Power Integrations Second Quarter 2022 Earnings Conference Call

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

Thanks, Joanne. 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.

Before we get started, I'd like to remind everyone that we will be hosting an Analyst Day on September 8 in New York. Details on a registration link for either in-person or remote attendance can be found on our Investor website, which is investors.power.com.

I'll also mention that 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, net other operating expenses of \$1.1 million related to a patent litigation settlement and an offsetting recovery from the liquidation of SemiSouth Laboratories 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 to our 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.

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Now I'll turn it over	to Balu.
Balu Balakrishnan,	Power Integrations, Inc President & CEC

Thanks, Joe, and good afternoon. Our second quarter revenues were up 2% year-over-year to \$184 million, which was slightly below our guidance range. Nevertheless, our non-GAAP earnings per share grew 24% year-over-year to \$1.03 driven by a significant expansion in our gross margin.

On last quarter's call, we acknowledged the emerging concerns regarding the near-term demand environment, and we noted that we had begun to see cancellations and lower forecasts from smartphone customers negatively impacted by COVID lockdowns and the conflict in Eastern Europe.

The weakness in the smartphone market has been confirmed by many of our peers this earnings season and had a greater-than-expected impact on our Q2 results. Revenues from our communications category were 30% lower sequentially, driven entirely by Chinese handset customers. Revenues from other smartphone OEMs were up slightly from the prior quarter.

Softness in the computer category was also evident but was cushioned by recent share gains in notebooks, resulting in a modest decrease about 5%. Industrial revenues increased about 20% sequentially, while consumer revenues are up high single digits though distribution sell-through lagged sell-in across both categories. Chinese appliance customers were a particular source of weaker sell-through in the consumer category.

While domestic demand in China is reportedly seeing an uptick following the easing of lockdowns, our third quarter revenue outlook calls for a 10% sequential decline at the midpoint, reflecting inventory builds at customers and distributors. Our outlook also reflects macro headwinds affecting the broader demand environment as evidenced by the broad-based slowdown in distribution sell-through.

Those who have followed us for a while know that changes in demand conditions typically affect us earlier than most of our industry peers. You also know that we have historically been among the first to come out of the downturn and that we manage our inventory and supply chain to maintain foundry capacity and to be prepared for the eventual upturn. As in past downturns, we will maintain our focus on long-term growth, continuing to invest in products and people rather than managing to short-term operating metrics.

We remain as excited as ever about our future, thanks to the expanding portfolio of leading-edge products we are bringing to the market and the broad secular trends, enabling us to expand our SAM. These include the electrification of tools and transportation, home and building automation, renewable energy, advanced mobile device charging and the conversion of brushless DC motors in appliances.

We are attacking the latter opportunity with a comprehensive solution, including our BridgeSwitch motor ICs and our Motor-Expert software suite. Motor-Expert includes not only design tools but also control software to drive both single- and 3-phase motors to optimize motor performance and minimize system cost. Integration is no longer strictly a function of hardware but a combination of hardware and software to provide comprehensive protection and preventive maintenance features.

The simplicity of the BridgeSwitch architecture combined with our Motor-Expert software enables rapid design cycles, a capability that has been especially powerful in recent months with many customers forced into sudden redesigns by competitor supply shortages and changes in efficiency regulations.

Our current BridgeSwitch product range addresses motors up to 400 watts, a market opportunity of \$0.5 billion, encompassing applications such as refrigerator compressors, water pumps, range hood fans, air conditioning fans, high-speed hair dryers and ceiling fans.

New efficiency regulations in India are having a significant impact in ceiling fans, which is a sizable market in that country. We recently received our largest BridgeSwitch order to date from a customer providing motors and electronic control solutions to ceiling fan OEMs serving the India market. We're also seeing strong traction at a broad range of major appliance customers where we already have deep relationships, thanks to our leading market position in AC to DC power supplies. In all, we expect to have about a dozen customers in production this year with BridgeSwitch, and that number is set to expand dramatically in 2023.

We are equally excited about our progress in electric vehicle market, where the need for high-voltage semiconductors is creating significant opportunities for Power Integrations.

Our automotive qualified InnoSwitch products are rapidly gaining acceptance at customers in the U.S., Europe, Korea, Japan and China, in particular, the new 1,700-volt version with a silicon carbide switch designed for use in next-generation 800-volt vehicles.

Our strategy in automotive is to land and expand. Our power supply products established a presence at customers and are quickly being adopted as platform solutions, enabling us to then gain access to higher value opportunities such as gate drivers for the drivetrain inverter.

And we are targeting not just passenger vehicles but also commercial and industrial vehicles such as buses, trucks, mining and construction equipment, where the available dollar content per vehicle is in the hundreds of dollars. In May, we launched our SCALE EV board-level gate drivers targeting heavy vehicles. SCALE EV drivers are rated at 1,200 volts to address both 400- and 800-volt systems and are capable of driving IGBTs as well as silicon carbide MOSFET modules.

Automotive is shaping up to be our largest addressable market opportunity as the EV market continues to grow and we expand our portfolio of automotive qualified products. While long design cycles will result in a gradual revenue ramp over the next few years, we expect to be in production this year with several customers, and we are rapidly expanding funnel of design opportunities.

Finally, we continue to make great progress penetrating the market with our highly integrated GaN products, including InnoSwitch, MinE-CAP and ClampZero as well as the recently introduced power factor chip HiperPFS-5. We won a wide range of GaN designs in Q2, including a 65-watt multipurpose USB PD charger for a Chinese handset and notebook OEM and aftermarket designs spanning from 33 to 120 watts. We also noted the introduction of a compact dual-port GaN charger offered as a multipurpose accessory and an inbox notebook charger by a leading personal electronics OEM.

In summary, while the near-term demand environment is challenging and uncertain, we have a playbook that has served us well in the past economic cyclical downturns. We intend to follow it again here, focusing on winning market share and bringing innovative products to market so we can come out stronger at the other end. Sandeep?

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

Thanks, Balu, and good afternoon. While our Q2 revenues were below the range, reflecting the downturn in demand, we nevertheless had an excellent quarter from an EPS and cash flow standpoint driven by a strong gross margin and lower-than-expected OpEx. We expect gross margin to remain above the high end of our target range for the next several quarters, thanks to favorable mix and manufacturing efficiencies and the strength of the dollar versus the yen. And as in past downturns, we are tightening our belt on spending, but we'll continue to invest in the people and products we need to sustain our long-term growth.

I will now quickly run through the key numbers for the June quarter and touch on the outlook before we begin the Q&A. Revenues for the quarter were up 2% year-over-year to \$184 million. Revenues from communication category fell nearly 50% from a year ago, reflecting the recent weakness in smartphones but also the unusually strong demand in the first half of 2021.

Computer revenues were up 15% year-over-year driven mainly by notebooks. Consumer revenues were up mid-20s driven by appliances, while industrial revenues increased nearly 40% year-over-year with strength in a number of verticals, including home and building automation, metering, high-power and broad-based industrial.

As Balu noted, however, sell-through did lag sell-in across all end market categories. Revenue mix for the second quarter was 38% consumer, 35% industrial, 18% communication and 9% computer. The higher-margin industrial and consumer categories accounted for 9 percentage points more than in the prior quarter, driving non-GAAP gross margin up to 58.5%.

Non-GAAP operating expenses for the quarter were \$42.1 million, below our forecast, reflecting a smaller-than-expected increase in headcount. Non-GAAP operating margin for the quarter was 35.6%, and non-GAAP earnings were \$1.03 per diluted share, up 24% from a year ago. Weighted average diluted share count for the quarter was 58.3 million, down 1.8 million shares from the prior quarter.

We repurchased 1.9 million shares during the June quarter for \$158 million. In total, we've bought back about 6% of our shares since November, taking advantage of market volatility as well as the dislocation caused by our promotion to the S&P MidCap Index late last year.

Cash flow from operations in Q2 was \$67 million. In addition to the buyback, other uses of cash were \$13 million CapEx and \$10 million for dividends. Cash and investments on the balance sheet fell by \$116 million during the quarter to \$328 million.

Inventory in the distribution channel rose to 11.6 weeks at the end of June quarter, reflecting the weaker sell-through. Internal inventories rose to 132 days, up 17 days from the prior quarter. As we have said many times before, we are comfortable allowing inventories to rise well above our target level during a downturn as we did in the earlier months of the pandemic when we went as high as 178 days.

We can do this because we have virtually no obsolescence risk with the vast majority of our products, thanks to their long life cycles and fungibility across customers and applications. Building wafers during periods of slack demand ensures continued access to foundry capacity, which gave us a tremendous competitive advantage throughout the period of supply and demand imbalance over the past 1.5 years.

Looking ahead, we expect revenues for the September quarter to be \$165 million, plus or minus 5%. We currently have backlog coverage to within this range.

I expect non-GAAP gross margin for Q3 to tick down slightly to about 58%, reflecting the seasonal slowdown in air conditioning, which will result in a slightly less favorable mix. Non-GAAP operating expenses for the third quarter should be approximately \$42.5 million, essentially flat compared to the June quarter. In light of the weaker demand environment, we have trimmed our expense budget for the second half of the year and now expect full year non-GAAP expenses of around \$170 million rather than the prior expectation of about \$177 million.

The non-GAAP effective tax rate for the third quarter should be approximately 10%, and I expect diluted share count for Q3 to fall by about 0.5 million shares.

And now, operator, le	et's b	pegin	the	O&A.
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Operator
(Operator Instructions) Your first question comes from the line of Christopher Rolland with Susquehanna.
Christopher Adam Jackson Rolland, Susquehanna Financial Group, LLLP - Senior Analyst
I guess maybe for Sandeep. You seem to have a great macro crystal ball. And you guys have talked about going in and seeing some of the weakness early in some of these semi cycles and seeing them earlier on the way out as well. I guess can you talk about maybe where the weakness is, obviously mobile, but where are the parts that have gone into weakness? Where are the parts that are still stable? Would you expect them to go in? And then it's probably too early to be calling anything coming out, but maybe your best guess at this point as well.
Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
Chris, I think as you heard from our script that the China handsets is really where we really saw quite a bit. But the other area that we are watching, and we have talked about in the past that with the whole housing issue that is happening, the inflation factor and all that has a big thing. And obviously, the war has had an impact also. So I think we've been calling this for a bit, and we're seeing it now.
The good part for us, however, as we have said in the past is we've had tremendous share gains. And we typically see this about a quarter or so earlier than others, but we also come out of it much stronger as we have done in the past.
How long the cycle lasts is very difficult to tell because the number of things that are very different this time is not only the macro situation but the inflation factors, the war, which are adding more complexity. Cycles in the past, and you've heard other people talk about this, I had another company which I read talked about that they'll see the inventory adjustment take 2 to 3 quarters.
It's hard to predict. And we this is we had cautioned about the sell-through in our last call, and that caution seems to have come through. The part I think I'd like to leave with is irrespective of this, we've had tremendous share gains. We feel very good, and we've got some very great products coming out. And we feel we're going to come out of this much stronger.
Christopher Adam Jackson Rolland, Susquehanna Financial Group, LLLP - Senior Analyst

Fantastic. And then also, gross margins held up pretty well through all this. I think some of that was a function of mix, maybe some currency on the yen side that you guys were helped by. But any other factors in there? And then lastly, if you could maybe force rank strength or weakness to that 10% for your verticals next quarter if there's some standout verticals there.
Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
Yes. So I think on margin, you pretty much highlighted the mix as the thing that really helped us. The one part that I think which you probably heard, I think that the margin will continue to remain strong because of the slowdown, what has happened is that the inventory levels have gone out. And the cost increases that I talked about in the back half, especially in Q4, will now get pushed out into the next year pretty much. So as a result, we continue to see good I mean, the similar margin as we have predicted for Q3 for Q4.
I think in terms of the revenue for the next quarter and the decline, I think you're going to see the communications maybe down along with consumer. You'll see some strength in the computer side for us. And I think the industrial is also will be a little bit down.
So I think it will be all 3 tapering, but I think the computer segment will do a little better there. But all the others, I think, will taper down. And you'll see it more so in consumer a little bit because of the air conditioning being down and just the whole macro situation and the impact in China.
Operator
Your next question comes from the line of Tore Svanberg with Stifel.
Tore Egil Svanberg, Stifel, Nicolaus & Company, Incorporated, Research Division - MD
First question is on channel inventory. Looks like we've gone from 6 weeks to 12 weeks in about 2 quarters, a pretty steep increase. So obviously, sell-through has weakened quite significantly. I was just wondering if you're starting to see any signs of stabilization.
That was a weird question, right? Because obviously, you're guiding down for Q3. But since you tend to see these things early on, I'm just wondering if you yourself have an opinion about when you expect to start to see some stabilization in the channel.
Balu Balakrishnan, Power Integrations, Inc President & CFO

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Yes. First of all, I think the reason the channel inventory went up is because of the suddenness with which the demand went down. I think both our end customers and our distis were caught off guard. They were making sure that they have enough inventory in case there is a snapback from the lockdowns, but that really didn't happen.

The other challenge, of course, is if you don't sell-through as much, your denominator is smaller, so for the same revenue or the same inventory or higher inventory, it amplifies the number of weeks. So it's -- the number of weeks is a little bit difficult to interpret under these conditions.

In terms of demand, now we believe there is inventory at our end customers. There is inventory at our distributors. And it will take some time for that inventory to burn down. And we are seeing some signs of improvement in Chinese cell phone demand, but we won't see the benefit of that until the inventory is completely depleted.

How long this inventory will last upon the demand, it could -- we think there is a very good chance that inventory will burn through by the end of this year. And depending upon when they start ordering, we may have some pull-in from Q1 because the Lunar New Year this time is earlier, so we'll benefit from that.

So it's hard to predict exactly when it will come back. But I would say it won't come back in Q3. A small amount may come back in Q4, and that is purely from an inventory standpoint.

As far as overall demand, of course, it depends on the macro. And there is obviously challenges around the world because of inflation and so on. But there's also specific challenges in China because of the GDP growth is slowing down quite a bit. And also, there is the challenge of the lockdowns that has impacted the demand, which we thought will come back, hasn't come back. But it could still come back. It could snap back in Q3 or Q4, but we are very cautious about the overall macro demand slowing down.

Tore Egil Svanberg, Stifel, Nicolaus & Company, Incorporated, Research Division - MD
No, that makes a lot of sense. And a question on gross margin, and I understand the drivers near term I'm just thinking a little bit longer term. I know you have a target 50 to 55. You're obviously quite a bit above that. And I know the mix is going to change around from year-to-year, but Sandeep or Balu, I mean, is there a chance that your gross margin will stay at least at the higher end of the range for the intermediate term as we go through this period of weak yen and mix benefit and so on and so forth?
Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance

It's a good question, Tore. I think if you are talking near term next year, obviously, the mix is the wild card. And you know how that can change. But I still believe that with the new products like BridgeSwitch and others, the mix, I think, will still be more towards our richer margins.

Ross Clark Seymore, Deutsche Bank AG, Research Division - MD
Your next question comes from the line of Ross Seymore with Deutsche Bank.
Operator
And overall, worldwide, we have very high share of the top 4 OEMs out of 5. But again, most of the challenge is in China. We are actually benefiting from the non-China customers growing.
So it's a share change, if you will, between major companies. We do have significant exposure in China because China has been very aggressive in adopting faster charging. And we have significant share in 2 of the largest companies in China.
We are already benefiting from that in spite of the fact that there is softness in terms of units, on a relative basis, the dollar value is higher for us even though units are lower. And remember that the softness is almost entirely in the Chinese side of the business in cell phones. Outside of China, our business is actually doing well. It's actually increasing.
Balu Balakrishnan, Power Integrations, Inc President & CEO
You're starting to see more some more share gains. You're starting to see higher ASP products. So I'm just wondering at what point do you start to benefit from those higher ASPs even though the units could perhaps be flat to down?
Great. And just one last question. The communications business has been correcting for a while now. And it's obviously gotten to much lower levels than what it was perhaps. I think the peak was Q2 of last year. And I know that in this segment, you do have some offset.
Tore Egil Svanberg, Stifel, Nicolaus & Company, Incorporated, Research Division - MD
Now with the macro, obviously, since we do value pricing, I don't know what the macro environment will be there, and that can have an impact. But obviously, the increase in wafer cost coming in next year would be a headwind, but the yen is definitely a tailwind. Putting all this together, and if I have to take a gut thing, I believe we will still be slightly above the high end of the range for next year.

I just had a question about the consumer and the industrial areas. I think everybody knew that the communications business and China handset specifically were weak. So while it was weaker than we expected, it wasn't necessarily directionally surprising.

But the consumer and industrial areas are 2 areas, probably in that order, that people are increasingly concerned about having somewhat of a similar impact over the next couple of quarters as macro weighs on those just a little bit later. So I know you talked about the AC market in China impacting consumer a little bit more than the down 10% for the average of the total company in 3Q. But just talk about any concerns you have on kind of later-stage weakness in those areas anything beyond the HVAC weakness in China, et cetera?

Balu Balakrishnan, Power Integrations, Inc President & CEO
So until now, I would say China is the only one which has been impacted. But on the longer run, we are concerned about the overall inflation and the potential impact on GDP across the world.
But I would say the significant concern right now is in China for multiple reasons. One is their real estate market is incredibly weak. As you know, the government is against any speculative purchase of real estate. And in China, until you actually buy the house, you don't put the appliances in. So to that extent, there is headwinds in terms of appliance demand in China.
Now I must say that not all the stuff we shipped into China actually gets used in China. A large portion of it comes out of China. And until now, the demand in other geographies have been very, very stable, I should say. But we are cautious about longer-term impact across all geographies.
Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
For us, this could obviously impact the shorter term, but the market share gains that we have gotten over these last 1.5 years with the ability to supply the innovative products that we have, I believe when this thing turns, we will still come back very strong in this segment.
Ross Clark Seymore, Deutsche Bank AG, Research Division - MD
Got it. What about the industrial side? Most of that China side, I assume you were referring to the consumer aspect. What about industrial for you guys? Same general question.

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

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The industrial, actually, on a relative basis, we have done extremely well in industrial. Even on a sell-through basis, if you compare it to -- compare year-over-year for Q2, we grew about 25% on a sell-through basis. We grew a lot more on a sell-in basis. But as you saw, our disti inventories went up in Q2 across all markets, including industrial.

So I think we are doing very well in industrial. The HBA is going really strong. High power has really come back. If you remember, we were relatively flat on high power. Now we are seeing significant growth in high power.

We have growth in utility meters. We have power tools is doing extremely well. So I think on a relative basis, industrial is doing well. But there is also -- we have a little bit of a caution about the overall macro across all markets.

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

Got it. And then my second question or maybe my third, sorry for that, is back on the disti channel side of things, is the predominance of that in the communications area? And how should we think about your expectations for that channel inventory underneath the guidance that you gave in 3Q?

Are you expecting to take it down in a decent step and the size of the guide down maybe \$20 million sequentially as we look into the fourth quarter, if you think the inventory burn is going to last until then, is that kind of the same sort of bogey that we should think about as you try to normalize the channel inventory by the exit of the year?

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

As I mentioned, the -- all of the category sell-through was weak. I don't think any one of them stands out in Q2. And as far as whether that inventory will stay there or go down, I don't believe in Q3 it will go down very much. But Q4 is when I expect it to go down.

The reason for that is our end customers also have inventory. They have to actually purge that inventory before they pull in from the distributors. So -- and that's especially true in cell phones because they built chargers ahead of phones. And therefore, they always have some level of charger inventory, and they also did not expect the demand to go down so quickly.

I'll give you an example, which is a crazy example. In April, we had one of the cell phone company executives here pushing us to ship more products to them. And literally, in May, the same company decided they have too much inventory, they see a recession coming, and so they wanted to cut the inventory by half, which means we don't see any business for a while.

I mean, that's how quickly this market changed. It's -- I remember when they came here how hard they were pushing us to ship them more products, and we were trying to resist that. As you know, we always try to meet the demand rather than what they're asking for. But we do have to let them have some inventory because they don't want phones ready, but they don't have chargers to go with it because phone is a lot more expensive than the charger.

So this whole thing happened so quickly. I think part of the thing is that they were hoping that after the lockdown, the demand would come back very strongly. And I think they were very surprised when it didn't come back. And this is all specific to China, just to be clear.

Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
And Ross, the other thing is that the Chinese the new year is much earlier. So there's a possibility there. And that's the hypothesis is that they would like to keep a little more elevated just in case there is more demand, and they don't want to again be out of inventory in Q4.
So that's why I think it may be a little more dragged out. And obviously, the sell-through in communication was so low. So yes, the weeks in the channel related to communication is much higher than the others, though everything grew, but it is much more in communication.
Operator
Your next question comes from the line of Matt Ramsay with Cowen and Company.
Matthew D. Ramsay, Cowen and Company, LLC, Research Division - MD & Senior Technology Analyst

I guess I need quite the pause as an introduction there. The first one is around -- obviously, the end markets are changing quickly due to some of the things that have been well documented and you guys have talked about so far on the call. I guess a 2-part question.

One is in that kind of an environment where you guys are taking actions to try to position your company to come out of this when the inventory clears and demand picks back up, are you seeing your competitors act rationally and maybe take similar prudent steps? And the second question that's related to that is -- and maybe the answer is yes, then it's fine. But if not, have you seen any changes at all yet in the pricing environment as you sort of entered this period where inventory is building and maybe sell-through has come in a little bit?

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Balu Balakrishnan,	Power Integrations, Inc President & CEO $$

Okay. Historically, we have been much more balanced during downturns, meaning that we don't do anything drastic. We continue to hire people. In fact, downturns are best time to hire people because you get very good people when other people are -- other companies are laying off people. So that's one thing.

Secondly, we continue to build inventory so that we keep our foundries running, and we can maintain the capacity. And we can do that because we're in a unique business model where we have very little obsolescence risk on most of our products. So we can build a lot of inventory without worrying about obsolescence. And that sets it up perfectly when the demand comes back, which it does eventually. The semiconductor cycles are pretty normal.

And so we look at it long term. And we do judiciously -- of course, we always tighten our belt a little bit, but not at the expense of long-term growth of the company. We continue to invest in hiring people in R&D and sales because we need that for future growth. And we doubled down on design wins, so we can gain share.

And every downturn in the past, we have gained significant share. And that's because we take this as an opportunity rather than as a problem, and we go after more designs. And I always think of this as a great opportunity to gain more share and come out of it stronger. So I can't tell you about what they're doing today, but I can tell you, historically, we have always done better through the downturn. And even in 2008 and '09, we not only grew through the downturn. 2010, we grew 40%. Sandeep will answer your...

Sandeep Nayyar,	Power Integrations,	Inc CFO & VF	of Finance

Yes. Yes, pricing thing, the way I told you, we do value pricing. So obviously, there are some pockets where you're seeing a little bit of that. And that's why when I had the question from Tore, I said, I want to see what the macro dynamics is. But you are seeing some pockets where the value pricing is seeing some back, but it's a little too early to tell.

Matthew D. Ramsay, Cowen and Company, LLC, Research Division - MD & Senior Technology Analyst

Got it. Just as a quick follow-up. I think someone earlier asked a little bit about the gross margin being higher, and you guys answered some of the overall trends. I wonder if you might -- it seems like more weakness in consumer, no question. So I wonder if you might quantify for us the difference in gross margins for the different end markets. If there's anything on a relative basis there, that would be really helpful.

Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
That's one thing, as you know, we have always ranged that we get the highest margin in industrial followed by consumer, followed by computer, and communication is the lowest. And I think the best way to attribute it is look at how the margin changed between what we guided to what we came out in Q3, and that gives you a relative measure of what happens when you have tremendous success in the higher-margin business.
Operator
Your next question comes from the line of David Williams with The Benchmark Company.
David Neil Williams, The Benchmark Company, LLC, Research Division - Senior Equity Analyst
Let me ask a question here. I guess, Balu, you had talked about the significant executive that had the demand in April then slowed in May. Was that just across the cell phones? Or did you see that across maybe other categories as well, which is appliances or any of the other business units you may be in?
Balu Balakrishnan, Power Integrations, Inc President & CEO
I think the suddenness was probably really most significant in China cellphone customers. But I must sawe are seeing, to a lesser extent, a similar reaction in appliances because the demand has come down in China appliances as well.
And they have kept some inventory. As you know, for the last 2 years, they have been struggling with getting enough supply. So as a result, they have built some inventory. And this, again, a reduction in demand is affecting our pull-through from our distributors. So it's not just cell phones, but cell phone is worse than appliances. We are seeing it in both areas in China.
David Neil Williams, The Benchmark Company, LLC, Research Division - Senior Equity Analyst

Okay. Perfect. And then maybe just kind of thinking about the guidance and where the macro is today. I know you said that you're booked for the guidance midpoint. How good do you feel there? Do you think there's any downtime risk to this? Or do you think there's more maybe an upside opportunity here?

Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
Yes. What we did is we said we guided to the range, and there's always the risks. You get some turns business, but you also get some cancellations. So we are watching this very closely. It's the best estimat that we can make.
And the only thing that is, I think, comforting to us is that, yes, with the Chinese New Year being early, people have realized in the past that if they cut it too thin, they don't have inventory. So I think that gives us a little bit of the comfort.
But again, it's we are in very different times right now in a very short period of time. But we have tried our level best to manage the inventory. But even in spite of that, the channel inventory has gone up quite a bit. So it's just the balancing of the 2 quarters and where the Chinese New Year is. That's why we feel we are okay. But again, the macro conditions are changing at a pretty rapid pace.
Balu Balakrishnan, Power Integrations, Inc President & CEO
David, just to add, we said for Q2, we were booked to the midpoint, and you noticed that we came below that. That tells you how unexpected this demand slowdown is. So it may look like we are being conservative, but we are trying to do the best estimate we can because there could be pluses and minuses. It could go either way. That's why our range is a little bit wider this time.
David Neil Williams, The Benchmark Company, LLC, Research Division - Senior Equity Analyst
Understood. You guys are always doing a very good job of on the guidance. So I certainly appreciate that. And then maybe just one last one if I can.
On the PC, you said you'd expect that to be maybe a little bit better next quarter, and you mentioned the notebook specifically. Just wondering if you're seeing anything there that may be improving in term of PC market or maybe more of just kind of a maybe lesser supply and so that demand is kind of pulling through. Just color there would be helpful.
Balu Balakrishnan, Power Integrations, Inc President & CEO
Ves I don't think we see any signs of PC husiness improving It's just that we have won such significant

Yes, I don't think we see any signs of PC business improving. It's just that we have won such significant share in that market. In spite of the weakness, we think we'll grow.

that. That's because we are growing share, and that will amplify in Q3 because of some new design wins And therefore, our forecast is that, that category will grow in Q3 even though the other categories will be weaker.
Operator
Your next question comes from the line of Gus Richard with Northland.
Auguste Philip Richard, Northland Capital Markets, Research Division - MD & Senior Research Analyst
Quick one. What's the normal turns in the quarter for you guys?
Balu Balakrishnan, Power Integrations, Inc President & CEO
There is no it's hard to talk about normal. If you go back 3 or 4 years, we used to have significant turns business within the quarter. I mean, maybe 50%, 60% turns business.
The whole world has changed in the last 2 years. I don't know what normal is anymore. But the best example I can give you is last quarter, we were booked to the midpoint and then we ended up at the lower end of our guidance. And so and we are now booked within our range. So the turns business, the net turns business is not very much, as you can tell.
Auguste Philip Richard, Northland Capital Markets, Research Division - MD & Senior Research Analyst
Got it. Got it. That makes sense. And then over the last couple of years because of the shortage of semiconductors, I don't think you have really passed along cost savings to your customers. Now that people are comfortable with their inventory positions or on the other side of having a little too much, are your customers starting are you planning on doing the normal 5% price reductions going forward?
Balu Balakrishnan, Power Integrations, Inc President & CEO

As Sandeep said, we always price our products based on value. To the extent the discrete components supply becomes easier and the cost on those come down, yes, it will impact on our pricing, but it's all value. It is it will not be driven by the dynamics of the market.
Auguste Philip Richard, Northland Capital Markets, Research Division - MD & Senior Research Analyst
Got it. And then just in looking at the handsets and so to follow-up, I think China has been first to adopt rapid charge, and I think that's kind of close to a standard. I'm just wondering, is there any impact on the attach rate? In other words, I can use my charger from last year's phone, and I don't need to buy one, and people aren't putting them in the box anymore. Is that dynamic having any impact on that business? Or is this just a normal inventory cycle?
Balu Balakrishnan, Power Integrations, Inc President & CEO
I believe it's the latter because in China, the chargers are shipped with the phone. They're in the box. They are constantly increasing the power level to charge the phone faster. So I don't believe that has an impact, at least not in China.
Auguste Philip Richard, Northland Capital Markets, Research Division - MD & Senior Research Analyst
Got it. And in that market, where do you think your market share is at this point?
Balu Balakrishnan, Power Integrations, Inc President & CEO
That's a good question. I don't know whether I have by that geography. I would say overall market share for smartphones, we are probably approximately in the 40-plus percent range on a unit basis. In dollar terms, we are much higher because our ASP is much larger than our competitors, who sell portions of the solution.
Operator
And your next question comes from the line of Tore Svanberg with Stifel.

I just had 2 follow-ups. So first of all, one of the few benefits of raising interest rates, of course, is the impact on your other income line. And Sandeep, I know you have a lot of cash. You obviously talked about buying back stock. But as we go through these next sort of choppy quarters, how should we think about your cash in relation to buying back stock or keeping it on the balance sheet with the higher interest rates?
Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
It's a good question. So as you know, we spent over \$300 million in the last 6 months. And in fact, the average price that we have bought it back is slightly below where we closed. So we've just taken a little pause, but you know we are opportunistic.
We've always been opportunistic, and we are going to be no different. So we just want to see what the choppiness is. And we're going to be, again, opportunistic, and buyback is one of the ways we return value, and that's not going to change.
Tore Egil Svanberg, Stifel, Nicolaus & Company, Incorporated, Research Division - MD
Great. And my second question, and I think this is the first time in more than a year that there hasn't been an auto question on the POWI call. So Balu, you talked about production this year but still a very gradual ramp. At what point will you start breaking out auto revenue? Will it have to reach 10%? And as you do start to see some more production revenue, are you embedding that under what categories? Is that industrial?
Balu Balakrishnan, Power Integrations, Inc President & CEO
Ves Right now it's in industrial I think we haven't decided when we're going to break out. Obviously it

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

Yes. Right now, it's in industrial. I think we haven't decided when we're going to break out. Obviously, if it becomes 10%, I think that will be a reasonable time to break out auto revenue.

In terms of when it will -- the auto revenue will really become material, I would say it will be starting in 2024 because right now, the designs we are winning are short design cycle type of sockets, where you don't need a full safety qualification and so on. So we will start -- we will have a little bit of revenue this year in the low single-digit millions. And that could grow very nicely next year. We have a lot of designs going on.

InnoSwitch is the star. I mean, we -- every customer we have showed InnoSwitch are going to use it. They're either started designing with it, some of them are in production. But everybody loves the product because of the level of integration we bring and the performance we bring.

So that's our door-opener. And then behind that, we have several products that we are getting traction on. And the big change will come when we have our gate driver products designed into the inverter, the main inverter for the motor. So that will not happen until probably '24 because it takes a long time to design that product in.

We also have other GaN-based products we are working on that will open up even more sockets in the car because we can go to much higher power levels with GaN. And so that will add even more SAM. So all in all, I would say automotive will become our largest SAM in a matter of a few years.

Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
Tore, I think what I've said before, 2025 to 2035, it will be the decade for POWI of automotive. So that's where you'll see all this effort that we are talking about to really come about meaningfully.
Balu Balakrishnan, Power Integrations, Inc President & CEO
The reaction from customers has been unexpectedly positive. We thought this will be a very hard market to get into, but the enthusiasm we see from customers based on how compelling our product is in the application is really heartening. And I'm very, very optimistic about this market.
Operator
And we have a follow-up question from Ross Seymore with Deutsche Bank.
Ross Clark Seymore, Deutsche Bank AG, Research Division - MD

Let me ask a couple more quickly here. I want to go back to the cash question that Tore just asked and maybe ask you differently and maybe clarify your answer to him, Sandeep.

It looked like you bought back more in the second quarter, not less. So when you said you were opportunistic and you're taking a pause because of what's going on in the end market, that's completely understandable. But I don't see the evidence of the pause.

But this last quarter, it fell by more than half sequentially. That doesn't seem like you added a bunch of people. I know share price moving around can change things a little bit, but your share price hasn't moved that much either. So is that something that is a structural change? Or how should we interpret that?
Got it. Okay. And then, I guess, a housekeeping question for you. You talked about and you guys have evidenced this through every downturn since I've followed you investing through downturns, coming out stronger, still continuing to hire, et cetera. Not that many other people care at all about stock-based comp.
Ross Clark Seymore, Deutsche Bank AG, Research Division
Ross, it's Joe. The pause refers to the fact that the buyback we did in Q2 actually exhausted the authorization we have, and so we don't have an active authorization at the moment.
Joe Shiffler, Power Integrations, Inc Director of IR & Corporate Communications
If you look back in the last 6 months or 7 months, we got over \$300 million. So and if you look back over the last 10, 12 years, it's like 800. So it's not that we are not going to look at this angle. It's just we're taking a temporary pause. And obviously, with the uncertainty, this will continue to be 1 of the 4 prongs, as I said, in the coming quarters.
Yes. We keep a little bit of powder dry for as we said, we have a 4-pronged approach, whether it be M&A, whether it be internal investments, like not only expense, but right now, we may be growing our inventory that we have done in the past and the dividends that we periodically increase.
Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
company? I know you have a ton of it, \$328 million is a lot. Most other companies have slightly net debt and you have a ton of cash per share. So it's not an issue, but I just wondered where your comfort level is there.

Was that a forward-looking statement? And how much cash in general do you need to run the

correct for the second half. We also have to catch up correction for the first half. So it's a good thing from an investor part of it. It's not good for us, obviously. But a large portion of the stock comp is based on performance, financial performance.
Ross Clark Seymore, Deutsche Bank AG, Research Division
Got it. So with the weaker second half in general, it probably stays at this level, but if, let's say, optimistically return you return to solid growth
Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
No, no, no. I think yes, no, no. Let me correct that. So we have what I would call performance stock short term and performance stock long term, which has cliff vesting especially at the executive level over a 3-year period. So when you have this performance, it also has not only to our performance, but the measure also is linked to how the industry is doing. So when you measure this, there is a true-up that happens. So this reduction is a result of the true-up more than what I would say is the ongoing cost.
Balu Balakrishnan, Power Integrations, Inc President & CEO
Relative performance.
Sandeep Nayyar, Power Integrations, Inc CFO & VP of Finance
Yes. So it's got a cap element of the true-up, which has made it lower than what it will be going forward
Joe Shiffler, Power Integrations, Inc Director of IR & Corporate Communications
All right. Thanks, everyone, for listening. Once again, if you are interested in attending our Analyst Day

on September 8 either in person or remotely, you can find a link to register on our website,

investors.power.com. Thanks again for listening, and good afternoon.

No, no, no. This shows how our stock compensation is tied to our performance. To the extent Q3 and Q4 are lower than we originally expected, we -- the stock comp goes down because we have to not only