

REFINITIV STREETEVENETS

EDITED TRANSCRIPT

QCOM.OQ - Q3 2021 Qualcomm Inc Earnings Call

EVENT DATE/TIME: JULY 28, 2021 / 8:45PM GMT

OVERVIEW:

Co. reported 3Q21 non-GAAP revenues of \$8b and non-GAAP EPS of \$1.92. Expects FY21 non-GAAP EPS to be \$8.24. Also, expects 4Q21 revenue to be \$8.4-9.2b and non-GAAP EPS to be \$2.15-2.35.

CORPORATE PARTICIPANTS

Akash Palkhiwala *QUALCOMM Incorporated - CFO*

Cristiano Renno Amon *QUALCOMM Incorporated - President and CEO*

Mauricio Lopez-Hodoyan *QUALCOMM Incorporated - VP of IR*

CONFERENCE CALL PARTICIPANTS

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

Brett William Simpson *Arete Research Services LLP - Senior Analyst*

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

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

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

Pradeep Ramani *UBS Investment Bank, Research Division - Equity Research Analyst of Semiconductors*

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

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

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

Srinivas Reddy Pajjuri *SMBC Nikko Securities America, Inc., Research Division - Research Analyst*

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

PRESENTATION

Operator

Ladies and gentlemen, thank you for standing by. Welcome to the Qualcomm Third Quarter and Fiscal 2021 Earnings Conference Call. (Operator Instructions) As a reminder, this conference is being recorded, July 28, 2021. The playback number for today's call is (877) 660-6853. International callers please dial (201) 612-7415. The playback reservation number is 13720943.

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 - VP of IR

Thank you, and good afternoon, everyone. Today's call will include prepared remarks by Cristiano Amon and Akash Palkhiwala. In addition, Alex Rogers and Don Rosenberg 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, 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 CEO

Thank you, Mauricio, and good afternoon, everyone. Thanks for joining us today. This is an amazing time to be part of Qualcomm. The need for our technologies and products has never been more evident. We are seeing demand across virtually every industry because our products and technologies are essential ingredients that enable digital transformation in the cloud economy. We are leading and expect to continue to lead in mobile. In addition, we also expect to lead the evolution of the connected intelligent EDGE by transforming connectivity and processing in cars, the enterprise, the home, smart factories, next-generation PCs and tablets, XR, wearables and many more. This is the foundation of our revenue diversification strategy.

The strong performance in our business has led to fiscal third quarter revenues and earnings per share that exceeded the high end of our guidance. Most importantly, we are on track to realize approximately \$10 billion in combined revenues across IoT, RF front-end and automotive in fiscal year '21, validating the positive financial impact of our revenue diversification strategy.

Let me provide you now with some additional details. The foundation of our IoT strategy is EDGE connectivity and processing for the growing cloud-based economy. In consumer, we're seeing strong demand driven by a consumer electronics upgrade cycle and growth in emerging product categories such as XR and wearables.

In EDGE networking, we had another great quarter with continued momentum driven by the enterprise transformation of the home and the second wave of enterprise demand driven by return to the workplace. We're also seeing rapid adoption of Wi-Fi 6 and increased demand for both 4G and 5G mobile broadband devices. In industrial, our product offerings are purpose-built for key verticals, such as transportation and logistics, warehousing, video collaboration, smart cameras, retail and more. We are at the forefront of enabling this new ecosystem and also making 5G for industrial applications a reality. We are becoming the connected intelligent EDGE partner of choice.

As demand for automotive solutions increase, we're pleased to report that our automotive revenue design win pipeline has reached approximately \$10 billion. And based on our third quarter results, our annualized automotive revenue run rate is now over \$1 billion. This reflects continued traction across global automakers and Tier 1 customers. Our automotive telematics and connectivity platforms, digital cockpit and C-V2X solutions are at the intersection of key automotive industry trends such as the continued growth of connected vehicles, the transformation of the in-car experience and vehicle electrification. As the digital chassis becomes one of the most important assets of automakers, we remain well positioned for continued growth as a leading technology partner for the industry.

In RF front-end, we believe we are on track to become the largest smartphone RF front-end supplier by revenue. Looking forward, we expect to have technology leadership across virtually all handset RF front-end components while continue to lead in modem to antenna system performance.

Now I will provide an update on 2 key drivers for our handset revenues. First, we continue to be positively impacted by the growth in 5G and changing OEM landscape, resulting in the expansion of our addressable handset opportunity. Our Snapdragon 8 series mobile platforms have shown significant design win momentum. More than half of our 5G smartphone design wins to date are using our 8 series and total design wins for Snapdragon 888 increased more than 20% quarter-over-quarter.

We're also seeing strong traction with our Snapdragon 7 series mobile platforms with nearly 40 new devices shipped or announced during this last quarter alone. Based on our design win traction and performance of our customers, we have increased confidence in growing our handset revenues. Snapdragon premium and high-tier solutions remains synonymous with Android flagship mobile experiences.

Second, we're still on track to materially improve supply by the end of the calendar year. We're securing incremental capacity across both leading and mature nodes and optimizing the allocation of our products across the global supply chain. We're also making progress with our multi-sourcing initiatives. In fiscal Q3, the Snapdragon 778G, the first of several products from our multi-sourcing initiatives was commercialized in record time and is now shipping in volume. Additional products from our multi-sourcing initiatives will be commercialized in the coming months. I would like to thank our employees, our suppliers and our customers for helping us navigate the challenging supply environment.

In our licensing business, our third quarter results reflect the strength of our patent portfolio and the stability of our licensing program. We are a global 5G IP leader with more than 150 5G license agreements signed to date, up from more than 130 last quarter. We continue to develop and patent new essential innovations for future releases of 5G and we expect 5G to have a longer life cycle than prior generations due to its broad application across multiple industries.

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

Akash Palkhiwala - QUALCOMM Incorporated - CFO

Thank you, Cristiano, and good afternoon, everyone. We are pleased to report another exceptional quarter in a challenging environment as we continue to execute on our priorities including 5G adoption, revenue diversification and operating leverage. Our third quarter results were above the high end of our guidance with non-GAAP revenues of \$8 billion and non-GAAP EPS of \$1.92. These results reflect 63% year-over-year increase in non-GAAP revenues and more than doubling of EPS, driven by strength across QCT and QTL including a partial recovery from the impact of COVID in the year ago period.

QTL revenues of \$1.5 billion and EBT margins of 71% were above the midpoint of our guidance. These results reflect the impact of a stronger mix offset by lower-than-expected units in China and India. QCT revenues of \$6.5 billion and EBT margins of 28% were above the high end of our guidance. EBT of \$1.8 billion nearly tripled versus the year ago period on revenue growth of 70% and 12 points of EBT margin expansion. Handset revenues increased 57% year-over-year to \$3.9 billion, driven by the adoption of 5G products in premium and high-tier devices across all major OEMs. Combined, RF front-end, IoT and automotive revenues accounted for approximately 40% of total QCT revenues within the quarter and grew 1.6x faster than handset revenues year-over-year.

RF front-end revenues of \$957 million more than doubled year-over-year on the strength of our broad product portfolio and customer traction. As a reminder, our RF front-end revenues include power amplifiers, trackers, antenna tuners, filters, diversity and millimeter-wave modules and excludes revenue from RF transceivers. IoT revenues grew 83% year-over-year to \$1.4 billion, an increase of approximately \$100 million versus guidance. The outperformance was driven by demand across consumer EDGE networking and industrial platforms. Automotive revenues of \$253 million grew 83% year-over-year on the adoption of connected cars and expansion of digital cockpit revenues. Our increasing design win pipeline now puts us on track to exceed the 2024 revenue target outlined at the last Investor Day.

Turning to our guidance for handset units and fourth fiscal quarter. For calendar 2021, we're maintaining our forecast for high single-digit growth for global 3G, 4G, 5G handsets, including 450 million to 550 million 5G handsets. Given the strong adoption of 5G in developed regions in China, we have a bias towards the high end of our 5G forecast. In the fourth fiscal quarter, we are forecasting revenues of \$8.4 billion to \$9.2 billion and non-GAAP EPS of \$2.15 to \$2.35. In QTL, we expect revenues of \$1.45 billion to \$1.65 billion and EBT margins of 69% to 73%. In QCT, we expect revenues of \$7 billion to \$7.5 billion and EBT margins of 29% to 31%. At the midpoint, this implies year-over-year revenue growth of 46% and EBT dollar growth of 114%.

The strength of our QCT forecast reflects sequential growth across all revenue streams, including premium and high-tier device launches and operating leverage benefit from extending our mobile technology and investments across IoT and automotive. Lastly, we anticipate non-GAAP combined R&D and SG&A expenses to grow 2% to 3% sequentially.

Based on the midpoints of our fourth quarter guidance, I would like to emphasize some key metrics for fiscal 2021. We expect non-GAAP EPS of \$8.24, nearly doubling relative to fiscal 2020. Within QCT, we expect year-over-year revenue growth of \$10 billion and operating margin expansion from 17% in fiscal '20 to 28% in fiscal '21. With our continued focus on diversification, we are forecasting RF front-end, IoT and automotive combined revenues to grow from \$6 billion in fiscal '20 to \$10 billion in fiscal '21. We expect to exit the fiscal year with a strong product road map, expanded design win pipeline and increased customer traction.

Before I finish my prepared remarks, I'd like to highlight a couple items. As part of our ongoing ESG efforts, we recently started purchasing 100% renewable solar energy for our San Diego headquarters, which will significantly reduce our annual greenhouse gas emissions. Lastly, we'll be hosting our Investor Day in New York on November 16, where we will provide an update on our long-term strategy and financial outlook.

Thank you, and I'll now turn the call back to Mauricio.

Mauricio Lopez-Hodoyan - QUALCOMM Incorporated - VP of IR

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

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Our first question is coming from the line of Mike Walkley with Canaccord Genuity.

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

Congratulations on the strong results. I just wanted to focus on the QCT margins. While June is seasonally a softer quarter with Apple back in the model, the margins came in above your guidance and you're guiding to 30% sequentially. Could you, Akash, maybe provide any estimates or supply constraints or expedited shipments? Did that adversely impact guidance at all? And is 28% EBT margins, is that now good to think of as a floor? And if not, what are some puts and takes that might move it lower over time?

Akash Palkhiwala - QUALCOMM Incorporated - CFO

Sure, Mike. Thanks for the question. Really, when you look at our operating leverage performance in the year, we're pretty happy with the way we've seen the operating margin expansion with revenue growth. If you look at what happened in the third quarter, we had a guidance midpoint of 25%. We came in at 28%. And so that's on the strength largely of revenue coming in higher and then strong gross margin performance as well. And then now we are forecasting a midpoint of 30% in the fourth fiscal quarter.

So really, when you think about it, going forward, we plan our margins around revenue scale and R&D investments. And the trick really for us is to optimize those 2. As we mentioned in our prepared remarks, as we exit the fiscal year, we feel like we're in a very strong position from a design win perspective to continue to grow revenues. And as we optimize investments against it, I think we have an opportunity to continue to expand our operating margins.

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

Great. And just for my follow-up, maybe for Cristiano, just focusing on the IoT business, you have an impressive 83% year-over-year growth. Maybe you're going to save this for the Analyst Day, but how should we think about what's a reasonable CAGR for this business? And how much of the business today is 5G and what could 5G do in terms of growing the IoT business?

Cristiano Renno Amon - QUALCOMM Incorporated - President and CEO

Thanks, Mike. That's a great question. We're very excited about this business for a number of reasons. First, is very diversified. There's a lot of things in our IoT segment. It has consumer, it has networking and it has industrial. And what we see is really secular growth trends, which is all based to an accelerated digital transformation. And we are going to provide a lot more details about how we think about growth rates of this business in our Analyst Day. It is one of the largest SAM expansion opportunity for Qualcomm. It is highly diversified and it has not only higher growth rates than handsets. I think Akash outlined a 1.6x our non-handset growth rate, but also it's accretive to margins and create operating leverage. So stay tuned for more, but we're very happy about what we see with IoT right now.

Operator

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

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

I guess for the first question, maybe you could talk about what generated the upside in the quarter as compared to your expectations. Was it a matter of getting more supply? Because I know supply constraints were a big concern coming in. And then if you could talk to us about the status of those supply constraints going into the end of the year. You talked about getting some additional supply. Does that benefit the December quarter? Where does that supply come farther out in time?

Akash Palkhiwala - *QUALCOMM Incorporated - CFO*

Chris, it's Akash. So let me try to answer both of your questions, and I'm sure Cristiano can add comments to it. For the third fiscal quarter, as you know, our guidance midpoint was \$1.65. We came in at \$1.92. And really, most of the upside was driven by QCT. We did come in slightly stronger on QTL, which was really just a trade-off between slightly lower units in India and China, the low tiers, but offset by stronger product mix, especially with 5G in various regions, so that helped us.

Going over to QCT, what we really liked about the growth that we saw in the quarter is really we saw strength across all the different revenue streams. So it's not just handsets, but also IoT and RF front-end and auto. And within that, we had a stronger mix -- product mix that helped us. And as we just discussed on the IoT side, significant upside, \$100 million higher than the revenue guidance we had given. So that helped as well.

And then maybe the last thing I'll highlight is the gross margin performance. We're pretty happy with the gross point in performance in the quarter. So those were kind of all the key factors that contributed to it.

Turning over to supply. As we said in Cristiano's prepared remarks, consistent with what we provided last time, we continue to expect that supply will improve materially by the end of the year. And it's really a combination of 2 drivers. We're seeing multi-sourcing initiatives that we put in place over the last several months. We are seeing the benefit of that as we can use available capacity across the foundries. And then the second is really previously planned capacity builds with some of our suppliers that comes online towards the end of the year as well. So both of those initiatives that we have previously discussed are in play, and that's helping us.

The first one of our multisourcing product, we recently commercialized and we have a couple more coming up. So that's really -- your seeing some of the benefits of those initiatives in our September quarter guide, and we'll see even more benefit in the December quarter guide.

Cristiano Renno Amon - *QUALCOMM Incorporated - President and CEO*

Chris, this is Cristiano. And the only thing I would like to add is, in spite of having great results, both revenue and EPS, all exceeding the right end of our guidance, we still have demand outpacing supply. We're -- we have more demand than supply across all of our business. And as you look at our guide in the next quarter, it's consistent with the statement we made that we see material improvement in supply to Qualcomm by the end of the year, and that's great news. And -- but overall, we continue to see strong demand in every single business outpacing supply.

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

That's very helpful. For my follow-up, I wanted to address one of the investor concerns to give you the opportunity to address it, and that's the modem socket at Apple. And of course, Apple has expressed that they're also working on their own modem. So that's a concern of investors. I know that being Apple, it's -- you're limited in what you can say on that. But I guess I wanted to hear what you could say on it. And perhaps if you could talk about perhaps the magnitude of that risk. If Apple were to take that path, what would it mean for Qualcomm?

Cristiano Renno Amon - QUALCOMM Incorporated - President and CEO

Thanks for your follow-up question. Two answers for you and not any different than what you would expect from Qualcomm. I think the very first one is, we're very happy with our relationship with Apple. We're just on her first phone. We have other phones to go, and we're very happy with the way things are progressing. At the end of the day, you should always think of Qualcomm, we have always been really focused on cellular technology, the first with every new generation of wireless and as long as modem continue to be relevant, there's always going to be a place for Qualcomm in this business.

The second part of the answer, which I think is the most important and an opportunity to address investor concerns is the biggest opportunity for Qualcomm in mobile is the changes that are happening in the mobile landscape right now. As a matter of fact, this quarter, Xiaomi is now the #2 OEM in award and shipments. And we see this shift in OEM market share create an incredible opportunity for us. Snapdragon became synonymous with Android premium and high tier. That is how we're going to go faster than the market and incredible opportunity for revenue and earnings, looking at the whole value of the Snapdragon platform. We're super focused on executing on this opportunity, and it's going to be one of the key drivers of growth in Qualcomm handset strategy going forward.

Operator

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

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

Congrats on the results. Just -- maybe I wanted to start off here on the RF -- results on the RF side and really great progress there. It does sound like you're on track and targeting to become one of the largest RF suppliers. Just if you can give us more of an update. I know you do it more annually, but update on where you stand in terms of share rate with some of the incumbents there. And what's driving the confidence here, particularly as you go in to heavy period of design wins and launches? What's driving the confidence about getting to that pole position in that market? And then I have a follow-up as well.

Akash Palkhiwala - QUALCOMM Incorporated - CFO

Samik, it's Akash. Thanks for the question. Overall, on the RF front-end side, the starting point for us, obviously, always is having the right product portfolio. And so over the last 3 years, we've been investing in the breadth of the portfolio. And we are in a very good place. I think as you look forward, not only are we the leaders in the modem to RF end-to-end system solutions, but also each individual component within the RF front-end, we feel like we're in a very competitive and strong product position.

The second is just the design win pipeline that we have in front of us. We have great relationships with the OEMs in the mobile industry. And so that relationship then extends into providing an end-to-end solution for them. And so as we look forward and based on our conversations, the commitments we have from the OEMs on the designs, we feel very confident that we have an upward trajectory going forward.

And then finally, in terms of scale, really, when we look at the scale within handsets, we already feel like we're maybe the largest player in the industry in RF front-end. And the opportunity for us is, as 5G expands outside, how do we take our position in the handsets, while we continue to grow within handsets, but also take it outside and grow in other areas.

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

On my -- for my follow-up, Akash, you talked about the growth in handsets. Just kind of thinking a bit more longer term into next year, how should we think about what's the primary driver here? Is it still content increase as you get on 5G phones? Or is it really the \$10 billion Huawei TAM that you've talked about? And in that context, can you talk about MediaTek's products and competitive landscape there, how that's evolving?

Akash Palkhiwala - QUALCOMM Incorporated - CFO

Yes. So maybe I'll address the first part and then Cristiano can address the MediaTek competitive landscape. Overall, I think the answer to your question is all of the above, right? We clearly have a long ways to go within 5G. We're at the front end of it, and we're going to see the rest of the tiers transition over as well. And as that happens, we still think the metric that we gave previously of a 1.5x multiplier on our revenue and margin opportunity still holds.

In addition to that, as you're seeing the changing OEM landscape is benefiting us with our customers winning share. And as that happens, when you combine that with our product portfolio within 5G and design commitments, from our customers, especially in the premium and high tiers that positions us to grow significantly as we move into fiscal '22. Maybe a quick data point to give on Honor. They are in the process of launching 3 phones with us. One is a premium tier Snapdragon 888 phone and then 2 in the high tier. And so it's just an example of how we are expanding our customer base.

Cristiano Renno Amon - QUALCOMM Incorporated - President and CEO

Samik, so really simple answer, not to talk about MediaTek, but we think that there's plenty of opportunities for growth for us and other companies in the changing landscape. What is really important for Qualcomm and I'll give a couple of metrics. One, outlined by Akash. Not only we have a strong road map, but we have customer commitments to premium and high-tier designs for Qualcomm. The total design wins for Snapdragon 800 increased 20% quarter-over-quarter, and of our total 5G design wins 1/2 of the design is Snapdragon 8 series.

So that in -- it's a clear indication about Qualcomm opportunity in the premium and high where we can capture the majority of the value of the market. And we look at the growth of handset segment, I know we talked a lot about the growth outside handset, but handsets up \$6 billion year-over-year. Q3 '21 handset revenue up 57%. So that's a clear indication that we are in a good position. We see this as one of the largest growth opportunities we have for the handset business, and we'll continue to be executing into this new TAM with premium and high-tier devices.

Operator

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

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

I guess as my first one, I wanted to ask a question on gross margins to Akash. It's impressive that you guys grew your gross margin 70 basis points sequentially despite the QCT side of the equation dropping in your mix. So I just wanted to get into a little bit about what's driving that upside in gross margin in the quarter?

And more importantly, structurally going forward, given the new markets you're entering into the position you guys have in the market, is there anything structurally that would keep you from getting a gross margin more aligned to kind of the even the mid-50s range where a lot of your fables peers currently reside.

Akash Palkhiwala - QUALCOMM Incorporated - CFO

Ross, thanks for the question. Yes, as I said earlier, I think, pretty happy with how we did on the gross margins. It's really a combination of a couple of things. One is just having a stronger mix of products. And so as we see more adoption of our solutions at premium and high tier, that helps our percent gross margin profile in addition to dollar margins. The second is really mix of businesses, and that leads into your second point is as we grow into these other areas, automotive and IoT, our margin profile at the gross margin level help is -- that growth helps the gross margin profile. And so that's a key factor for us going forward, as you rightly noted.

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

And yes, I should have clarified the mid-50s gross margin would be for the QCT side, not overall. But I guess, as my follow-up question separately, whether it's Cristiano or Akash, how should we think just pluses and minuses for the calendar fourth quarter. You have a lot of different dynamics, the timing of premium launches, new launches from the Huawei Honor China ecosystem supply coming on board. So just a lot of different puts and takes that could make historical seasonality really be thrown out the window. So any sort of just even directional color there on those puts and takes will be helpful.

Akash Palkhiwala - *QUALCOMM Incorporated - CFO*

Sure. So as you know well, it's a seasonally strong quarter for the company overall. And let me just maybe quickly hit the 2 businesses. Within QTL, we've said in the past that we expect the holiday quarter to be around \$1.7 billion range. So at this point, we're not seeing anything different at this point to give separate data points. On the QCT side, we expect the seasonality to be a favorable thing for all of our businesses, so not just handsets, but RF front-end, IoT and auto. And so we'll see a typical seasonal benefit.

Within handsets, obviously, we're getting the benefit from the launch of new handsets that happened during that time, especially in the premium and high tier and then some supply improvements coming into the picture as well. The one thing to keep in mind, as a reminder, last year, we had a higher-than-normal sequential increase from September to December quarter. And that was obviously because of 2 reasons that we would not have this time. First is Apple coming back as a customer to Qualcomm. And so that exaggerated the seasonality. And then also there was a delay in their phone launch. So those are key factors if you compare to last year that would not be factors that would imply this year.

Operator

Our next question is coming from the line of Blayne Curtis with Barclays.

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

I appreciate the detail on the IoT business that you released, obviously, a very broad business. So I was wondering is there any way you can dial this in maybe by the 3 subsegments? So where are you seeing the strength? Obviously, the business nearly doubled since you started breaking it out. I know there's a lot of segments in there. I know it's pretty diverse. So I was just curious how you would answer the question as to within these segments, where you've seen the most strength?

Akash Palkhiwala - *QUALCOMM Incorporated - CFO*

Yes, Blayne, it's Akash. Let me take a crack at that. If you look at what happened in our IoT business this year, we were somewhere in the \$1.1 billion range, revenue range for March. We grew to \$1.4 billion. And as I mentioned earlier, we feel like we're in a strong position to continue to grow that revenue stream. So pretty interesting trends for us. When you break down the business, and we broke it down in the slide you are referring to in 3 buckets. We had EDGE networking, consumer and industrial. Neither of those are dominant categories. So you should think of all 3 as contributing very materially to the total amount of revenue.

Maybe I'll highlight a couple of things. Within EDGE networking, both the Wi-Fi access point business and the 5G fixed wireless business, they're both very strong for us. And especially when you think about the 5G fixed wireless business, we're really at the very front end of that having a very material impact for us. So we're looking forward to the growth that, that offers to us over the next several years. In the consumer business, clearly, there is a very broad set of products we have. The revenue is split between several products. But then also as you look forward, the opportunity within the next-generation PCs and AR VR are very material things that could be -- material growth drivers going forward.

And then within industrial, that's a very broad field, and we're really not even in the first innings on that market. So a long ways to go for us and we're excited all these markets are looking for technologies from us.

Operator

Our next question is coming from Matt Ramsay with Cowen.

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

I guess my first question goes back to the TAM that you guys outlined at \$10 billion from what Huawei is exiting and your customers are going to go into. We've been all trying to track as Huawei has kind of depleted their own inventory and now yourselves and MediaTek are growing into that business against some supply constraints. So of that \$10 billion TAM that's out there for you, just ballpark about how much do you think you can realistically address in the September quarter? And how much of that TAM is still ahead of you guys as you go into fiscal '22?

Cristiano Renno Amon - *QUALCOMM Incorporated - President and CEO*

Thanks, Matt, for that question. I will stay away from kind of breaking down that TAM. I don't think we have that level of precision in kind of estimating our opportunity going forward. What gives us confidence that we will get a portion of it in the September quarter, but really, this is a big tailwind for us going into fiscal '22, is our conversations with the OEMs, commitments from them on designs and really the supply improvements that we'll get at the end of the year. And so those are the 3 kind of factors that play into our confidence as we go into fiscal '22.

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

Got it. And as my follow-up, I wanted to ask a question, Cristiano, on your automotive business. It seems really well positioned and you guys have talked about the pipeline growing. With 5G connectivity being a fulcrum and then the ability to do Wi-Fi, GPS, Bluetooth, in-dash display, et cetera, on the same integrated platform, I guess, what's the competitive landscape like that across those sockets for Qualcomm right now? And what kind of ASPs are you guys envisioning for that business as you sell it as an integrated solution, including RF?

Cristiano Renno Amon - *QUALCOMM Incorporated - President and CEO*

Thanks, Matt, for the question. Look, we really like our position in this space, especially because the trends of connecting the car to the cloud, it's just the first step what you can do within the telematics or the communications box in the car. You can add to that Wi-Fi, Bluetooth as you outlined, but also Cellular V2X capabilities. A long road map. I think we have a very strong position given our understanding of the market and the ability to provide a very modular solution. I think we're highly differentiated in that space, and it's really showing based on our design wins.

Also, we're starting to see digital cockpit becoming more material in the revenue, which is really a much richer silicon opportunity for us as we look at the dashboard, the infotainment, rear seat entertainment, heads-up display, smart mirrors, smart side view mirrors and so forth. And there is a complete redesign of the in-car experience. I will argue today, Qualcomm is now winning the absolute majority of premium tier car RFPs. We are engaged with 23 of the 26 brands. Highly differentiated in the space also because we can take a system approach connecting all those different systems together. You should start thinking about our automotive business as there are going to be a digital chassis, then an automotive company will have to build and we are differentiated because we have capabilities across multiple domains, and it's starting to reflect in the magnitude of our contracted pipeline.

Operator

Our next question comes from the line of Joe Moore with Morgan Stanley.

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

Great. I wonder how the end of kind of supply chain tightness and shortages affects your EBIT margin in QCT. And is there kind of an active process of thinking that through of can we trade off some of that 30% EBIT margin to retake some share that maybe we lost? Or is it sort of -- just how are you approaching that? And is there an ambition to achieve a certain EBIT margin or a certain market share? And what's the trade-off between those 2 things?

Akash Palkhiwala - *QUALCOMM Incorporated - CFO*

Joe, it's Akash. Our framework on margins really is unchanged from the way we outlined it at Analyst Day last year. It's really a combination of 2 things. It's optimizing the gross margins. And the way we do that is a combination of the mix between premium high tiers where the gross margins are a lot more attractive in handsets versus the lower tiers. And then second is focusing on diversification outside. And so that adds scale to the margin profile.

The next point I'd maybe highlight is a lot of the technology that funds the growth in IoT and auto is coming from mobile. So mobile technology is being reused in these areas in very large scale. And that allows us to really get the operating leverage benefit that we were planning for. And then, of course, we are balancing that with R&D investments and making sure we're investing in the right things that position us to continue to win in these exciting areas in the long term. So it's a combination of those factors.

Operator

Our next question comes from Rod Hall with Goldman Sachs.

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

I wanted to dig into millimeter wave a little bit. Last quarter, you said it was about 20% of RFFE revenues. I wonder if you could tell us what it was this quarter. And then if you might be able to indicate whether you expect that to continue? I mean, assuming it's risen, do you expect to continue to rise? Where does it end the year, the calendar year for you? That's my first question, then I have a follow-up.

Akash Palkhiwala - *QUALCOMM Incorporated - CFO*

Rod, it's Akash. I'll give you the metric on it and then I'll defer to Cristiano to add color on top of it. From a percent of total RFFE revenue, this quarter was not that different than last quarter in pretty similar range. When you think about it very long term going into next year and the following year, as millimeter wave gets deployed, we expect that to be a vector for growth within RF front-end. So it will become a larger percent of the total pie.

Cristiano Renno Amon - *QUALCOMM Incorporated - President and CEO*

Rod, on the second part of your question, here's how millimeter wave is tracking. Everything in line over expectations, commercial networks, United States, Japan, Italy and Singapore. The upcoming one is South Korea, Germany. There are some countries in Western Europe, Southeast Asia and in Russia as well. And during the MWC Barcelona, the recent trade show, 150 carriers around the world indicated they are investing in millimeter-wave technology. So we're excited about that. And we continue to highlight where we think could be an incredible upside opportunity to the model which is millimeter wave going to China. We'll continue to be engaged in -- for the Winter Olympics in early 2022. And if that becomes a broader deployment in China, you should expect a lot of upsides to our model.

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

Great. Okay. And then I wanted to dig into the China weakness a little bit more. I know that you guys called it out in your comments. There's the Huawei opportunity, I guess. But curious if you could just comment on the wider market there, the weakness that we are seeing in handsets. Do you think this is just consistent with the maturity of that market? Do you think there are macro factors that are coming into play here. Could you just give us a little bit more color on what you think is going on in China? And maybe what the outlook there is the next 6 months or so?

Akash Palkhiwala - *QUALCOMM Incorporated - CFO*

Yes, Rod, it's Akash. I think, as I mentioned in my prepared remarks, we did see some weakness within the quarter relative to our expectations in China and in India. A lot of the weakness we saw was at the low tier. So the phenomena we saw is really kind of weaker low tier, but then mix shift towards the high end in these markets. And so that's a key trend that we're monitoring, which, obviously, net-net, the mix shift is a very positive thing for us. The impact in India that we saw in the June quarter, obviously, was related to the COVID situation there. And so as that improves and has improved materially already, we'd expect that some of those units come back into the September quarter and that's been factored into our guide.

Operator

Our next question is coming from the line of Timothy Arcuri with UBS.

Pradeep Ramani - *UBS Investment Bank, Research Division - Equity Research Analyst of Semiconductors*

This is Pradeep Ramani for Tim Arcuri. I have a couple of questions. Maybe the first one, just given the recent Intel announcement where you're partnering with Intel on IFS, what sort of commitment is this on your part? Is that sort of a volume commitment at this point? I realize it's some ways out, but would it be fair to say that it's going to service the U.S. consumer?

Cristiano Renno Amon - *QUALCOMM Incorporated - President and CEO*

Thanks for the question. Look, it's actually very simple. Qualcomm, we're probably one of the few companies that, given our scale, is able to have multi-sourcing at the leading node. We have 2 strategic partners today, which is TSMC and Samsung. And we're very excited and happy about Intel deciding to become a foundry and investing in leading node technology to become a foundry. I think that's great news for the United States fabless industry. We are engaged. We are evaluating their technology. We don't yet have a specific product plan at this point, but we're pretty excited about Intel entering the space. I think we all determined that semiconductors are important and resilient supply chain is only going to benefit our business.

Pradeep Ramani - *UBS Investment Bank, Research Division - Equity Research Analyst of Semiconductors*

Okay. And for my follow-up, can you provide some more color on how the license -- the 5G-related licensing agreements work for the non-smartphone adjacencies? Is there sort of a price cap? Or is it revenue based? Or can you provide some color on the arrangements?

Cristiano Renno Amon - *QUALCOMM Incorporated - President and CEO*

So what you see with QTL right now is -- in the top line numbers that you're seeing, a result of executing on long-term agreements with the major handset OEMs. On the non-handset side, we've had license agreements in place for a long time. Some of those agreements are on a percentage basis. Some of the agreements are on a dollars per unit basis. We don't break out those individual agreements or the collective non-handset revenue. But we are moving forward successfully with 5G in the automotive space and in the IoT space as well. It's just that the overall revenue is a relatively smaller part of -- the overall non-handset revenue is a relatively smaller part of our overall licensing revenue, so we don't break it out.

Operator

Our next question comes from Brett Simpson with Arete Research.

Brett William Simpson - *Arete Research Services LLP - Senior Analyst*

Cristiano, you made a lot of references to the Snapdragon 888 in your prepared remarks. And I wanted to ask more broadly about the Android flagship opportunity you see ahead. And I guess, historically, Huawei and Samsung has kind of dominated this segment. And that's limited your share to some extent in flagship. But can you share with us just your perspective on how you think this market plays out for Qualcomm? What sort of market share do you think you can attain? And what sort of time frame do you think it takes to be able to fully supply this segment of the market?

Cristiano Renno Amon - *QUALCOMM Incorporated - President and CEO*

Great question. Look, the market right now is a lot more favorable. And I want to take a minute to outline this. It used to be highly concentrated. If you look at the opportunity right now we have, we have a great relationship with Samsung, which is expanding. We have a relationship with Xiaomi, OPPO, Vivo, all in the premium tier. We have a relationship with Honor. In record time, we launched Snapdragon 888 with Honor, the Magic 3 device. So if you look at a much healthier market, you have at least 5 companies at scale that are driving the premium tier and that creates an incredible opportunity for us. And as you know, the Snapdragon premium tier devices, there are a lot more revenues in earnings compared, for example, to just the modem technology alone.

And the last comment I want to make into this, we're just at the beginning of this opportunity. We're showing with 5G a much better mix across the devices. The market is moving towards premium and high. We're very well positioned in the space. And over time, with our investments we've been doing in CPU with Nuvia, we expect to take the differentiation to a whole another level. Thank you.

Brett William Simpson - *Arete Research Services LLP - Senior Analyst*

Maybe just a quick follow-up on automotive because obviously, with the backlog growing to \$10 billion, what sort of silicon content do you think Qualcomm can address in autos? I mean you talked about digital cockpit and there's obviously 5G and there's RF. When you add it all up, what sort of total silicon can Qualcomm address by the middle of the decade in typical cars?

Cristiano Renno Amon - *QUALCOMM Incorporated - President and CEO*

It's -- there is a lot of silicon opportunities for Qualcomm. And not to make an ASP disclosure, we will provide a lot more color in our Analyst Day, especially how all of the different elements of the digital chassis is evolving. But you see in the automotive business, an opportunity for a lot more silicon content and much higher ASPs than we see in other business.

Operator

Our final question is coming from the line of Srin Pajjuri with SMBC.

Srinivas Reddy Pajjuri - *SMBC Nikko Securities America, Inc., Research Division - Research Analyst*

I have a clarification and a question. First, on the RF business in the quarter that you reported, Akash. Historically, I've seen kind of handset and RF move hand-in-hand, but this quarter, I think RF grew about 5% or 6% and the handsets declined about 4% or 5%. Just trying to understand what explains that discrepancy.

Akash Palkhiwala - QUALCOMM Incorporated - CFO

Yes. Sridhar, there are a couple of reasons. One is you will see some differences in purchase timing for various things within our portfolio. So sometimes RF components are purchased earlier that are not explicitly tied to a specific handset. So sometimes you see a timing difference that impacts these things. And then second is design wins, right? While RF is largely thought of as an attach business for our Qualcomm baseband, we do have business outside of Qualcomm baseband. So we do attach to other devices. And so that also becomes a different factor.

Srinivas Reddy Pajjuri - SMBC Nikko Securities America, Inc., Research Division - Research Analyst

Got it. And then on the QTL side, I think you said for the Q4, the run rate should be about \$1.7 billion in the peak quarter. Just trying to understand how we should think about growth in this business, Akash, because obviously, you're guiding for handset units to grow high single digits. And obviously, 5G is potentially doubling or even more than that and some of the adjacencies are adopting 5G.

So as we look into next year or 2, can you talk about some of the potential growth drivers? I mean whether it's low end or mid-end smartphones adopting 5G or some of the adjacencies. I'm just curious as to why we are not seeing a bit more pronounced growth here.

Akash Palkhiwala - QUALCOMM Incorporated - CFO

Yes, Sridhar, I'll reiterate what we said at Analyst Day a couple of years ago. When you look at our licensing business, we kind of have a base case for the business and we think of it -- other things as upside opportunities. And the way to model our business is really you have our June quarter numbers and then we are forecasting September, and then we gave a data point for December. So those are reasonable data points to project forward to get to an annual number for the licensing business.

There are a few things that could drive upside on top of that. But again, we think of it as upside opportunities. The growth outside handsets is a factor. Second is, as I mentioned earlier in the call, we're seeing a mix shift that's very positive for us. And so as mix shift continues, we'll see the benefit in QCT, but we'll also see the benefit in QTL. And so that would be another upside driver. And especially with 5G penetrating the lower tiers, that will be a factor for QTL as well. And again, it will show up through better ASPs and as a result, better revenues. So hopefully, that helps in framing the forward path for it.

Operator

Thank you. 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 CEO

Thanks, everyone, for joining us on the call today. Once again, I would like to say thank you to our employees who are staying focused and delivering results. I look forward to leading Qualcomm, leading in 5G and building on the success of our diversification strategy.

Operator

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

DISCLAIMER

Refinitiv reserves the right to make changes to documents, content, or other information on this web site without obligation to notify any person of such changes.

In the conference calls upon which Event Transcripts are based, companies may make projections or other forward-looking statements regarding a variety of items. Such forward-looking statements are based upon current expectations and involve risks and uncertainties. Actual results may differ materially from those stated in any forward-looking statement based on a number of important factors and risks, which are more specifically identified in the companies' most recent SEC filings. Although the companies may indicate and believe that the assumptions underlying the forward-looking statements are reasonable, any of the assumptions could prove inaccurate or incorrect and, therefore, there can be no assurance that the results contemplated in the forward-looking statements will be realized.

THE INFORMATION CONTAINED IN EVENT TRANSCRIPTS IS A TEXTUAL REPRESENTATION OF THE APPLICABLE COMPANY'S CONFERENCE CALL AND WHILE EFFORTS ARE MADE TO PROVIDE AN ACCURATE TRANSCRIPTION, THERE MAY BE MATERIAL ERRORS, OMISSIONS, OR INACCURACIES IN THE REPORTING OF THE SUBSTANCE OF THE CONFERENCE CALLS. IN NO WAY DOES REFINITIV OR THE APPLICABLE COMPANY ASSUME ANY RESPONSIBILITY FOR ANY INVESTMENT OR OTHER DECISIONS MADE BASED UPON THE INFORMATION PROVIDED ON THIS WEB SITE OR IN ANY EVENT TRANSCRIPT. USERS ARE ADVISED TO REVIEW THE APPLICABLE COMPANY'S CONFERENCE CALL ITSELF AND THE APPLICABLE COMPANY'S SEC FILINGS BEFORE MAKING ANY INVESTMENT OR OTHER DECISIONS.

©2021, Refinitiv. All Rights Reserved.