know probably next year where we are in terms of design wins. And it will be something like 2024, people will actually see revenue from the traction part of it that is driving the motor because driving the motor takes much longer time to qualify than if you have a power supply within the car. So before that, we will start seeing revenues coming from our power supply chips. For example, we have released automotive version of InnoSwitch. We have released the automotive version of our Qspeed diodes and our LinkSwitch product. All of those will get designed in a lot faster because they go into parts of the car that are not safety related, and therefore, they have shorter design cycles. So we expect to start seeing some revenue, a little bit of revenue this year, gradually increasing. But the big increase will come when we are in the drivetrain.

Operator

Your next question comes from Gus Richard from Northland Capital Markets.

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

Let me offer my congratulations to a strong quarter and year. Just on the GaN products, what percentage of revenue are they now? And sort of what is the growth rate of that product family?

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

Well, last year, it was -- we had said that in 2019, it will be mid-single-digit millions. In 2020, it was just over $10 million. And this year, as I said, we expect it to be more than double, probably as much as triple the revenue, which will be somewhere in the $20 million to $30 million worth of revenue. And then you can calculate what ratio it is to the total revenue.

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

Got it. And then just in terms of the supply of epi wafers for the product, are you well situated for the base wafers?

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

Absolutely. We have no constraints at all on the base wafers.

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

Okay. Okay. You need -- your vendors don't need to add any capacity?

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

No.

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

Got it. And then in terms of seasonality for the year, I know Ross asked about cell phones. Could you talk about your overall thoughts on how the year will play out? Do you expect -- seasonality seems a little bit off these days? Can you give us a little bit of color on how you think it will play out for the full year on the top line?

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

Well, there are a lot of dynamics happening. First of all, 5G is driving power levels up, which is good for us. The fast charging is taking off, which is good for us, which requires even more power. So that distorts. And we are gaining share. We are gaining share from our competitors. And our OEMs are gaining share from Huawei. So there's a lot of multiplying factors. To the best we can estimate, which we can only estimate short term in Q1, we believe our cellphone revenue will grow -- continue to grow. And after that, it really depends upon how this Huawei situation resolves itself. And so we will know in Q2, whether it will continue to grow or maybe the little bit of a softness, and then it's a question of how much 5G is going to start absorbing these fast chargers. So for the whole year, the cellphone revenue should do extremely well in 2021.

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

Yes, what I was trying to get to first -- I was trying to get at the other pieces of your revenue, you expect industrial consumer PC to behave as one would expect in a normal seasonal year? Or will they have similar types of impacts ex-cell phones?

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

It will be a different seasonality because of the pent-up demand in, for example, in consumer goods, which is appliances. Appliances are continuing to grow because I think the appliance companies pulled back too far in Q2, and the demand is very high because people are staying home and they want more convenience at home, so they are buying more appliances. And adding to that, because most people don't want to go to a store to buy an appliance, most of the appliance companies are now selling online, which means they haven't had inventory to be able to serve customers online. It's directly from business to consumer type of sale.

And so what we are seeing is that a significant demand from all major cell phone -- sorry, consumer companies for appliances. So that distorts the seasonality. We won't be surprised if the demand continues through Q2. The second half is always more challenging to predict. We have to believe the total bookings we are seeing right now is higher than the underlying long-term demand. In the short term, there is obviously an increased demand. So like the reports you have read, we also believe the second half could have some kind of an adjustment once we are over this demand bubble, if you will. Having said that, we are very, very confident that we are gaining share, like we always do during downturns. And as a result, we are very confident that we will grow well above the market this year. But I cannot tell you the exact seasonality in the second half.

Operator

(Operator Instructions) Your next question comes from Christopher Rolland from Susquehanna International.

David Wayne Haberle - Susquehanna Financial Group, LLLP, Research Division - Associate

It's David Haberle on behalf of Chris Rolland. And congrats on the terrific quarter here. I guess you guys haven't seen the supply constraints that other guys have. But has there been any kind of knock-on effect where you have a customer who can't ultimately build a device because they can't find other components? Is there any way to gauge that? Or pretty much what you're seeing is good to go on the customer side and that you're meeting your demand at this point?

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

No, you're absolutely right. Many times, they can't procure other components. And that's why we monitor that very carefully. We don't want to ship whatever the customer asks for because, then, all it's going to do is sit in their inventory because they can't get other components and then we've lost our ability to serve other customers. So -- but surprisingly, the customers have been extremely cooperative. We are telling them, okay, we will definitely make sure you'll get the parts you need, but please don't build inventory. And so what we are doing is we are managing it on a daily basis, on a weekly basis, which is a lot of hard work. But I believe that's the only way to manage it so that all customers are taken care of. And I think they understand that. And we have been very successful in making sure that this upswing surge has been served well for our customers. In fact, many customers have told us that. They've had more challenges with other IC companies than with us. They say we are the best supplier. But it takes a lot of work to do that. And we will continue to do that at least through Q1.

David Wayne Haberle - Susquehanna Financial Group, LLLP, Research Division - Associate

Got it. And then for my follow-up -- I think it's a very prudent approach, by the way. For my follow-up, do you guys have some visibility and to when you think you'll allow customers to start building inventory and replenishing the channel? It seems like a nice tailwind at some point for you. Do you have any visibility as to when demand might slow down a little bit and you might be able to replenish that channel?

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

Yes, that's a good question. To the best we can estimate, we think we may be able to replenish the channel a little bit in Q1. It really depends upon what happens to demand after the Lunar New Year. So we have to wait and see. There is always a concern that after the new year, there could be some push-outs and so on. But we have taken all of that into account when we are projecting the guidance that we are saying, which is 150 plus or minus 5%.

So if the demand continues, then it will be difficult to build inventory either in our channel or in our customers'. Now what we don't know is whether our customers have inventory of finished goods that they might have overbuilt, and that's our concern in the second half, is they might have built too many appliances, too many cellphones in anticipation of gaining more share and which may or may not happen. And again, I want to emphasize that, yes, there might be a softness in the second half. But on a relative basis, I believe we will do overperform the analog semiconductor market this year again.

Operator

That was our last question. At this time, I will turn the call back over to the presenters.

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

Okay. 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

Ladies and gentlemen, this concludes today's conference call. Thank you for participating. You may now disconnect.