

## CORPORATE PARTICIPANTS

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

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

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

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

Good afternoon, everyone, and 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, 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 5, 2021. 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. We concluded an outstanding year with another quarter of strong revenue growth, profitability and cash flow. Revenues for the fourth quarter were \$173 million, up 15% compared to the strong fourth quarter of 2020. Gross margins approached the high end of our model and our non-GAAP EPS grew 38% from a year ago. For the full year, non-GAAP EPS grew 92% on revenue growth of 44%. That's well above the revenue growth rate of the analog semiconductor industry, which was on track to grow about 30%. Over the past 3 years, we have averaged 19% top line growth, almost 3x the rate of the analog sector.

The revenue growth in 2021 was broad-based and diversified with all 4 revenue categories growing at least 35%. We gained share across a broad range of end markets, including appliances, smartphone chargers, notebooks and a range of verticals in the industrial category. We have strong momentum coming out of 2021, and we could not be more excited about the opportunities ahead of us in 2022 and beyond.

The secular trends underpinning our growth last year remain in full effect, including energy efficiency, electrification, smart homes and appliances and advanced chargers for mobile devices. GaN was a significant contributor to our growth in 2021, with revenues tripling from the prior year, and we expect strong growth again in 2022. GaN-based InnoSwitch products and complementary products like MinE-CAP are driving a revolution in chargers, and we have a wide range of impressive smartphone and notebook designs coming to market in the months ahead.

We also have new revenue streams coming online this year from motor drives as our BridgeSwitch products begin ramping at appliance customers, and from automotive, with multiple EV design wins going into production later in the year. Our unique foundry model and timely investments in capacity, which enabled us to win market share in 2021, will help us again in 2022 as lead times remain stretched across the industry. Our team executed beautifully last year under challenging conditions, assessing genuine customer needs, building the right mix of parts and keeping customer lines running while guarding against inventory builds and excess ordering. Our inventories are nearly back to our target level, and we are in a great position to support strong demand in 2022.

We will also introduce new products this year that will extend our lead over the competition while expanding our addressable market. We have a pipeline of products incorporating industry-leading technologies, such as our proprietary GaN switches, FluxLink isolation technology, the BridgeSwitch architecture for motor drive and our SCALE gate driver technology for high power. In all, we expect to double our addressable market to more than \$8 billion over the next 5 years with the expansion primarily coming from the appliance, industrial and automotive markets.

We announced one such product earlier this week, a new member of our InnoSwitch 3 family of ICs qualified for automotive use. Our InnoSwitch products are rapidly gaining acceptance in EV power supplies, thanks to their efficiency and their high level of integration, which saves precious board space while enhancing reliability. This latest InnoSwitch device, designed for next-generation 800-volt EV platforms, incorporates a 1,700-volt silicon carbide MOSFET. The challenges of high voltage are new to the automotive market and customers are eager to tap our expertise. As noted earlier, we have multiple automotive design wins going into production later this year, including an emergency power supply for a tier 1 automotive supplier. We have additional designs scheduled for production in 2023 and 2024, and a strong pipeline of design activity involving 7 of the world's top 11 automakers. While revenues will ramp gradually given the length of automotive design cycles, we are excited about our progress, and we are investing in products, people and facilities to make automotive a significant part of our business in the coming years.

Another new revenue stream for 2022 is motor drives. Our BridgeSwitch products drive brushless DC motors, which are being adopted by appliance makers to keep pace with efficiency requirements such as China's new standards for air conditioning as well as recent updates to European efficiency standards. BridgeSwitch ICs offer higher efficiency than incumbent solutions, compounding the energy saving benefits of brushless motors. They also enable faster time to market by reducing component count and integrating safety features that are normally implemented in the system software. This feature alone can save months of delay by avoiding the need for a new safety certification after any software update.

Our leadership in appliance power supplies and our strong relationships at appliance makers around the world puts us in an excellent position to sell BridgeSwitch and expand our content in appliances. We expect our first material revenues in 2022 with 2 designs going into production in the first half at a major air conditioning customer followed soon thereafter by a dishwasher design at another top-tier appliance maker. In all, we expect to be in production this year with at least half a dozen appliance customers, and that number should expand significantly next year.

The current suite of BridgeSwitch products addresses motors up to 400 watts, a market opportunity of about \$0.5 billion, which is growing along with adoption of BLDC motors for water pumps, compressors, fans and other motor applications. A significant portion of our SAM expansion over the next several years will be in motor drive applications with follow-on products addressing higher power levels.

While we're excited about these 2 new revenue streams, which will be an important part of our growth story in the years ahead, we are equally excited about the continued growth in our core markets. We grew our consumer revenues 40% last year through a combination of share gains and expanding dollar content in appliances. China's new efficiency standards for air conditioners were a key contributor, and we'll see a full year's impact of those standards in 2022. Our delivery performance also continues to be a key advantage in appliances as competitors allocate scarce capacity to other end markets.

Industrial revenue grew 35% in 2021, driven by a diverse set of applications, including metering, home automation, lighting, battery powered tools and broad-based industrial. Our growth in industrial market reflects not only the attractiveness of our products, but also our success in reaching smaller customers with online design resources and our efforts to drive higher productivity in our distribution channel.

Revenues from the communications category grew more than 45% in 2021, driven by advanced chargers for smartphones, while computer revenues nearly doubled, driven by GaN-based notebook adapters and high-power aftermarket chargers, such as Anker's NANO-II products. Back in May, we announced that Anker was the exclusive launch partner for our GaN-based InnoSwitch4 chipsets. Last month, Anker's CEO revealed that his company had shipped more than 10 million units of NANO products in 2021 and offered a strong endorsement of our products and customer support.

We expect strong growth from advanced chargers again in 2022 as the market continues to move away from commoditized low-tech designs in favor of faster, smaller, more versatile designs that require advanced semiconductor technologies. We have several high-volume designs scheduled to go into production over the next few months, including a high-power GaN-based inbox charger for a major Chinese smartphone OEM as well as new compact notebook adapters at multiple customers in the PC market. And later this quarter, we will introduce new products targeting ultrafast chargers with power levels in excess of 100 watts as well as a range of other mid-power applications like desktop PCs, power tools and e-bikes. Since ultrafast chargers typically feature multiple charging ports and require a separate power factor stage, they offer a substantially increased dollar content and require high levels of both integration and efficiency.

To summarize, 2021 was an outstanding year for Power Integrations, and we are confident in our prospects for 2022 and beyond. GaN represents one of the most important opportunities ever in power semiconductors, and we are the clear market leader. Smartphone and notebook chargers are transforming from throwaway accessories to high-tech appliances that help our customers differentiate their products. Transportation and tools are going electric, and appliances are adding more electronic features while needing to use less power. IoT and smart home devices need power supplies that are reliable and compact with minimal standby power consumption. And with governments and private sector pushing for lower carbon emissions, our products have a critical role to play in the generation, transmission and efficient consumption of power. Each year, our EcoSmart technology saves enough electricity to power more than 1.5 million homes, and we have been doing this for over 20 years. Our GaN technology will save even more power as it replaces silicon, and our gate drivers are used in solar and wind power as well as high-voltage transmission lines that deliver clean energy to the grid.

## FEBRUARY 03, 2022 - Q4 2021 Power Integrations Inc Earnings Call

Having surpassed the \$500, \$600 and \$700 million revenue milestones in all in the same year, we are looking ahead to the \$1 billion mark. Our addressable market is large and growing, and we are investing in the R&D resources, sales reach and capacity to become a \$1 billion business. And as Sandeep will explain in a moment, we are also underscoring our confidence in the future by investing heavily in our own shares. Sandeep?

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

Thanks, Balu, and good afternoon. We had another excellent quarter from a financial perspective, with revenues above the midpoint of our guidance, gross margin near the high end of our model, healthy cash flows and a significant return of cash to stockholders. Our capital allocation decisions reflect our strong balance sheet, our expectation of continued cash flow growth and the recent divergence between our share price and our financial results. Specifically, we took advantage of market volatility, including the turbulence around our promotion to the S&P Mid-Cap Index, to buy back 2% of our outstanding shares between November and January. In January, our Board allocated an additional \$100 million to the buyback and has also increased our dividend for the second straight quarter, bumping it by 20% to \$0.18 per quarter.

Looking now at the Q4 results. Revenues were \$172.7 million, down 2% sequentially. The communication category was down high single digits, driven by year-end inventory reduction in the distribution channel. Sell-through for the communication category was up more than 15% sequentially, indicating that the end customers' inventories have returned to healthy levels following the overbuild that took place early last year. Computer revenues were down mid-teens driven by softness in PCs, while consumer and industrial revenues each increased slightly from the prior quarter.

On a year-over-year basis, total revenues were up 15% compared to last year's very strong Q4. The industrial category was the fastest grower, up more than 14% driven by metering, home automation and broad-based industrial applications. Consumer revenues were up 30% on continued strength in appliances, driven by share gains, content increases and end-market demand. Computer revenues were also up 30% year-over-year, driven by penetration of the notebook market. Communications revenue were down mid-20s compared to a very strong quarter a year ago when OEMs began building aggressively in an effort to capitalize on the Huawei sanctions.

Revenue mix for the fourth quarter was 35% consumer, 32% industrial, 23% communication and 10% computer. The higher-margin industrial and consumer markets accounted for a greater-than-expected 67% of our mix in Q4, helping drive non-GAAP gross margin to the high end of our model at 54.5%. Also contributing to the increase in margin are manufacturing efficiency, including improved yields and test times.

Non-GAAP operating expenses for the quarter were \$38.8 million, up \$1.8 million from the prior quarter, reflecting increased headcount. Non-GAAP operating margin for the quarter was 32%, while the non-GAAP effective tax rate was 8%. Non-GAAP earnings for Q4 were \$0.83 per diluted share, up 38% from a year ago on revenue growth of 15%.

Cash flow from operations for the quarter was \$47.2 million. Diluted share count for the quarter was \$61.4 million, flat compared to the prior quarter. We repurchased 423,000 shares during the fourth quarter for \$38 million. Repurchases were heavily weighted towards the end of the quarter, so the impact on share count will be seen primarily in the March quarter. As noted earlier, repurchase activity continued after end of the quarter at an accelerated pace, reflecting our price-sensitive approach. In fact, within the month of January, we exhausted the \$67 million remaining on the plan, buying back an additional 820,000 shares. As noted in our press release, our Board has allocated an additional \$100 million for repurchases, which we would begin to deploy next week should the stock price remain in the range of our price volume metrics.

Other uses of cash during the fourth quarter was \$17 million for CapEx and \$9 million for dividends. Cash and investments on the balance sheet totaled \$530 million at quarter end, down \$19 million from the prior quarter. For all of 2021, we returned nearly 60% of our free cash flow to stockholders, including \$74 million in the form of buybacks and \$33 million in dividends.

Looking now at inventories, as Balu noted, we are pressing our advantage on product availability and delivery performance. Our unique foundry model and our investments in back-end capacity have enabled us to build inventories back to 114 days at year-end, up 15 days from the prior quarter and within sight of our target level of 125 days. Channel inventories fell to 6.3 weeks, down from 6.7 weeks in the prior quarter, reflecting sequentially higher distribution sell-through, mainly in the communication category, as well as our preference for keeping inventories in-house to be responsive to customer order patterns.

Turning now to the outlook. We expect revenues for the March quarter to be \$180 million, plus or minus \$5 million. The implied year-over-year increase of 4% at midpoint reflects the exceptionally strong quarter we had a year ago when revenues grew 15% sequentially. I expect non-GAAP gross margin for the first quarter to be similar to the fourth quarter level of 54.5%. End market mix should be less favorable with the communication category showing relative strength, though we expect offsetting benefits from manufacturing efficiencies and higher volumes.

Non-GAAP operating expenses are expected to be \$41 million in Q1, plus or minus \$0.5 million. The sequential increase reflects headcount growth as well as seasonal factors such as FICA taxes and the year-end shutdown that lowered expenses in Q4. The non-GAAP effective tax rate for the quarter and the year should be 8% to 9%.

Finally, I expect diluted share count for Q1 to fall by at least 1 million shares compared to December as a result of our buyback. And now, operator, let's begin the Q&A session.

## QUESTIONS AND ANSWERS

### Operator

Your first question today comes from Karl Ackerman with Cowen & Company.

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

Two questions, if I may. First, on the guidance, your guide is particularly strong, both in terms of revenue and gross margins. There's nothing normal about this environment, but you are growing well above what is typical seasonal for March. So my question is, is the growth mainly coming in March coming from non-communication markets? And as you address that question, are you seeing channel inventory now balanced there? Or are orders still well ahead of your ability to supply?

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

So for the -- in terms of relative mix, the communications will be relatively stronger, as we just mentioned in Q1. But I would say because of our share gains and content increase and our ability to supply, we are seeing significant growth across all 4 markets, and that's one of the reasons why we are growing sequentially in Q1, whereas historically, Q1 has been a slightly down quarter.

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

And Karl, we had expected communications to start coming stronger after Q4. But as you can see, the sell-through was great, but they managed their inventory. So the sell-in as a result was lower, which now you will see because the inventories are balanced, our Q1 will be stronger in communication, but you could see that the sell-through in communications was even stronger sequentially in Q4. But as Balu indicated, I think what we are seeing a positive sign for the full year, even looking ahead is the share gains that we have got and the ability to supply product to our customers has been a real positive. And I think that trend will continue into 2022.

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

Yes. That's helpful. I appreciate that. That dovetails into my second question, which is share gains on the top of share gains. How large of a revenue opportunity do you see BridgeSwitch being over the next few years? I ask because I was under the impression this is one of the products that is allowing you to gain share from 2 competitors that have deemphasized that market.

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

Well, the addressable market for our current product that we have introduced is about \$0.5 billion. As we mentioned earlier, we plan to introduce higher power versions of the BridgeSwitch, which will allow us to expand that addressable market significantly. And so it's a pretty large addressable market, and we are very well positioned in that market, not only because our products are more efficient, but also they have a lot of safety features built in hardware, which is very, very useful in monitoring the health of the motor, which a lot of customers like. And more important is that we have eliminated heatsinks altogether. The incumbent technology uses what's called an IPM—integrated power module—and typically has a significantly large heat sink on it. With our solution, we are so efficient that we don't need any heatsinks at all up to 400 watts with the current solution and we plan to extend that power level without heatsinks significantly in the future.

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### Operator

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

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

Congrats on the strong results and the guide. You talked a lot about the share gain side of things and the additional supply, allowing you to be a lot more aggressive than the peers. So I guess if I thought about 2022 as a whole, will that actually allow you to grow your communications business just given it started really strong last year, but ended, I think, down mid-20s year-over-year. How do you expect that to trend for 2022 as a whole?

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

I think we will grow in all 4 categories. Previously, as you know, as we had guided, we thought the communication and computer category would grow faster. But considering the share gains that we have had in consumer and also the strengths we are seeing in industrial, it clearly appears to us that the mix for us next year is going to be more favorable than what was in 2021. But having said that, I think all 4 categories will go.

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

And I guess a cyclical question for you. There's concerns about behavioral change supply catching up to demand. The fact that you guys have shorter lead times than most because your proactive inventory management gives you a more real-time look at what's happening on the demand side. Earlier in the year in '21, you were cautious because of that, and then you got more optimistic as the year progressed. So what's the update as of tonight as far as those cyclical views?

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

Well, the reason we are more optimistic now is the level of share gains we have gotten in all of the markets. It's very well diversified, which is the best part of it, I think. And in terms of cyclical, I would say Q1, obviously stronger than normal cyclical, but our expectation right now is a little bit early, but we think that we will come back to the normal cyclical from Q2 onwards, which means that we'll have some increase in revenue in Q2 and Q3 and then probably a slight reduction in Q4. That's our best guess at this point.

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**Operator**

Your next question comes from the line of David Williams with the Benchmark Company.

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**David Neil Williams** - Drexel Hamilton, LLC, Research Division - Former Analyst

Congrats on the quarter. Lots to unpack here. But I guess the first question is really on the automotive side. It seems like that has been pulled forward, and I know it's been an area of opportunity for you all. But I think in the past, you kind of looked out and said this will be a little time out, but it sounds like you've made a lot of progress. Just can you maybe give some color around the automotive space in particular and maybe what some of the newer products and the cadence of products that you've been releasing, what that means in terms of the overall revenue profile for the year and then maybe for the longer term?

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

Thanks, David.

What really surprised us is the level of interest in our automotive products that we recently introduced over the last year or two. Normally, automotive takes a long time to get designed in, especially if you're not an automotive supplier, people make you go through a lot of steps to even get qualified. But what we have seen recently over the last year or so is that our products are so compelling. I'll just give you an example, InnoSwitch for an emergency power supply. If you're not familiar with what that means is that electric cars have an emergency power supply that makes sure that if

one of the batteries, whether it's a 12-volt battery that supplies the control systems or the main battery, the 400- or 800-volt battery gets damaged or disconnected. They require that the car be maneuverable and can be brought to a safe stop. And to do that, they have what's called an emergency power supply. And that requires the power supply to work all the way from 30 volts to over 1,000 volts input. And InnoSwitch is perfectly suited for that and trying to implement that any other way requires so many external components. It's such a good solution that when they look at InnoSwitch, they said, my God, this is a perfect solution for that, and it takes far less space. I mean it takes typically like one-half to one-third the space on the PC board, which is an expensive space when you think about it in the automotive terms.

So many of the customers have actually shortened their design cycle, especially in things like commercial vehicles and also non-car type applications where the design cycle can be completely compressed. And we are actually very impressed that we are going to have several designs going into production this year. And the same is true for our LinkSwitch products. They are being used as auxiliary power supplies for many subsystems like, for example, seat heaters, air compressors. This is the air conditioning compressors. And there are many like onboard chargers require an auxiliary power supply. The DC to DC converter requires an auxiliary power supply. What we are finding is our product is so well suited, people are now trying to power many of the subsystems directly from the main battery rather than from the 12-volt battery. And that's a trend that's very exciting to us. So we think the non-car business will start growing from this year onwards. We'll have a small amount of revenue this year, even though many of them are going to production, but it will gradually grow over the next several years. But the car manufacturers will really jump in somewhere in the 2025 range where you'll get a much bigger increase in revenue driven not only by InnoSwitch and LinkSwitch but also by our gate-driver products, which goes into the drivetrain and therefore it takes longer to qualify.

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**David Neil Williams** - Drexel Hamilton, LLC, Research Division - Former Analyst

It's an impressive leap in terms of when we thought you would be designed in there. So definitely great to see. And then maybe if you had talked about the new revenue stream within the appliance market. Obviously, you've had a strong market share there. But I guess, are these new revenue streams from existing clients or customers? Or are there opportunities, I guess, to move into new areas or new customers that you haven't previously served?

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

Well, the new revenue stream from motor control is from existing customers. That's appliance manufacturers. We have very good relationships with them and the air conditioning manufacturers. And so that's a relatively easy market because we know them. We know the customers, they know us and so on. But automotive is entirely new. We will be new to automotive, and this InnoSwitch product is really opening doors for us, especially the latest one we announced, which is the 1,700-volt silicon carbide-based InnoSwitch, which allows you to operate from 800-volt batteries, which is the trend in the marketplace. The cars are going to go from 400 to 800 volt batteries. And when you go to 800 volts, this problem gets far more complicated, and we have the expertise in high voltage to be able to provide a very, very simple and elegant solution that's very reliable and takes very little space and, of course, very efficient, which they care about. They especially care about standby efficiency, which we have very, very low standby, which is an important advantage to make sure that batteries don't discharge on their own. So the automotive revenue is completely new to us, and we are very impressed that customers are coming to us. They are very open-minded about using our products.

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**David Neil Williams** - Drexel Hamilton, LLC, Research Division - Former Analyst

And one more for Sandeep, if you don't mind, real quick. Just maybe on the gross margin, is there any component to the pricing or anything that we should be thinking about that may come out later? Or is this purely driven by the mix shift?

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

Well, I think the way to look at it is, obviously, the mix came in much more favorable than what we expected, and the manufacturing efficiencies were better than what we thought. If you are looking to what will happen in the next year, it's hard to predict. But we expect the trend to be a gradual decline from the starting for the guidance that we have given for Q1. The mix is going to be more favorable than we -- than this year, as I

talked earlier, but we are continuing to see further input cost pressures, which I think will flow as the year goes by. The best guess I have for next year is at this point of time that I can model is somewhere in the 53.5% to 54%.

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**Operator**

Your next question comes from the line of Tore Svanberg with Stifel.

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

Congratulations on another great quarter. Maybe I can start on that last topic on gross margin. So Sandeep, 53.5% to 54%, that's still higher than kind of what we were thinking before. So is that a function of newer products? Or are you still expecting that contribution to be mainly mix driven for the full year, that is not just Q1.

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

So I think -- sorry, the mix is going to be favorable next year, which is kind of helping us very nicely. And when I was -- because when previously we were talking, we thought communication and computer would overshadow the other. But because of the share gains, we think consumer is going to do real well. I'm just seeing really good strength in the industrial side. But we've also made good progress in manufacturing and the volume growth is also going to help with the -- initially, we thought we may have a little headwind with the capacity expansion, but that is going to be less because of the manufacturing efficiency and the volume growth. And lastly, the pricing environment is favorable and we do value pricing. So I think that helps also as part of this whole thing. But I really think it's a combination of effect and the execution we have done.

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

Very good. And Balu, just to clarify, when you talked about the 7 of the top 11 auto OEMs, were those design wins? Or is it that you're working with 7 of the top 11?

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

We are working with them. It's not a design win at all those companies.

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

Very good. And then the last question, you talked about ultrafast and introducing a 100-watt plus product late this quarter. I mean we've seen the market wanting to eventually move to 200 watts and things like that. So how far can you go with the technology -- the GaN technology that you have right now?

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

We can go to very high power levels, but the products we are targeting right now will easily cover what has been anticipated. If you're following USB PD, they have an extended power version, which can deliver up to 240 watts, and we will be ready with that solution before people need it. And that's again, we'll do that without heat-sinking by the way.

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**Operator**

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

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**Gus Richard**

Yes, thanks for taking my question and pronouncing my name correctly. Just real quick, I want to talk a little bit about supply. Remind me how many foundries you work with these days?

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

Let's say, our biggest foundries are Epson and Lapis in Japan. We have a couple of smaller foundries in addition to that. But within each company, we are using multiple of the locations for foundries.

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**Gus Richard**

And do these guys have spare capacity? Or are they getting full as well?

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

Well, they're all running full. But because we have contractual agreements, we have some dedicated capacity, and we have managed the capacity extremely well. So we run it all the time. So when there is a softness in the market, we don't stop running wafers. We build wafers and build our inventory and keep them mainly in wafer form. So it doesn't show up as too much in [inventory] -- in terms of dollar terms. And so we did that in Q2 of last year, I mean, not last year, 2020. And that was very helpful. And you can see now we are building inventory because we can, we can build inventory and we expect to get to our target inventory in the near future. And that will be very helpful for us to handle any upside that might show up this year.

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**Gus Richard**

Yes. And I was actually thinking more the \$1 billion target. Are these foundries going to have to add a shell, if you will? Or you're going to have to add another guy to hit that goal? Or are your existing partners sufficient to reach \$1 billion revenue?

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

We're doing all of that. We are trying to expand within the existing partners. We are in negotiations with them to get more capacity. But we are also adding new foundries. We are discussing new additions. So all of that is going on. We are pretty confident we can build enough capacity to get to \$1 billion, whenever that happens.

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**Gus Richard**

Got it. That's super helpful. And then just on the automotive market, in your early designs for the emergency backup, what's your revenue content in the first designs? And then once you get into powertrain, where do you think that can grow when you get into 2025?

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

I would say with the products that -- excluding the powertrain, our dollar content will be tens of dollars per car. It just depends on how many power supplies there are in a given car, and that seems to be increasing all the time. But when we get to the drivetrain with the board level products, for example, it will be over \$100 a car, maybe a couple of hundred dollars a car. It's still in a flux because the things are changing quite fast in EV. I would say the higher the voltage, like they go to 800 volts, we have more content than at 400 volts. The good news is most of the vehicles are going to 800 volts because there are a lot of savings when you go to 800 volts. And when you go to 800 volts, our products shine even better because we can handle high voltage better than anybody else.

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**Gus Richard**

Got it. And then are you primarily focused on EVs? Or are you doing internal combustion engine vehicles as well?

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

We don't play in the internal combustion vehicles because the voltages are too low. Even the hybrids are only 48 volts. We only play in pure electric vehicles. And when I say vehicles not just cars but also all commercial vehicle buses, trains, you name it, other types of commercial vehicles that are used for transportation of goods.

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**Operator**

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

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

I also want to echo my congrats. Just given the strong guidance for next quarter, I was wondering if you could provide maybe a little bit more color as to sequential changes or force rank the segments? How do you see them playing out?

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

As Balu indicated, I think the biggest driver will be the communications segment and the other segments will be flat or slightly down. But the communications segment will be the biggest one, as I said, the sell-through was very, very strong in Q4, and they managed to keep the inventories low. And as a result, we now feel that the overhang that we've had through the year because of what started in the beginning of the last year is now cleared through, and that's why we feel we'll have a good Q1 for communication.

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

Just to be clear, he was talking about Q1 -- for the whole year, we think all 4 end markets will do very well growth-wise. And the mix is going to be -- if you look at the whole year, the mix will be more favorable on a whole year basis than it was this.

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

It will be more favorable, meaning that on a relative basis, the consumer and industrial and computer will grow faster.

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

Excellent. And I might have missed it, but did you reiterate gross margin at 54% for the whole year? I was just...

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

No, what I said is that the best modeling I can do because the mix will be favorable, but there's further input cost pressures that the best guess I had right now was 53.5% to 54% for the whole year. But I also said from Q1, it will gradually taper down as the year progresses.

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

Okay. And what exactly were those manufacturing efficiencies that were driving...

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**Balu Balakrishnan** - Power Integrations, Inc. – President, CEO and Director

We get yields, test times. One of the advantages of running very high volume is there are always ways to improve efficiency. And one of the things we have done is move to a new test platform, which is a much more capable what we call tester and reduces our test time and test costs. So that's one of the some things we've done. The second one is, it has given us the opportunity to fine-tune our products to improve the efficiency -- I'm sorry, the yield of the product so that we get the lower cost overall.

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

And we got to do this because we continue to see input pressure on our costs. So that's why we have to balance that out, and that's why it's helping us.

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**Balu Balakrishnan** - Power Integrations, Inc. – President, CEO and Director

The other item I would also add is that when you run higher volumes, your utilization is better, utilization of your testers, your assembly equipment, all of that is better, and that also helps.

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

Great job. And Sandeep, you can run my stock portfolio anytime you want, nice purchase this quarter.

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

Thanks a lot.

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

Thanks, Christopher.

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**Operator**

(Operator Instructions) There are no further questions at this time. Joe Shiffler, I'll turn the call back to you.

