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PRESENTATION

Operator

Ladies and gentlemen, thank you for standing by. Welcome to the Qualcomm Second Quarter Fiscal 2022 Earnings Conference Call. (Operator Instructions) As a reminder, this conference is being recorded, April 27, 2022. The playback number for today's call is (877) 660-6853. International callers, please dial (201) 612-7415. The playback reservation number is 13728288.

I would now like to turn the call over to Mauricio Lopez-Hodoyan, Vice President of Investor Relations. Mr. Lopez-Hodoyan, please go ahead.

Mauricio Lopez-Hodoyan - QUALCOMM Incorporated - Vice President of Investor Relations

Thank you, and good afternoon, everyone. Today's call will include prepared remarks by Cristiano Amon and Akash Palkhiwala. In addition, Alex Rogers will join the question-and-answer session. You can access our earnings release and a slide presentation that accompany this call on our Investor Relations website. In addition, this call is being webcast on qualcomm.com, and a replay will be available on our website later today.

During the call today, we will use non-GAAP financial measures as defined in Regulation G, and you can find the related reconciliations to GAAP on our website. We will also make forward-looking statements, including projections and estimates of future events, business or industry trends or business or financial results. Actual events or results could differ materially from those projected in our forward-looking statements. Please refer to our SEC filings, including our most recent 10-K, which contain important factors that could cause actual results to differ materially from the forward-looking statements.

And now to comments from Qualcomm's President and Chief Executive Officer, Cristiano Amon.



Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

Thank you, Mauricio, and good afternoon, everyone. Thanks for joining us today. As we shared at our Investor Day last November, Qualcomm is at the intersection of transformative trends that are generating demand for our broad technology portfolio across virtually every industry. This is creating strong growth and diversification opportunities beyond handsets.

These trends, which include the enterprise transformation of the home, conversions of mobile and PC, merging of physical and digital spaces, the digital transformation of industries, connectivity and processing at the edge, the automotive digital chassis and 5G have only continued to accelerate. They are driving our financial outperformance in a greater-than 7x addressable market expansion to approximately \$700 billion in the next decade.

As you can see from our results, we delivered record revenues of \$11.2 billion and non-GAAP earnings of \$3.21 per share, representing year-over-year growth of 41% and 69%, respectively, both exceeding the high end of our guidance.

In QCT, our chipset business and the growth engine of the company, we saw strength across the entire portfolio. Revenues of \$9.5 billion were also a record and reflect our continued diversification.

Our automotive design win pipeline is now over \$16 billion, up more than \$3 billion since fiscal Q1. IoT revenues grew 61% year-over-year with strong growth across all 3 categories of consumer, edge networking and industrial. RF front-end revenues grew 28% year-over-year, and handset revenues grew 56% year-over-year. These results demonstrate that our growth drivers remain unchanged and our strategy is working.

Our one technology road map across wireless connectivity, advanced edge processing and power-efficient AI is incomparable across our peer group. In fact, advanced processing and artificial intelligence are the fastest-growing silicon content areas for Qualcomm. As such, we can no longer be defined just as a communications company serving one industry, rather, Qualcomm is a leading connected processor company for the intelligent edge serving multiple new end markets and enabling the growth of the cloud-connected economy.

As we continue to expand, we remain on track to meet our Investor Day financial projections, and I will now provide an update on our progress to date.

In automotive, our horizontal platform, the Snapdragon digital chassis is a significant driver of our growing design win pipeline and is increasingly becoming a key asset for automakers. Our digital chassis comprises a full suite of open, flexible and scalable platforms for telematics, connectivity, digital cockpit, ADAS and autonomy and cloud services.

With leading system solutions expertise and capabilities across multiple domains, Qualcomm is fast becoming the preferred industry partner for the auto industry and is well positioned for continued growth. Since our last earnings call, we significantly expanded our Snapdragon digital chassis capabilities. First, the arrival acquisition enhanced our ability to deliver open, fully integrated and competitive ADAS solutions to automakers and Tier 1 suppliers at scale. As a result of the acquisition, we are incorporating Arriver's computer vision, drive policy and driver assistance assets into Snapdragon Ride.

Second, we recently announced a long-term cooperation with BMW to jointly develop and extend BMW automated drive software to the Snapdragon Ride platform. The co-developed solution is scalable and customizable and can be offered by Qualcomm to other automotive OEMs across all tiers.

We also pleased with our multiyear technology collaboration with Stellantis, which will be utilizing our Snapdragon automotive cockpit platforms across the automaker's 14 brands. Upcoming Stellantis vehicles will also be featuring 5G capabilities for telematics systems based on our Snapdragon auto 5G modem RF platforms.

In consumer IoT, Android tablets are becoming collaboration tools and increasingly, demand is shifting from entry-level commodity tablets to premium connected computing devices, a clear validation of the conversions of mobile and PC. We are pleased that Snapdragon 8 Gen 1 inspiring the newest flagship tablets such as the Galaxy Tab S8 series globally.



Additionally, we are growing in premium and high-tier devices with OEMs such as Lenovo, HP and Opel. We're also pleased to see the announcement of the first-ever premium Windows on ARM enterprise focal laptop, the Lenovo ThinkPad X13S powered by the new Snapdragon 8CX Gen 3 compute platform. This new ThinkPad features 5G millimeter wave Al accelerated experiences, advanced camera and audio technology, an ultra-slim, fanless design and up to 28 hours of battery life on a single charge.

We're encouraged by the broad interest in our upcoming products, utilizing our industry-leading CPUs designed by our NUVIA team. We continue to drive the inevitable transition to ARM-based computing while redefining the future of mobile productivity.

In edge networking, we continue to benefit from the demand for global connectivity required for remote work, school and play, and we provide industry-leading solutions, enabling the migration to WiFi 6 and WiFi 8 mesh technologies. We also recently announced the world's first and fastest WiFi 7 commercial solution, which we believe will further extend our leadership position.

With multi-gigabit WiFi performance, ultra-low latency and unmatched spectrum versatility, we believe our WiFi 7 solutions will unlock a new era of advanced consumer and industrial applications. Our 5G fixed wireless access solutions also continue to gain traction as a last mile broadband solution. We now have more than 125 fixed wireless access designs announced or in development by more than 40 OEMs.

We also introduced next-generation features such as stand-alone 5G millimeter wave support in our RF sensing suite to enable operators to extend their 5G service offerings to the home and enterprise.

Industrial IoT experienced the fastest year-over-year revenue growth within IoT this quarter driven by continued demand for both connectivity and advanced processing at the edge. Notably, this quarter, we saw accelerated demand for ruggedized handheld devices for warehousing, logistics and health care industries as well as for robotics platforms.

Going forward, we're actively building an ecosystem of system integrators and channel partners to support the scale of our industrial IoT platforms as they become critical for the digital transformation of multiple verticals.

In handsets, we had record revenues of \$6.3 billion driven by continued traction with leading smartphone OEMs such as Samsung, Xiaomi, Oppo, Vivo and Honor, where Snapdragon continues to be the mobile technology platform of choice for premium and high-tier Android. We now have approximately 75% of the premium tier processor volume for Samsung's Galaxy S22 smartphones, up from approximately 40% in the Galaxy S21.

Samsung's strategy to adopt Qualcomm for the majority of volume is significant and validates our platform leadership as well as consumer preference for the Snapdragon brand. Our Snapdragon mobile solutions continue to define premium smartphone experiences. Let me highlight a few examples from our Snapdragon 8 GEN-1.

In imaging, devices enabled by this platform achieved the highest DxOMark ever, making it the best smartphone camera in the world. In connectivity, our solution features the world's first 5G Al processor in a modem RF system, enabling Al-based performance enhancements, antenna tuning, network selection and more. In Al, our 7 generation Al engine doubles the computational performance versus the previous generation. Our handset strategy, as outlined at Investor Day, is enabling share gains and enhancing our ability to capture the most significant portion of the revenue opportunity.

In RF front end, we continue to drive 5G modem RF leadership. Our fifth generation modem RF system now implements advanced features such as AI integration, millimeter wave and sub-6 dual connectivity in 5G sub-6 care aggregation with FDD and TDD spectrum. Looking forward, in addition to growth in handsets, we're expanding RF front end into automotive and IoT.

In our licensing business, revenues of \$1.6 billion were above the midpoint of our guidance driven by the most valuable patent portfolio in the industry, and we continue to develop and patent new essential innovations for future releases of 5G and beyond. Lastly, demand remains strong across all our technologies and continue to exceed supply. We believe our multi-sourcing and capacity expansion initiatives will continue to provide incremental improvements towards supply throughout the year. With our One Technology road map and demand for our products and solutions



across virtually all industries, we are in an incredible position to continue providing high-performance, low-power computing on-device intelligence and everything wireless. Our plan remains on track, and I'm very excited for the future of Qualcomm.

I would now like to turn the call over to Akash.

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Thank you, Cristiano, and good afternoon, everyone. We're extremely pleased to report strong second quarter results. We delivered non-GAAP revenues of \$11.2 billion, our third consecutive quarter of record revenues and non-GAAP EPS of \$3.21. These results reflect year-over-year increases of 41% and 69%, respectively, driven by strength across all QCT revenue streams.

QTL revenues of \$1.6 billion and EBT margin of 73% were above the midpoint of guidance, reflecting a slight decrease in lower-tier units, offset by a favorable mix. This was another record quarter for QCT with revenues of \$9.5 billion and EBT of \$3.3 billion, an increase of 52% and 111%, respectively, versus the year ago quarter.

We have now doubled QCT EBT dollars on a year-over-year basis in 6 of the last 7 quarters. Additionally, QCT EBT margin of 35% surpassed the high end of our guidance and increased 10 points year-over-year driven by revenue growth and diversification. Handset revenues of \$6.3 billion increased 56% versus a year ago quarter. The upside relative to guidance was driven by increased volume in premium tier and improved supply. We gained share in Samsung's flagship device, the Galaxy S22, demonstrating leadership of our Snapdragon processor technology and our ability to compete with internal chipset initiatives.

RF front-end revenues of \$1.2 billion grew 28% versus the year ago quarter on increased adoption of our products across major OEMs. We saw accelerated growth across IoT and automotive as we align supply to better meet the demand for our products.

loT revenues were up 61% year-over-year to \$1.7 billion primarily on increased demand for our chipsets for connected intelligent edge devices. We saw strong performance across consumer, edge networking and industrial with each of these categories growing by more than 50% compared to the year ago quarter.

We achieved record automotive revenues of \$339 million, a growth of 41% versus the year ago period, driven by launches with our digital cockpit platforms. With the strong adoption of our Snapdragon digital chassis, we have now increased our overall design win pipeline to greater than \$16 billion.

Lastly, during the quarter, we announced a 10% increase in our dividends and returned \$1.7 billion in dividends and stock repurchases. Our strong free cash flow has positioned us to deliver attractive capital returns that are among the highest in the semiconductor industry while maintaining flexibility for strategic investments.

Before turning to guidance, I will provide an update on the Arriver acquisition. On April 1, SSW Partners acquired Veoneer for \$4.6 billion with substantially all of it funded by Qualcomm. SSW Partners then transferred Arriver to Qualcomm and now plans to sell the remaining non-Arriver businesses over the next several quarters.

We expect that Qualcomm will receive most of the cash proceeds from the sale. We estimate Arriver non-GAAP operating expenses of approximately \$50 million per quarter. However, our guidance for the third fiscal quarter does not include this impact since we plan to report Arriver 1 quarter in arrears until the fourth quarter. Further details of the transaction are included in our 10-Q and earnings presentation posted on our Investor Relations website.

Turning to financial guidance for the third fiscal quarter. We are forecasting revenues of \$10.5 billion to \$11.3 billion and non-GAAP EPS of \$2.75 to \$2.95. We estimate QTL revenues of \$1.4 billion to \$1.6 billion and EBT margins of 69% to 73%. Our guidance contemplates global handset units consistent with the exit rate from the second fiscal quarter and assumes the end of COVID-related impact in China by the end of the quarter.



In QCT, we estimate revenues of \$9.1 billion to \$9.6 billion and EBT margins of 31% to 33%. At the midpoint, this implies year-over-year revenue growth of 44% and EBT dollar growth of \$1.2 billion. On a sequential basis, we expect mid-single-digit revenue growth in IoT and automotive and a seasonal reduction in handsets and RF front end.

Our strong forecast for QCT is driven by the same factors which benefited our second quarter, including gains in handset premium tier volume, strong demand in IoT and automotive and supply improvements. We anticipate non-GAAP operating expenses to be up 5% to 7% sequentially, reflecting select investments in product road map.

In closing, we are pleased with our financial results and strong execution as we manage to supply constraints in the current macroeconomic environment. Our QCT handset revenues are on track to grow by greater than 50% in fiscal '22. And we are well positioned for fiscal '23 as we continue to benefit from increased processor content and share gains.

While we strengthen our mobile leadership, diversification is the top priority for the company as evidenced by increasing design win pipeline in automotive and accelerating revenue growth in IoT.

Thank you. Back to you, Mauricio.

Mauricio Lopez-Hodoyan - QUALCOMM Incorporated - Vice President of Investor Relations

Thank you, Akash. Operator, we are now ready for questions.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Our first question comes from Matt Ramsay with Cowen.

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

Congrats, guys, on the strong results. Cristiano, my first question comes on the automotive business. Obviously, there's a lot going on with the Arriver acquisition, the Stellantis deal and you guys talking about a \$16 billion pipeline now. I wonder if we could go back and revisit some assumptions from the Analyst Day. I think you guys had talked about getting to \$3.5 billion in revenue on sort of a 5-year basis. You're running maybe 1/3 of that now, but the pipeline is expanded dramatically. So maybe you could talk a little bit about the visibility on revenue and how you're thinking about the numbers that you laid out at the Analyst Day for that strong automotive growth.

Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

Thanks for the question, Matt. No, look, I think the simple answer to your question, it's looking really good. The way you should think about that is as the cars are really becoming connected computer on wheels, the digital chassis assets of Qualcomm really resonating with carmakers. And we're probably winning ahead even of our original projections. So we feel pretty good about ability to meet what we outlined at Analyst Day.

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

As a follow-up, just on the handset business, I think it's notable that the significant, I guess, share expansion that you guys are highlighting at Samsung. And if you go back to the Analyst Day, I think you guys talked about growing QCT handset revenue sort of in that 12% range either -- even while Cupertino came out of share in the 2023 phone in a pretty significant way. So I guess there were some questions at that time about the



ability to grow through the next 2 or 3 years Android revenue in such a significant way. So Cristiano, are you thinking about the content and share expansion at Samsung as being sustainable? And how is the RF attached on that expansion and share at Samsung trending?

Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

Great question, Matt. Look, I wanted to point it out. It's a pretty good trade actually. Instead of providing a modem, we provide an entire Snapdragon platform with AI, GPUs, CPUs and a lot of silicon content plus RF front end. It's a pretty positive trade, if I can say it that way.

This has been consistent with what we said before. You probably saw that in the making as a lot of the new form factor from Samsung, both the fold and the flip was Qualcomm globally. And I think the GS-22 kind of outlined the strategy of a deeper partnership with Qualcomm. And going forward, we expect our relationship with Samsung only to increase.

So we're very pleased. And I think it reflects that the strategy is working. We've been focused on premium and high, and that's the value share of the Android market and technology investments, our differentiation and even Snapdragon brand matters. And I think that's reflected in what happened with GS-22.

Operator

Our next question is coming from Mike Walkley with Canaccord Genuity.

Thomas Michael Walkley - Canaccord Genuity Corp., Research Division - MD & Senior Equity Analyst

Cristiano, building on Matt's question, just on the smartphone market. There's some investor concern or just industry concern about slowing 5G or Android demand. But it sounds like you're still trying to meet demand with your ability to supply. Can you talk about kind of your design wins into the back half of the year? And how you feel about the supply-demand environment for premium to your Android?

Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

Thanks for the question, Mike. There's a lot in there. I think both how we think about the design as well as supply. So in handsets, it is a good story. I think Akash outlined, we're growing year-over-year for fiscal '22 in the order of 50%. We grew 56% in the quarter. And it's a story of share gains with Samsung as well as if you look at fiscal '22 compared to fiscal 2021, share gains in China as well. And it's -- and we continue to see Snapdragon as probably the synonymous with premium and high Android flagship. The design pipeline is very strong. We've been reporting that as we talk about the number of designs. And I'll let Akash talk about the market. Even though the market -- it is a little bit more soft, we're not that exposed to lower-tier units because of our strategy to be really focused on premium and high and in the value share of the market. Maybe Akash, if you can comment?

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Yes. Mike, from a market perspective, we saw some softness relative to our previous expectations in the March quarter in the lower tier units. But as Cristiano said, a lot of the driver for our revenue growth and our value proposition is very strong at the premium high tier. And you're seeing the benefit of that show up.



Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

So the second question, Mike, on supply. The supply situation is going as we planned. I think contemplating our guidance contemplated into our projections that we made back in Analyst Day. Having said that, you're going to hear the same thing that you're probably hearing from us consistently. We still have more demand than supply across all business.

Operator

Our next question is coming from the line of Samik Chatterjee with JPMorgan.

Samik Chatterjee - JPMorgan Chase & Co, Research Division - Analyst

Congratulations on a great quarter here. I just want to start with Cristiano and Akash, you both mentioned the 50% QCT handset growth for the year. If you can put that in context, we all know the overall market is either flat or down for handsets this year. Just wondering if you can quantify how much of that 50% growth is share versus content growth on apples-to-apples basis. I'm just trying to think about how you would try to sort of capture what -- how much of that growth is sustainable into next year. Then I have a follow-up.

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Samik, it's Akash. So maybe I'll address the question at a higher level in terms of the key drivers there. So first is we talked about Samsung share increase. And so that has helped us at the premium tier. Second is as supply has improved, we've been able to meet more of the demand in China as well. So that's the second key driver. As we've said in the past, as the OEM mix has changed, it has opened up a larger portion of the market for us. And so being able to access that portion of the market is also beneficial.

And then finally, it's -- just the thing to remember is only 20% of the global handset units come from China, right? So the rest of the market, you're still seeing strong demand at premium high tier. And so we've been able to participate in that.

And then finally, from a content perspective, as you know well, when you look at one generation to the next of phones, the amount of computing that consumers are demanding keeps going up. And that provides an opportunity for us, not just from a competitive differentiation perspective but also additional content per phone. And so even if you look at one generation 5G phone to next-generation 5G phone, because of the increase in content on the processor side, you're seeing the benefits show up in our numbers.

Samik Chatterjee - JPMorgan Chase & Co, Research Division - Analyst

And my follow-up, Akash, maybe how you're thinking or sort of baking in the impact of the China lockdowns here, both in relation to demand and any impact on supply that we should think of?

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Yes. So we've looked at it both from a demand and supply perspective. On the demand side, as I mentioned earlier, relative to our expectations, we saw some slight decrease in lower-tier units in China. So we are projecting that forward into the June quarter and where our numbers assume a recovery in COVID-related impact in China by the end of the quarter. But obviously, that's an evolving situation and we're going to continue to closely monitor it. But as I said earlier, China is 20% of the global market. You still have the remaining 80% where we're seeing a lot of positive trends from a consumption perspective with a strong demand for premium high-tier devices.



Operator

Our next question is coming from Stacy Rasgon with Bernstein Research.

Stacy Aaron Rasgon - Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst

I guess, first, in this environment with China and COVID and everything, we've been hearing some players in the market talk about conservatism in their outlook. And I mean this doesn't feel conservatism, but maybe that's wrong. I guess the prior quarters, the original outlook look really strong and then you've been crushing it.

So I guess can you just give us some feeling for the degree of conviction you have in this outlook. And I know you've given us a little bit, not just into June. You even gave us a little bit on some of the end markets into September as well. It sounds like the drivers are there, but can you just maybe give us a little more color on where your conviction levels are as we're sitting here today?

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Sure. Stacy, it's Akash. We obviously take a consistent approach when we guide the quarters going forward. So we've taken the same approach as we have done in the past. Certainly, there is more things that we don't do, given the situation in China and then macroeconomic situation as well. But the demand signals are strong and supply is improving and a lot of the upside that you're seeing is those 2 factors coming together.

Stacy Aaron Rasgon - Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst

Got it. So my follow-up, you gave us some color on handsets. If handsets are up just 50% linked in the second half, that would put them, as you said, down a little bit in June. And you'd probably be up 20% in September sequentially if you just applied 50% year-over-year. So we have a little more color on that in September. Is there any outlook you can give us either qualitative or quantitative for the rest of the business into September?

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Yes. From a September quarter perspective, as you know well, it's kind of the quarter where we start seeing the second inflection point of the year for us, where we have flagship launches late in the August, September time frame going into holiday season. So we still expect that to happen, and that's going to help our performance as we go into those 2 quarters.

Also, if you look at the September quarter, we're seeing strong demand across our diversification plan. So that's playing out as or better than we had expected. And so IoT, automotive and RF front end, we also expect strong year-over-year growth in those areas into the September quarter.

Operator

Our next question is coming from Tal Liani with Bank of America.

Tal Liani - BofA Securities, Research Division - MD, Head of Technology Supersector & Senior Analyst

I have 2 questions. One is on margins. It's -- last quarter was record margin. This quarter, again, much better than expected. Can you discuss the puts and takes of margins and what we should expect going forward? That's number one.

And number two, I just want to understand -- just kind of a follow up on China. Entering the quarter, we thought China is going to be weak. We are also hearing, and I want you to correct me if I'm wrong, that Huawei share loss in China is not materializing, meaning Huawei is still selling in



the high end and many miles away from China. So I would like to know what are the kind of share dynamics in China and what is the overall demand and if you can just elaborate a bit on the Chinese market.

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Sure, Tal. It's Akash. So on the operating margin side, we're obviously very pleased with our margin performance. We guided 32% to 34% and came in at 35%, pretty strong performance. We're guiding 31% to 33% going forward as well. And it's really a combination of the 3 drivers we have discussed before. Revenue forecast with diversification, that's really helping us. Gross margins, as I'm sure you'll see through the numbers. We're doing well there. And then being able to leverage the handset technology into these new markets also make it accretive to diversify.

So it's the combination of those things and consistent with what we've said before. The story is playing out as we would have expected. From a China perspective, you should think of we are participating in the revenue opportunity across all OEMs in China. And so if there's a particular OEM that's winning, Qualcomm would be participating in that as well.

Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

So Tal, this is Cristiano. I just want to add a couple of things. So first of all, the strategy for handsets for us, it's different. We're really focused on premium and high tier. We have been very disciplined how we think about pricing. And we're really building on our technology differentiation, preference for Snapdragon brand. And I think that has had a contribution on the gross margin on the handset business.

But also, we pointed out that in China its represented 20% of the market. The premium tier devices, whether Vivo, Oppo, Xiaomi, Honor, Huawei for 4G as well as devices such as Samsung, they're all powered by Qualcomm. And that is why we've been benefiting of growth in a richer mix of premium and high. We're not that much impacted by the low-tier units. And we've been less interested in commodity units in the handset business.

Having said that, regardless of what's happened in the China market, I think the story on IoT is strong. The story on auto is strong and all of the new business are accretive to margins that Akash outlined.

Operator

Our next question is coming from Rod Hall with Goldman Sachs.

Roderick B. Hall - Goldman Sachs Group, Inc., Research Division - MD

I wanted to come back to the 50% growth in handsets. When we calculate what that implies for Q4, it's about \$1 billion more than we had anticipated for QCT revenues. And I think we were above Street, so a very strong number there. I guess I want to try to ask the visibility question again, maybe in a different way, which is do you -- how much of that revenue is committed? And I'm assuming this would be mainly high-end Android buyers that would be interested in shipping new units at the end of the year given your prior commentary about Apple exposure and so on.

But I wonder if you could just confirm that is Android and then talk a little bit about how much of that revenue is in the bag now and how much still needs to be kind of developed in the order book. And then I have a follow-up.

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Rod, it's the driver of the September quarter is typically consistent with what you would have seen in the past, right? So flagship launches that happen, not just in Android but Apple as well. we see the benefit of that show up in our numbers in that quarter and then going into December quarter. So that's a factor.



Android demand continues to be strong. We have obviously significant demand and visibility in terms of the information we're getting from all of our customers, even with reconciling their demand signal for the market changes. So we're pretty confident as we look forward.

Roderick B. Hall - Goldman Sachs Group, Inc., Research Division - MD

Okay. Great. And then for my follow-up, I just wanted to -- you haven't touched on Europe at all. You talked about a little bit of weakness in China. We picked up some developing weakness in Europe. But I'm just curious what you're seeing there from a demand point of view. It doesn't sound like anything, but maybe give us a little bit of color on what you see going on in the European market from a demand perspective.

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Yes. I think maybe the only -- really thing to highlight that's inconsistent with the way we had seen the market before and the way we had outlined it at Investor Day is the weakness at the lower tier when you kind of step back from that and look at the rest of the market. On a global basis, it's playing out consistent with our expectations.

Operator

Our next guestion is coming from Ross Seymore with Deutsche Bank.

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

A couple of questions. Congrats on the strong results. I wanted to get back to the handset growth and the sustainability of it. The 50% number in this fiscal year is great, significantly above my estimates, just like what Rod just said about his. But as you think about the moving parts that drove that, how much of, say, the \$10 billion SAM opportunity you talked about in China will already have been addressed? And if you've gone from 40% to 75% penetration than the Samsung GS 22, how much more is there? So really, what I'm getting at is how long can you outgrow the handset market by content and market share gains if you're doing so well now?

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Yes. Ross, it's Akash. So when we look forward on the handset side, we still think that there is opportunity to gain share, especially as supply improves. So that would be one driver.

Second is 4G to 5G transition. We have some ways to go on that for the rest of the market. So we should see that play out, and that should benefit us as well.

The third driver is what we discussed earlier, where the amount of processing that's needed. And this is whether it's CPU or GPU, Al camera, audio, video security, each of these vectors are being pushed hard in terms of performance and the competitive landscape between the OEMs. It is demanding that all these capabilities get added to the handset. So that is also helping us from a content increase perspective. And then those are the drivers as we look forward.

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

I guess the follow-up would be on the margin side of things. You guys have done a great job expanding both the gross and the operating margins, especially on the QCT side of things. But I'm a little curious in the near term with your guidance. The overt guidance on EBT is down a couple of points, both on QCT and QTL. But more precisely, it looks like you're guiding the gross margin down a little bit in QCT.



Given the moving parts within that, is there something unique going on? Because I would have thought kind of the diversifying engines would have actually brought the margins up. But it seems like the gross margin is going down 1.5 points, 2 points, something like that.

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Yes. So I think in the quarter that we just reported, we guided gross margin at a certain level, and we came in even stronger than that. And so as we look forward, we're guiding kind of in line with our recent history, more in line with the way we had guided the March quarter as well.

So that -- we could have a potential opportunity based on a mix of products. But the insight that we have right now based on the mix, we think that's a good number.

Operator

Our next question is coming from Joe Moore with Morgan Stanley.

Joseph Lawrence Moore - Morgan Stanley, Research Division - Executive Director

Great. Obviously, you've seen this really healthy environment in the premium to your handset market. But you've also had a shortage. And I wonder, has the shortage contributed to the pricing and margin strength that you've seen in any way as that shortage eases? Do you see more competitive market? And you talked about as your supply gets better, you can take share. Does that imply the more price aggressive? Or are the prices going to be sticky and mix shift is the element to watch?

Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

Yes. Thanks for the question, Joe. This is Cristiano. I think what you have to watch is the amount of processing content that is increasing. It's now beyond a 5G story, just on the premium tier for the next generations of Snapdragon coming up. It's a significant increase in GPU, in artificial intelligence and CPU.

So content on the processor side has been the biggest driver of higher ASPs and gross margin in handsets. The other thing I want to continue to point it out, which is as we leverage our one technology road map to grow in the other business. And in the quarter, 61% growth in IoT. In automotive, we added \$3 billion to the design win pipeline. That's all accretive to margin, highly leveraged from the R&D that we do in mobile.

Joseph Lawrence Moore - Morgan Stanley, Research Division - Executive Director

Great. And if I could follow up on the royalty side. Nice to see that those numbers are solid in the first half of the year. Can you help us put that in the context of the overall supply chain issues that your customers are dealing with? And does that imply if they have pent-up demand, could that end up being better than seasonal royalty strength and just how should we correlate that with what we're seeing on the supply side?

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Yes. So the easiest way to think about that already business is really aligning it to the total handset market and then mix within that. So as you'll recall at Investor Day, we had forecasted 2022 calendar units as flat to calendar 2021. And what we're seeing play out is slightly lower units at the low tier but offset by a stronger mix. And that's the combination of factors that's impacting both the actuals for QTL and our guidance for the next quarter.



Operator

Our next question is coming from Chris Caso with Raymond James.

Christopher Caso - Raymond James & Associates, Inc., Research Division - Research Analyst

I just want to go back to the Samsung commentary and the share gains that you've had there. And of course, at Samsung, your competition is an internal competition there. Can you speak to your level of conviction that now that you've achieved this new level of share within the Samsung Galaxy series that is sustainable, that what allows you to keep this business as you go forward with Samsung?

Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

Condition is very high. And I'll point you to something that I would encourage, I think, you all to observe what's happening in the market. In many of those markets that are now new markets to Qualcomm, Samsung is actively advertising Snapdragon as an ingredient brand with the Galaxy S22. And I think that's a very significant data point. And as I said earlier, I think we're very confident that Samsung relationship is going to continue to be an expanding relationship for us.

Christopher Caso - Raymond James & Associates, Inc., Research Division - Research Analyst

And as a follow-up, I wanted to revisit the notebook market and your intentions on penetrating that with Qualcomm silicon. It's something you spoke about quite a bit at the Analyst Day. Could you give us an update on that and perhaps when would we be able to hear more on that and start to see some impact on that into the results?

Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

No, absolutely. Thanks for the question. We are on track. We have been working with Microsoft for many years. I think Windows 11, as I mentioned before, is for the first time, you'll have full support, including 64-bit emulation on ARM. It's the first time that you actually have a platform, which is ready for commercial and enterprise deployments.

We did -- within the quarter launched with Lenovo, the first enterprise ThinkPad. And we have a number of designs with our 8 CX generation 3. As we think about the next generation, we have been developing our own CPU that's been designed by the NUVIA team. And we are going after the performance tier for focus about high scale in the enterprise. And development is on track, and we expect to have that in late 2023.

Operator

Our next question will come from the line of Blayne Curtis with Barclays.

Blayne Peter Curtis - Barclays Bank PLC, Research Division - Director & Senior Research Analyst

I wanted to ask you, if you look at the first half of the year, I think the 50% growth in handsets, it's pretty much all higher revenue per chipset through your filings. So I'm just kind of curious, as you look at the second half, obviously, the compares on kind of the content get harder. Just how are you thinking about that mix between unit growth, which I think Android units probably went positive this quarter but were down as you -- you're starting with supply. But how are you thinking about the second half in terms of the kind of pull there to grow revenue units, i.e., share or more content?



Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Blayne, it's Akash. So as I mentioned earlier, we're seeing growth in content, which is a driver for us. We're also seeing the share that we picked up at Samsung that we've discussed the strength in China and the improving supply. All of these are combinations that help us in the second half of the year. Also to keep in mind that typically, the new Apple phone launch happens in the fall time frame, and that would be a driver as well.

Blayne Peter Curtis - Barclays Bank PLC, Research Division - Director & Senior Research Analyst

Got you. And then maybe just as a follow-up, IoT, just curious the mix tailwinds you're seeing there, I mean assuming stuff like WiFi 6 is helping, but any color on the tailwinds within the IoT segment?

Akash Palkhiwala - QUALCOMM Incorporated - Chief Financial Officer

Yes. So as we reported, IoT grew -- total revenue grew by 61% year-over-year. So of course, very happy about that. When you kind of unpack it a bit and you look at enterprise, consumer and edge networking, each of those portions of IoT grew by greater than 50% individually. So it's not something that's concentrated in an area. It's very broad growth.

As Cristiano mentioned in his prepared remarks as well, that the strongest growth came from the enterprise channel, which was really good for us. I think that's an area that the SAM is effectively unlimited. There's a lot of digital transformation that needs to happen. And our ability to expand our presence there and participate in it is a tremendous driver for us long term.

Operator

That concludes today's question-and-answer session. Mr. Amon, do you have anything further to add before adjourning the call?

Cristiano Renno Amon - QUALCOMM Incorporated - President and Chief Executive Officer

Yes. Thank you. Thanks, everyone, for joining us on the call today. I also like to take this opportunity to thank the hardworking, dedicated brilliant Qualcomm employees, thank all of our partners. And I just wanted to say why we love all the questions about handsets and handsets always going to be a very big part of our business. I wanted to point you all that the Qualcomm is changing from a communications company for the mobile industry into really a connected processor company for the intelligent edge.

Even how we think about handsets no longer about modems. And in the quarter, we're super pleased that IoT alone was \$1.7 billion. If you look at the IoT plus auto combined plus our RF business in excess of \$3 billion, and we're just busy executing on one of the biggest opportunities in our history. Thank you very much.

Operator

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



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