11-Feb-2021

QUALCOMM, Inc. (QCOM)

Goldman Sachs Technology & Internet Virtual Conference

Copyright © 2001-2021 FactSet CallStreet, LLC

CORPORATE PARTICIPANTS

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

OTHER PARTICIPANTS

Rod Hall
Analyst, Goldman Sachs & Co. LLC

MANAGEMENT DISCUSSION SECTION

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Okay. Welcome back, everyone, to the Goldman Sachs TMT Conference. I'm Rod Hall. I'm the Hardware and Networking Analyst at Goldman Sachs. So, welcome. And I've got the great pleasure of having Qualcomm here with me, Cristiano Amon, the President and CEO-Elect. So, welcome, Cristiano. Thanks for joining us.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

Oh, very happy to be here, Rod. Pleasure talking to you. And this is exciting times for us, so very happy about it.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Great. Okay. And congratulations on being the CEO-elect. I don't know if I've said that to you before publicly, but congratulations on that.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

Thank you very much. Thank you.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

I don't know if you want to open with any comments or if you'd like to just dive into questions. It's up to you if you want to make a couple opening comments, feel free, otherwise I'll jump into – jump right into questions.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

Copyright © 2001-2021 FactSet CallStreet, LLC

Well, maybe I just going to take probably a minute and talk about the big picture. Qualcomm, it's right in front of us, one of the largest opportunities I think we ever had in the history of our company. I just have the relative privilege to be with Qualcomm for a very long time, being through any one of those generation transitions of technology. And what we like about 5G, it's kind of the first time really that you have a general purpose technology which is not exclusive to the telecommunications sector, is going to a number of other industries. And as a result, it's feeding into this momentum, the demand for Qualcomm technologies is really happening across many verticals. And with that, we have been – why we have a very strong story and we'll continue to have a very strong story. Very different than what happened in 4G on the 5G and our core handset business, but it's creating a big automotive business, it's creating a big Internet of Things business for Qualcomm. And we're just at the very beginning of that expansion. We're really happy about it. Not only is it really diversifying the company and created multiple of vectors of growth, but also it's a normal opportunity to generate earnings from the R&D that we do for mobile.

QUESTION AND ANSWER SECTION

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Right. Okay, thanks for that. Thanks for that summary. So the big topic I think on everyone's mind today and more generally is the whole supply chain situation in semiconductors, not specific to you, but just more broadly what's going on there. And then you at your own earnings had talked about – set some goal posts for the June quarter that relate back to the supply chain issue. So I wonder if you could talk a little bit about how you see these shortages resolving. At earnings, you gave us that June look at the business, but not – we didn't really get too much of an idea of what you're thinking on the back end of the year. A lot of semiconductor suppliers saying that these shortages will persist all the way through the year. So I just wonder if you could talk a little bit about when you see this resolving itself, how long it persists for you.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

Yes. So, happy to address the industry question but just specifically to us. If you look at what we see over our business right now, we see two issues, right? One – I shouldn't say issues. We see two factors.

One, it's a very positive one and I'll say that is a permanent expansion of our SAM. The reality is you have Huawei which is about over 200 million handsets, and then their supplier HiSilicon exits the market for a number of reasons. We don't have to go into that. And what that did is create a permanent expansion of our SAM. And with that we've seen an increase of demand. Very happy about that because that's not going to go away. The supply chain is going to get resolved, and that's not going away. And we see the traction, for example, of the pipeline of designs, especially in the premium to high tier which is the strength of Qualcomm. Like the premium tier, we almost have a unique category with Snapdragon 800.

Then you have a temporal issue. The temporal issue is that the industry is constrained on supply. So you have inability of the supply chain to meet demand, is constrained across a number of industries. There are unique specific things about, if I have a product that is design in Samsung, for example, and capacity becomes available at TSMC for that particular product, the time that it takes for you to redesign or wait until the next cycle, you can't immediately react to that. But that's a temporal issue. And that's why we're kind of optimistic with the whole situation. As the supply chain resolves, we have this opportunity which is significant growth for Qualcomm into the Huawei SAM.

Copyright © 2001-2021 FactSet CallStreet, LLC

To your question about supply, the reality is we have line of sight to this getting better in the later part of the calendar year. So it's still early to predict how much better it gets. In the September quarter, it's definitely getting better than the June quarter. And as we get to the December quarter, the situation normalizes.

And there's a number of different factors for that. One, you have some V-shaped recovery, some pent-up demand across a number of the industries like automotive, PC, networking, you have this whole enterprise transformation of the home that is driving this cycle. But we like that many of the demand, for example, in case for – specifically to Qualcomm and mobile, that continues because of the expansion of the SAM and 5G. And as supply normalizes, we're very happy about the opportunities for the company.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Could you talk a little bit about the puts and takes around when the supply normalizes? You mentioned Samsung versus TSMC. What are some of the things that drive it to normalize quicker versus further out? Notwithstanding demand, let's hold demand constant and just talk about some of the puts and takes around different suppliers and moving designs around [indiscernible] (06:31).

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

Okay. Look, the easiest thing for me to do, the easiest thing for me to do is to give a very simple answer as it relates specifically to Qualcomm when we think about leading node. But that's not a very accurate answer, but I'll give that answer and then I needed to provide you a more precise.

What's really happening, if you think about the specific demand of a Huawei, HiSilicon was in TSMC. If you look our Snapdragon flagship product within the Android, it's on Samsung 5-nanometer. We're ramping 5-nanometer and actually, we in a ramp of a new node. This is like a record ramp that we have. We have never shipped as many like in the Q1 of a brand-new nodes [indiscernible] (07:24), which is a good sign about the demand and design traction.

But the size of Huawei, that capacity becomes available at TSMC. So then is the question is when does your next product cycle that intercepts that capacity becomes available, as well as the Samsung capacity on the new node becomes available. We don't see anything different than we projected, for example, the ramp of 5-nanometer, nothing different. It's actually doing – in Q1, it was slightly better. But the demand is very high. It's much higher than what we'd have predicted. Nobody could predict it that all of a sudden the entire HiSilicon opportunity becomes available.

We have a number of different products in different tiers at TSMC that we'll be able to benefit from that. If I give a little bit more color and then I'll go back to the precise answer. If you take one large US smartphone customer out of our numbers, if you take that out of our numbers, in the Android segments, look from our guide for fiscal Q2, we're actually see double-digit growth, which is shows that we're actually capturing the value of the high-value designs of what's becoming available, because with Qualcomm is traditionally a high-end premium tier supplier. And it's all based by the supply chain. So it's just really the process of having more capacity available at 5-nanometer. You have new products coming in that can benefit from the TSMC 7-nanometer and they [ph] add two (09:06) product cycles. And this one is actually one that is important to explain.

People launch phones when they launch phones, right? So you can't change Chinese New Year. You cannot change holiday season. So the next holiday season comes in within the September quarter and then the

Copyright © 2001-2021 FactSet CallStreet, LLC

December quarter, not in the June quarter. So you have this seasonality of when the products are in design right now and then when the next wave of products come in. So that seasonality is also important to understand. There's demand for products that are in the shelf today. And you can't automatically redesign them, because the OEM actually want will wait until the next flagship.

And that's why we talk about our June quarter. I think there was probably a misalignment with the expectations, but it's just a seasonality. You have the supply issue and then you have the seasonality when you launch new products.

Now I'm going to give a precise answer. I wish the issue was just leading node, like whether you have 5-nanometer or 7-nanometer. But that's not the issue. There are many other semiconductors that go into a phone and you have from power management chips to other controller chips, some analog chips, and the industry's constrained on every node. The industry's constrained on 40-nanometer, 65-nanometer, 28-nanometer and even on more of the analog nodes like 130-nanometer, 150-nanometer because of that V-shape recovery.

So if you look at certain components, for example, whether it's a Wi-Fi component or a power management component, it is right there in the same node that the automotive industry is, and the automotive industry is constrained.

So it's not about a single issue on a TSMC versus Samsung, but this whole thing normalizes towards the end of the year. And the reason is because some of that demand I will say probably the people buying PCs, people buying Wi-Fi routers, people buying cars, I think that kind of normalizes and we see line of sight to much better supply chain capabilities in Q4 of calendar 2021.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Right, right. So it's kind of a positive balance there in a way because you've got this excessive demand for some of those products right now but that should normalize, like you say, as we roll into the back end of the year, we reopen and that creates capacity for some of these other products. That's kind of what you're seeing?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

That's correct. Look, if I can summarize, we're probably in the best position to be in. If I have to tell you, you know, Rod here's the situation, we have all the supply we need to meet a short-term demand but then that's going to go away, I would rather be in the position I am right now, which is, yes, I have a temporal ability to meet demand but guess what. This demand is permanent. HiSilicon kind of left the industry is a massive expansion of our SAM. And if you think about the growth story of Qualcomm, there's a lot of comparisons that come back about 4G versus 5G. So the growth story of Qualcomm 5G, this is a very different situation from the past.

Number one, we're growing because we get more value out of 5G and we now – in the core business we have the RF Front End. So, you see that 1.5 multiplier. Every time I convert a unit from 4G to 5G, I have a multiplier at 1.5.

On top of that you have Apple back in our numbers. That's another growth that we didn't have. On top of that, one competitor left the market, HiSilicon. That's an expansion. And that expansion, I [indiscernible] (12:56) because even if you compare, for example, with the Apple business, if I get a socket which used to be a Huawei premium tier, that's a full SoC. That's a number of times I think more valuable...

Copyright © 2001-2021 FactSet CallStreet, LLC

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Right. Much bigger.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

...to Qualcomm [indiscernible] (13:10). So we like the position we're in. That's permanence versus the temporal supply chain issue. So I'd prefer to be in this position than the reverse.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Right. On Huawei, do you think that is permanent? We've seen Honor spinout, there's been talk of the high end Huawei team getting spun out. How much probability would you say there is that that ends up not being permanent and there's some kind of a give back on that at some point? Are you guys factoring that into your thinking or you just don't think it's worth considering?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

That's a very good question. And there are two factors. There's the handset OEM and there's the semiconductor provider. So handset OEM, I think Honor, that was a spinout, and we're engaged with Honor. I think that is an opportunity. Huawei, it's still undefined. As we've been publicly about it, we apply for license, we have not received them for 5G, ability to sell to Huawei. Maybe that will get resolved, maybe it doesn't get resolved. And that is Huawei.

Within that conversation of handsets, we're very well hedged because if there is a demand for an Android premium to your phone, whether it's that Huawei that sells it, Honor that sells it, Vivo, OPPO, Xiaomi, we have a very good position with the design of our premium Snapdragon as well as our high tier Snapdragon. So we're well hedged for the demand, and then Huawei may or may not be a customer depending whether license are issues.

Then the second question, which I think it's what you were referring to, is HiSilicon.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Right.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

There is a broader issue on the semiconductor industry of China, which is we're hopeful that the dialogue will be – resumes, it will be constructive at the end of the day. I feel that there's opportunity for everybody. But if you look at the whole HiSilicon situation, you look at the SMIC situation, there's a broader issue on semiconductors that may take some time to resolve. So from a company like Huawei, if they are going to have a viable phone business, they have to find alternatives to design their processors and that's the reason we feel that opportunity's there for a number of cycles for us.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Copyright © 2001-2021 FactSet CallStreet, LLC

Yeah. You feel like that strategic – the geopolitical issues around the semiconductor industry keep that Huawei – or the HiSilicon business from being maybe bifurcated or something like that. We thought, well, could they – the concern seems to be mainly with infrastructure, could they bifurcate away the handset design business, that sort of thing but...

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.
A

It's possible but it would take a little bit of time, right?

Rod Hall
Analyst, Goldman Sachs & Co. LLC
Q

Right. Right. I guess while we're on this topic, we're on the geopolitical and what do you think about – just curious what you think about US semiconductor capacity and how badly that's needed, how much you would like to see it come in and just kind of what your thoughts on that are.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.
A

For a company like Qualcomm, we'll be very happy and it will be a very positive development to have more US – semiconductor manufactured in the United States. Now, one thing that is probably not very well understood by the industry, a big portion of our chips, especially for 5G chips are actually US made. We have a very balanced relationship with leading node, we're probably one of the few companies that have multi sourcing of the leading node across TSMC and Samsung. And Samsung manufactured a lot of the product for Qualcomm out of their Austin fab. And so we actually geographically, we're well distributed across Taiwan, South Korea and United States. And if there is a movement for foundries like TSMC, Samsung to basically build capacity in the United States – or even a company like Intel. Intel, with new leadership and if they are – they build a foundry business, we're very interested. This is a very good opportunity for a company like Qualcomm which is a fabless semiconductor company.

Rod Hall
Analyst, Goldman Sachs & Co. LLC
Q

Yeah. Okay. Thanks for that. And just checking, one last thing on supply and then we'll move on to some other topic. But when you talked about June, are you talking about both thin modem and SoC supply constraints or is it more the SoCs that are supply constrained than the thin modems?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.
A

The way we're looking into this is where that we have demand that was not above I think the industry planning. And the demand is most of it coming on the Android side because of the Huawei expansion. So, we don't see a constraint in some of the areas that we already planning for. It's like who would predict if you look at the semiconductor lead time that Huawei will disappear?

Rod Hall
Analyst, Goldman Sachs & Co. LLC
Q

Right.

Copyright © 2001-2021 FactSet CallStreet, LLC

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

And it's like I said, it's a very good problem to have. We like the permanent aspect of it or the longer term aspect of it versus the short-term, but that's where the shortage is for us.

Now, it will be wrong for me to say this is just mobile. I think the overall industry is experienced that whether it's networking, automotive, IoT, and you can saw in our results the demand is high across all the other business as well.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Absolutely. Okay. Thanks for that. So handset market, let's talk about handset market. QTL was a little weaker than we forecast. You guys called out that Chinese demand was weaker than expected. And in subsequent conversations it sounds like your thinking is maybe China is maturing. We think so too. But on the other hand, CAICT data was just pretty strong for China in January. So I'm just curious, do you think that QTL weakness you saw and particularly the Chinese weakness, do you think that is more of a structural thing that persists, do you think that there's a possibility that it's more macro than structural? What are your thoughts on that?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

So in general, I think the mobile market is a – it's a mature market and I think we have very high smartphone penetration across the globe. And as we look past 2020 and we look at 2021 and we see the market kind of resuming growth but [ph] it's only (19:51) single digits. So we don't see anything that's really structurally different with the mobile market.

And from a QTL standpoint, it's just tracking the market. You don't have any outliers. So all of the OEMs are licensed, it's very stable. It's just tracking the market.

There is a disconnect between QCT and QTL and maybe we should spend a little bit of time on this. The industry in the past, especially a lot of the financial analysts who always look at the correlation between QCT and QTL – and I actually saw this happening in our earnings call. People said okay, if QTL is tracking the number of subscribers and that is showing a smaller overall market, QCT is up, that means inventory in the channel. You're selling in, but there's no sell out. And we said no, there's no inventory in – I wish there was inventory in the channel. We have a supply chain situation.

The reality is QCT is growing faster than the market because of some of the factors we outlined before. And QCT has now other industries that are diversifying the company revenue. We got like over $1 billion in the IoT segment and we have a very strong pipeline in automotive which is tracking well. So that kind of creates a little bit of a separation. That's why if you look what we did two earnings call ago, we stopped talking about QCT/QTL. We said look, there's a licensing business, there a handset business, analog front end, automotive, and IoT and that's kind of more reflect where the company is going.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Got it. Okay. Yeah. That was helpful disclosure too, by the way, that additional vertical disclosure. So what about the – you guys kept the 5G forecasts unchanged in this last earnings report but you're calling out the supply

Copyright © 2001-2021 FactSet CallStreet, LLC

shortages. You are flagging android here. Are you mostly talking 4G shortages then as we look into June and then that resolving itself or is there some 5G shortage out there too on Android?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

It's across the board, it's 4G and 5G. So as we said, the demand is now paced by supply. You have probably a lot of lower end units of 4G that are larger in numbers, not in value. But then you have significant shortage of that too because of emerging markets. And the reality is we do believe that this is going to get better as we get to the second half the year, because you have two issues hit you at the same time, right? Which is, you have demand for the products that are designed in today and they are like in the shelf or in the market, they're validated with carriers. And you're going to sell what you can sell of those demands. But then the next product comes in. So, the ramp is not only gated by supply, but gated by the product launch cycle. So we going to see that seasonality and then we think, as we'll get to the December quarter, we have not only the supply chain normalized, but you have all the new product cycles.

And as we said in the call, we're very happy with the design traction that we see not only for the existing generation product, but for next-generation product as well. So that's why we're kind of more, we talk more about we're happy with this even though there's a short-term temporal supply chain issue. All of the growth drivers kind of remain intact.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Great. Okay. Yeah, let's move on to RFFE and talk about that a little bit just to make sure we get – that's an important topic and we were surprised at how that revenue number was when you guys finally disclosed it. So clearly a lot of traction there. I guess, is there anything you can say about that in terms of expected medium-term growth? And where do you – can you put us in a ballpark, low single digits, mid-single, something like that so we understand kind of what you expect on growth there?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

Look, I'm comfortable telling you that we're kind of in a very good position to achieve like the target we put in, about 20% of the overall market, we said that in the Analyst Day, like in 2019, right before this crazy 2020. And we're in a very good position to do that. Don't want to make a projection above that even though I feel very good about where the business is.

And there's one thing is worth highlighting. I thought there was a little bit of a confusion in the market. Some people thought that that business was mostly related to millimeter-wave, and it's not the case at all. We only have millimeter-wave today in the United States, Japan and Korea on some of the premium tier devices. So a lot of that content is really sub-6 GHz across the board, across all different tiers. And we actually find our revenue very diversified. Some of our other competitors are highly concentrated on one very large US customer. We actually have that distributed across the board, so we actually like the diversified strategy of the revenue.

And I'm going to answer your question about growth in a different way. What could happen that we would do much better? It's millimeter-wave penetration in other industries, in other countries, I should say that. So one thing that we're tracking very well is will millimeter-wave come to Europe, will millimeter-wave come to China. So we saw that Germany did issue the auction at the beginning of the year. They had 82 private license of millimeter-wave. And then the big – [ph] expectation (25:43) is one of the big public carriers who will deploy millimeter-wave.

Copyright © 2001-2021 FactSet CallStreet, LLC

So we're going to tracking their auction. Germany deploying, it could be a very good sign about millimeter-wave coming to Europe, so we're tracking that.

And the most important one is will millimeter-wave come to China. If it comes to China, then you have a different ball game, right, because China has a very important role in also bringing scale to the [ph] remote worker (26:09) system, to the Chinese OEMs. And we're tracking very good activity towards 2022 for the Winter Olympics.

So if millimeter-wave deploys beyond the existing markets, that's a major tailwind for our RF Front End business. We're not counting on that. I think we're just sticking with our predictions we made on Analyst Day. We're very confident we're going to be able to achieve that. But there's a lot of upside opportunity depending how the market evolves and how millimeter-wave gets deployed.

Rod Hall
Analyst, Goldman Sachs & Co. LLC
Q

Yeah. We agree with it. Maybe you could say another word about China and the activity – you said you were tracking activity toward the Winter Olympics. Say a little bit more about that in terms of what could happen there I guess.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.
A

There are two issues that points to millimeter-wave in China. So one issue, there's a China government sponsor activity with the carriers. They identified 100 verticals for 5G industrial deployments and with the majority of those using millimeter-wave. And for those 100 verticals, they have dedicated trial activities with different companies from industrial sector, automotive, healthcare and so forth. And many of those use cases have millimeter-wave indoor campus deployment and we're participating with the carriers China Mobile, China Unicom, China Telecom and some of our partners in China in that activity as it evolves to enterprise and industrial deployments with millimeter-wave in 2002 (sic) [2022] (27:51) and beyond is one driver for millimeter-wave.

The other one is when the Olympics come back post-pandemic, China, assuming that the 2022 Winter Olympics may be the very first back to normal Olympics, and they're being planning for millimeter-wave launch with a number of different use cases especially as we think about venues and stadiums and all of that. And we've been working with the carriers in China preparing for that event, as well as on OEMs. So those things could drive larger scale deployment of millimeter with China. If that happens and that becomes a requirement for China devices, just add the millimeter-wave to that Huawei SAM expansion and the Qualcomm position with Vivo, Oppo, Xiaomi, that's a very good tailwind for our business. But we're not there yet. We're just tracking the development and we like what we see.

Rod Hall
Analyst, Goldman Sachs & Co. LLC
Q

Yeah. When you say the – the first thing you're talking about in China is industrial application, right, not smartphones? So it'd be mostly industrial automation, that kind of thing, is that correct?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.
A

There is...

Copyright © 2001-2021 FactSet CallStreet, LLC

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

And then the second thing is maybe smartphones.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

But in the first one, in the 100 verticals, you have smartphones in some of those verticals, especially some of the future enterprise. And you have non-smartphone applications as well. And then the Olympics is the smartphones.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

All right. Let me give you one Qualcomm advertising shot here. So we've done a lot of work on millimeter-wave. It looks to us like you've got a two to three-year advantage there. But then a lot of your competitors say no, no, no, we can come in and we can compete on millimeter-wave, we can do that too. So can you talk a little bit about competitive moats and where you see your technology protected from that?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

Yeah. By the way, this is great question. That's actually a softball. I appreciate it. Because when our competitors, especially I think our main competitor, talks about I have millimeter-wave available in 2022, that only validates what I just said about China, in 2022 millimeter-wave is starting to look very good, especially because if you – you have to say that you have millimeter-wave in 2022 if you want to be a player in China. So if anything, it just validates that it's coming.

Now let me answer your question. And it's one that we're very proud of. We took a lot of early R&D in millimeter-wave. Millimeter-wave is very complicated to do because you can have millimeter-wave but then how does it perform, does it perform economically, do you have a range, do you have the ability to do coverage for the carrier, do you have battery life, do you have performance. We just announced this week our fourth generation modem for 5G. There's a lot of intelligence at the system level because millimeter-wave is all about radio beam management. You have multiple antennas on devices, hand position change things, device position changes, you have a lot of computational.

And I will tell you, when we started, the conversation wasn't about our competitors are going to have millimeter-wave. The conversation from our competitors and everybody else is, it simply does not work. That was the conversation.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Yeah.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

And we said okay, do you like the Galaxy phone in a form factor which is competitive in the Verizon commercial network, and that is working with generation number four.

Copyright © 2001-2021 FactSet CallStreet, LLC

I point the technologies, you're going to hear a lot about this technology in the future, technologies such as Smart Transmit that you do a lot real-time computational to optimize signals. We talk about technologies in these announcement about AI, artificial intelligence applied to modems. So, you have decisions based on where signals are. Those things are highly differentiated for Qualcomm. And unless you have the whole thing from digital to the antenna, it's difficult to replicate. That's the reason we use 5G as the entry point for our RF Front End business.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Okay, great. Thank you. So we've got eight minutes left. I want to remind the audience that you can ask questions. I've already got a stack of questions here, Cristiano, so I may ask you a couple of those just to give the audience a chance too.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

Bring them on.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

One of ones, this comes up with investors with us a lot too, is Apple and insourcing. I'm sure you hear about this a lot. Maybe talk to us a little bit about the risk of that, how do you see it, how would you frame that up for investors?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

Look, I would be worried if I didn't get the question. I get it every time. So I'll tell how we think about that. And what we do for a living is modem. That's like the number one thing for Qualcomm. We do many other things but that's our core competence. And the simple answer to the question, as long as we continue to define the pace of innovation of cellular modems in the industry, there always a room for Qualcomm. So that's how we think about it.

Now, I believe that this is not new news. We have always had customers, especially if you have scale that design their modem. And we just to the beginning of this relationship with Apple. We kind of restored a relationship. We have a multi-year agreement with them. We just did the very first phone, the launch, we have some years to go. We like about the results of our joint work, it's just the phone speak for itself. And the way we think about it, if they succeed in doing their own modem, there's always going to be room for advanced technology modem and probably more than one supplier. That's how we think about a relationship with Samsung. We don't make in our business any heroic assumptions that they are not going to succeed and we are going to be the sole supplier. On the contrary, we also have competition in the sector. But we think that as long as we continue to drive the roadmap forward, we're in a well-position to be one of the suppliers of Apple. And it's really no different than our relationship with Samsung today.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Right. Got it. Yeah, just like kind of a hybrid relationship probably over time.

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

Copyright © 2001-2021 FactSet CallStreet, LLC

Yes.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Another question I've got is, if you were to isolate new products that you know about, we don't know about in the fall, do you have any content increased expectations for new product launches coming this fall?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

We will continue to execute on this 1.5 metric, right? I think that is driving a lot of content increase for Qualcomm, which is higher value solutions to the 5G and the RF Front End. As the 5G transition continues, we said that we ended the year in 2020 at the high end of our guide, 225 million 5G smartphones. We're projecting north of 500 million in 2021. And then the 1.5 multiplier applies to that. And we continue to feel good about RF Front End. We see new bands get added. We see expansion into the 4G area. So those are all opportunities for more contents. And we have to track for the next wave of design launches. Like one thing that I think was probably misunderstood in our business versus some of the analysts' expectation is there's seasonality change because we have one large US customer now. But even if you look for the Android conversation we had, there's a number of new devices launches through the later part of the year. And there are always opportunities, especially on the RF Front End.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Okay. I want to make sure – we've got a few minutes left. I want to make sure we get to ARM-based CPUs and NUVIA because I think that's an important topic for you guys as well. I guess the way I would frame this is the M1-based machines that Apple has launched are – the performance of those is off the charts. Like we expected it to be good, it's probably better than we expected. I would think that puts a lot of pressure back on ARM designers like you potentially to provide something to the PC industry beyond Apple. Just curious where that stands. And what does NUVIA tell us about your roadmap for CPUs that could be applied to PCs? Do you have anything available in the relatively short term or does NUVIA kind of mark the start of an effort for maybe having something a couple of years out?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

Look, I think what you're seeing from Qualcomm is a very consistent behavior that we have over the years. I'll point you back a little bit of the past, right? When we moved from 3G to 4G, we realized that 4G, you're going to put a computer in your hands. And in order to create a smartphone, we need a roadmap that wasn't what ARM was providing, and we basically built a CPU team and we delivered the first gigahertz clocked ARM CPU in a mobile device. You may have – you remember a long time ago, it was the Scorpion CPU. Because that what we needed to build on that opportunity. We see ourselves exactly the same space right now.

We believe and continue to believe that mobile and computing are going to converge. That's why we started on the journey with Microsoft and Windows on Snapdragon and we brought that to reality with the Surface Pro X design. The Apple M1 launch just validated that opportunity and start moving the development ecosystem. And just say that's very clear we have now a computing opportunity for full conversions to mobile and we needed to develop a CPU to have a leadership position in that. Then similar to the decision we made back then, that's what drove the acquisition of NUVIA. And we're so excited about that because the reaction from the ecosystem has been incredible. If you look at what happened when we announced the NUVIA acquisition, every single Android

Copyright © 2001-2021 FactSet CallStreet, LLC

OEM endorse our move for a premium smartphone, with an exception of Huawei because we don't have a license. Even Honor was there. And every one of them see that opportunity to further differentiate in premium smartphone, is I think we raised the bar for competitors there. And then you have from Microsoft and Google plus every PC OEM endorsing our entry into that PC space for high-performance CPUs.

It's a very big opportunity for Qualcomm. I think the Apple M1 made that real and understood. We started that with our Windows on Snapdragon. Very excited about that and you're probably going to hear from us – we have to close on this acquisition – with products in the future. So we're happy about that.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

So how many incoming calls did you take from PC vendors after that M1 launch?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

We have been busy. Roadmap discussions at an all-time high.

Rod Hall
Analyst, Goldman Sachs & Co. LLC

Q

Right. Right. Right. Okay. Let me just finish with IoT. IoT has been a really strong point for you guys through the downturn. I think every single one of us has probably upgraded our house Wi-Fi by now. How sustainable is that strength do you think? I know long-term there should be demand, but do you think we go through any kind of demand downturn or normalization as we reopen?

Cristiano R. Amon
President & Chief Executive Officer-Elect, QUALCOMM, Inc.

A

No, not really. And this is one that is good to talk about the big industry trends. And I'll walk you to a few of them. So one thing obviously it was – and you just mentioned about this, is the enterprise transformation of the home. That is driving a lot of networking aspects, it's a lot of connected IoT devices in the home. But the other one we saw also, payments. Paper money gone during the pandemic. So what happened is a massive acceleration of retail digitization of payments, points of sales. Then the other one that we're seeing, and that's a bigger one, is companies send everybody home, connect their people. But then they realized they need to connect their assets. Their assets were not connected. So this whole broad – the digital transformation acceleration is driving a lot of IoT. We see a lot of activity with industrial, robotics. And I think that will have a very long ramp.

And the way I'll summarize that to you is it would in general, we have a new technology like a generation of 5G, it takes about five to 10 years for the industry to kind of understand the potential. What the pandemic did, in about two quarters, ready or not for telehealth, you're going to have telehealth, ready or not for remote education, you're going to have that, ready or not to connect your assets when people working from home and they have to log in into the labs, you're going to have that. That is driving an acceleration. I think that demand is sustainable, is going to continue to expand to many other industries. And we like because it's not only a diversified business, there's a lot of things in there IoT bucket, but it's also one that is likely to be very stable. It's not subject to the ups and downs that we see on mobile industry cycles and that it's one that have a much longer rollout of technology, similar to auto.

Copyright © 2001-2021 FactSet CallStreet, LLC

Rod Hall

Analyst, Goldman Sachs & Co. LLC

Right. Right. Great. All right, Cristiano. Well, we're out of time. We're a little bit over time actually. So thank you very much for joining us. Great to see you. Maybe we'll see you in person someday again.

Cristiano R. Amon

President & Chief Executive Officer-Elect, QUALCOMM, Inc.

Looking forward to it.

Rod Hall

Analyst, Goldman Sachs & Co. LLC

And thanks, everyone, for joining.

Cristiano R. Amon

President & Chief Executive Officer-Elect, QUALCOMM, Inc.

Thank you. Pleasure to be here, Rod. Good talking to you. And look forward to see you in person as well.

Disclaimer
The information herein is based on sources we believe to be reliable but is not guaranteed by us and does not purport to be a complete or error-free statement or summary of the available data. As such, we do not warrant, endorse or guarantee the completeness, accuracy, integrity, or timeliness of the information. You must evaluate, and bear all risks associated with, the use of any information provided hereunder, including any reliance on the accuracy, completeness, safety or usefulness of such information. This information is not intended to be used as the primary basis of investment decisions. It should not be construed as advice designed to meet the particular investment needs of any investor. This report is published solely for information purposes, and is not to be construed as financial or other advice or as an offer to sell or the solicitation of an offer to buy any security in any state where such an offer or solicitation would be illegal. Any information expressed herein on this date is subject to change without notice. Any opinions or assertions contained in this information do not represent the opinions or beliefs of FactSet CallStreet, LLC. FactSet CallStreet, LLC, or one or more of its employees, including the writer of this report, may have a position in any of the securities discussed herein.

THE INFORMATION PROVIDED TO YOU HEREUNDER IS PROVIDED "AS IS," AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, FactSet CallStreet, LLC AND ITS LICENSORS, BUSINESS ASSOCIATES AND SUPPLIERS DISCLAIM ALL WARRANTIES WITH RESPECT TO THE SAME, EXPRESS, IMPLIED AND STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, COMPLETENESS, AND NON-INFRINGEMENT. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, NEITHER FACTSET CALLSTREET, LLC NOR ITS OFFICERS, MEMBERS, DIRECTORS, PARTNERS, AFFILIATES, BUSINESS ASSOCIATES, LICENSORS OR SUPPLIERS WILL BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING WITHOUT LIMITATION DAMAGES FOR LOST PROFITS OR REVENUES, GOODWILL, WORK STOPPAGE, SECURITY BREACHES, VIRUSES, COMPUTER FAILURE OR MALFUNCTION, USE, DATA OR OTHER INTANGIBLE LOSSES OR COMMERCIAL DAMAGES, EVEN IF ANY OF SUCH PARTIES IS ADVISED OF THE POSSIBILITY OF SUCH LOSSES, ARISING UNDER OR IN CONNECTION WITH THE INFORMATION PROVIDED HEREIN OR ANY OTHER SUBJECT MATTER HEREOF.

The contents and appearance of this report are Copyrighted FactSet CallStreet, LLC 2021 CallStreet and FactSet CallStreet, LLC are trademarks and service marks of FactSet CallStreet, LLC. All other trademarks mentioned are trademarks of their respective companies. All rights reserved.