



Akoustis Technologies, Inc.

**Fourth Quarter and Fiscal Year End 2021 Business Update
Conference Call**

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C O R P O R A T E P A R T I C I P A N T S

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Anthony Stoss, *Craig-Hallum*

Suji De Silva, *Roth Capital*

Harsh Kumar, *Piper Sandler*

Rick Schafer, *Oppenheimer*

P R E S E N T A T I O N

Operator

Good day, ladies and gentleman, and welcome to the Akoustis Technologies Business Conference Call.

As a reminder, this conference is being recorded. A replay of the call will be available on the investor relations section of the Akoustis website.

Tom Spenezis

Thank you, Operator. Good morning to everyone on the call. Welcome to Akoustis' Fourth Quarter and Fiscal Year End 2021 Business Update Conference Call.

We are joined today by our Founder and CEO, Jeff Shealy; Interim CFO, Ken Boller; and EVP of Business Development, Dave Aichele.

Before we begin, please note that today's presentation includes forward-looking statements about our business outlook. All statements, other than statements of historical facts, included in this conference call, such as expectations regarding our strategies, operations, costs, plans, and objectives, including the timing and prospect of product development and customer orders, our expectations regarding achieving design wins from current and future customers, the possibility of entering into collaborative or partnering

relationships, potential impacts of the COVID-19 pandemic, and guidance regarding expected revenue, product orders, and milestones for the current and future fiscal quarters, are forward-looking statements.

Such forward-looking statements are predictions based on the Company's expectations as of today and are subject to numerous risks and uncertainties. The Company and our Management Team assume no obligations to update any forward-looking statements made on today's call. Our SEC filings mention important factors that could cause actual results to differ materially. Please refer to our latest Form 10-K and Form 10-Q filed with the SEC to get a better understanding of those risks and uncertainties.

In addition, our presentation today will also refer to certain non-GAAP financial measures. A reconciliation of these measures to the most directly comparable GAAP measure is presented in our earnings call highlight release, available in the Investors section of akoustis.com.

I would now like to turn over the call to Jeff Shealy, Founder and CEO of Akoustis.

Jeff Shealy

Thank you, Tom, and welcome, everyone, to our 2021 Fourth Fiscal Quarter and Year-End Business Update Call.

Fiscal 2021 was an exciting year for Akoustis as we entered volume commercial production of our patented XBAW filters with our Tier 1 consumer focused WiFi 6 customer. This helped lead to year-over-year revenue growth of over 270% in Fiscal 2021, and we expect strong growth to continue in Fiscal 2022 and beyond.

We have had a growing number of design wins across each of our major markets over the past several months, which we expect will translate into record quarterly revenue by the December quarter. While we exited the June quarter with one major customer in production, we expect to end the current calendar year with over five customers in production, with additional customers expected in early calendar 2022.

We generated significant momentum in our WiFi filter business in Fiscal 2021, specifically in the wireless router market with both WiFi 6 and WiFi 6E filters, and we are currently ramping up efforts to enter the 5G Mobile market in calendar 2022. We added two new customers in 5G Mobile during fiscal 2021, and have delivered early samples to one of these customers. We continue to target production ramps with both customers in calendar 2022.

We added two new network infrastructure customers in Fiscal 2021, both targeting the Citizens Broadband Radio Service, or CBRs market, in the U.S. We expect to begin shipping against volume orders in the current September quarter to support the customer's initial ramp this calendar year.

The ramp of our 5G small cell network infrastructure business continues to be impacted largely due to the effect of the global semiconductor supply chain shortages on our customers, as well as operator-driven network deployment priorities and timing changes, but we continue to expect to ramp multiple filters with our customers in the current fiscal year.

In our defense and other markets, we continue to work with DARPA on the Direct to Phase 2, or DP2 Program, for the development of an XBAW filtered product development kit that will enable BAW and other similar MEMS structures to be designed and fabricated using the Company's state of the art, patented XBAW process.

Recently, we added a new VP of Engineering, Kamran Cheema, an extraordinary talented executive who brings a wealth of RF experience in product design, manufacturing, technology development, program

management, and importantly, 25 years of experience in micro-acoustic hardware. Kamran comes to us from Qualcomm RF360 where he was Vice President of Engineering. Kamran will lead our 5G Mobile and multi-chip module development, as well as assist in deploying wafer level packaging into mobile products, including 5G smartphones. I am pleased to introduce him to our executive team and welcome him to our company, and we look forward to his leadership and contributions moving forward.

I would now like to discuss the highlights from each of our market segments in the June quarter, beginning with our WiFi business.

WiFi activity continues to increase, as evidenced by the multiple announcements we have made over the past few months and the customers we expect to go into production later this calendar year and expanding further in calendar 2022. We continue to ship both 5.2 and 5.6 Gigahertz WiFi 6 coexistence filters to our Tier-1 consumer-focused customer. This was the first of three WiFi 6 customers that we announced over the past year, and as we announced last week, we expect to ramp production with our second WiFi 6 customer beginning in the December quarter of the current calendar year.

We believe the WiFi 6E filter market will expand significantly in calendar 2022 and beyond, driven by the rapid release and adoption of WiFi 6E CPE. Additionally, there are strong indications that OEMs are planning to incorporate the new WiFi 6E standard in 5G Smartphones, tablets, laptops and other devices, likely making the WiFi 6E filter market significantly larger than the current WiFi 6 market, by both unit volume and revenue. We have made significant progress with our WiFi 6E portfolio, which includes our 5.5 and 6.5 Gigahertz coexistence solution and our new 5.6 and 6.6 XBAW filters that we announced in April.

In the June quarter, we announced our first design win in WiFi 6E with a Tier-1 Enterprise focused customer, and we expect additional WiFi 6E designs wins in the September quarter and beyond. Additionally, we have design locked and delivered to our previously announced Tier-1 Enterprise customer, four custom high performance XBAW filters targeting ultra tri-band applications. These four filter products are currently in qualification for production release, and the initial production ramp is scheduled for the December quarter.

In the March and June quarters, we also added three new WiFi System on Chip, or SOC customers, with reference design wins for multiple WiFi 6E platforms. We expect more than three WiFi 6E customers to be in production by the end of the year, with more to follow in calendar 2022.

We have recently announced that we have received our first development order from a Tier-1 PC chipset maker for our WiFi 6E diplexer. The development of this diplexer will build on our earlier filter modules and leverage our expanding chip scale package, or CSP, technology. This new diplexer represents the first step toward developing more complex and integrated modules for our customers, using our XBAW process and technology.

The PC market represents another large market for Akoustis and we are well positioned to meet the critical requirements including small size and superior signal selectivity in WiFi 6E.

And finally, last week we announced that we have received a new design win from a carrier-focused OEM for our 5.5 and 6.5 Gigahertz WiFi 6E filters for an MU-MIMO gateway product, which is expected to begin shipping in the December quarter of the current calendar year.

To summarize our recent WiFi activity, we have more than 12 XBAW WiFi filters, four for WiFi 6 and more than eight for WiFi 6E, up from four last quarter. As of today, we have three announced design wins in WiFi 6 and two in WiFi 6E, and we expect the number of WiFi customers in production will increase from one to more than five by the end of the year. We also added three new WiFi 6E SOC partners in the

March and June quarter, and lastly, we are developing our first XBAW diplexer with which we intend to enter the PC market, another substantial market in unit volume and revenue.

I would now like to discuss our recent developments in 5G Mobile.

While most of our efforts in 5G Mobile are geared toward engineering samples by the end of calendar 2021 and production ready parts by the end of calendar 2022, we did receive a significant validation of our technology from one of our 5G Mobile customers in the past few months.

In June of this year, we delivered the first engineering samples to our Tier-2 RF Front-End Module customer, and we signed a foundry agreement with this customer, which puts us in an excellent position to enter the 5G Mobile market in calendar 2022. This opens Akoustis to our largest potential market by both revenue and unit volume, and is a significant achievement for our Company and team.

We continue to make progress with our second Tier-1 RF component customer as we announced, this morning, we just delivered first engineering samples of the first of two filters that we are developing for their 5G Mobile products. We are on track to deliver the second sample to this customer by the end of the current calendar year, and remain confident that we will be ready to enter volume production with this customer in the second half of calendar 2022.

Our wafer level packaging efforts continue to progress. We introduced our first WLP technology in the past month using a North American supply chain, and expect to qualify the process by the end of the current calendar year. In the past month, we also shipped 5G Mobile engineering samples to our RF Front-End Module maker customer, complete with these new WLP packages. We plan to expand our capabilities in WLP as we deliver new filters that can leverage the technology for mobile handsets and other devices where size considerations are at a premium.

To summarize our 5G Mobile activity, we have multiple customer-funded XBAW filters in design. We currently are focused on two customer engagements, a Tier-1 RF component company and a Tier-2 RF front-end module maker, and both customer engagements are actively engaged with either our design or manufacturing teams.

We have recently entered into a foundry agreement with one of our customers to produce a 5G Mobile handset filter product in the second half of calendar 2022. We have shipped 5G Mobile samples with our new WLP technology, and expect to enhance our WLP capabilities moving forward.

I would now like to move on to network infrastructure.

Wide bandwidth, high power handling, low insertion loss and high out-of-band rejection are the core filter performance requirements for 5G network infrastructure. Akoustis is ideally positioned to compete in this segment given our small form factor filter solutions and our growing portfolio of RF filters above 3 Gigahertz, where 5G is being deployed worldwide.

Citizens Broadband Radio Service, or CBRS, has emerged as the initial driver for our 5G network infrastructure business with three design wins in the current calendar year including two at the end of July. The first customer design win for CBRS is for a 3.6 Gigahertz XBAW filter for base station equipment, and the second customer's two design wins include both base station and consumer premise equipment. We expect to ship volume filters to both customers in the current September quarter as each customer looks to ramp production before the end of calendar 2021 and into 2022.

Furthermore, we are currently engaged with over 10 SOC, OEM and ODM makers for the development of CBRS networks using 5G and expect to announce additional design wins as the CBRS networks are further deployed.

The FCC C-Band Auction for 3.7 Gigahertz to 3.8 Gigahertz spectrum last December, raised over \$80 billion on new sub-6 Gigahertz, 5G spectrum in the United States. This has created yet another 5G network infrastructure opportunity for Akoustis and we demonstrated early XBAW filter samples addressing this new 3.8 Gigahertz spectrum in the June quarter. We are currently improving on this initial design and expect to demonstrate additional samples by the end of calendar 2021. We expect carriers will look to deploy small cell base stations that operate at this frequency, by late calendar 2022 or early calendar 2023, and we are currently in early discussions with multiple OEMs.

As we mentioned on our last conference call, the production ramps with our 5G small cell network infrastructure customers focus on Asia, have been slower than previously expected due to the global semiconductor supply chain shortages, operator driven network deployment priorities and timing changes, but we continue to expect to ramp production with multiple filters with these customers in the current fiscal year. Similarly, continued customer specification changes have delayed commercialization of our massive MIMO network infrastructure filters, but we continue to work with the customer to develop a plan to introduce a final product.

To summarize our 5G network infrastructure activity, we have five completed 5G network infrastructure XBAW filters, four for small cell base stations, and one for CBRS. To date, we have announced three design wins in small cell with our Tier-1 customer, and one from a second customer. Additionally, we have received three design wins for CBRS from two leading network infrastructure OEMs. In the June quarter, we developed our first 3.8 Gigahertz filter for the U.S. 5G Mobile with further iterations expected in late calendar 2021, early calendar 2022, and we now have over 10 customer engagements, five of which have already placed purchase orders.

I would like to now discuss our progress in our other market segments.

During the June quarter, we continued to work with the Defense Advance Research Projects Agency, or DARPA, to develop our technology involving the multi-year R&D contract from DARPA, through the development of a piezo MEMS process design kit, or PDK, for the Company's proprietary and patented XBAW process. The direct to Phase 2 or DP2 contract is dedicated to developing a general purpose PDK that will enable BAW and other similar MEMS structures to be designed and fabricated using the Company's state-of-the-art patented XBAW process. We expect this will expand the opportunities for XBAW moving forward as other designers will be able to develop new products utilizing our novel piezo electric materials and substrates outside the current devices, which could lead to new opportunities in adjacent vertical markets.

I am pleased to announce today that we have received an order from one of our existing defense customers for a seventh XBAW filter the customer will use in a phased array radar application, that is expected to ship later this calendar year.

To summarize our other market segments, we recently received an order to deliver a seventh XBAW filter to our first defense customer, we have seven completed XBAW filter solutions for the civilian and defense markets, we continue to refine and improve our XBAW PDK driven by the direct to Phase 2 contract with DARPA, and finally, we have a total of three customer engagements, two of which already have placed purchase orders or provided NRE revenue.

Next, I would like to hand it over to Ken, for some financial highlights.

Ken Boller

Thank you, Jeff.

For the fourth quarter, ended June 30, the Company reported revenue of \$2.2 million, driven by a 68% increase in our core XBAW filter product revenue. Revenue was within the guided range we gave last quarter, despite the ongoing headwinds driven by COVID-19 and the resulting supply chain disruptions.

On a GAAP basis, operating loss was \$11.8 million for the June quarter, mainly driven by revenue of \$2.2 million, offset by labor costs of \$6.9 million, depreciation of \$1.4 million, and other operational costs totalling \$5.7 million. As a result, GAAP net loss per share was \$0.20.

On a non-GAAP basis, operating loss was \$9.8 million and non-GAAP net loss per share was \$0.19. Reconciliation of these amounts to the corresponding GAAP measures is available in the press release issued this morning, available in the Investors section of our corporate website.

Capex spend for Q4 was \$2.6 million, compared to \$5.4 million in the prior quarter, mostly related to the continued capacity expansion in the Company's New York fab. Cash used in operating activities in Q4 was \$7.4 million, up from \$5.9 million in the prior quarter. The Company exited the June quarter with \$88.3 million of cash and cash equivalents, versus \$90.4 million at the end of the previous quarter.

During the June quarter, the company raised \$7.5 million in cash through additional equity financing, at an average price of \$10 per share. Given the current challenges in the semiconductor supply chain, and how that may impact our WiFi customers, as well as timing shifts related to 5G small cell network infrastructure, we expect revenue for the September quarter to be relatively flat at approximately \$2 million. However, we expect a return to top line growth in the December quarter as we begin to convert several of our WiFi 6, WiFi 6E and CBRS wins into production revenue. In fact, we expect record quarterly revenue in the December quarter as the total number of customers in production increases from one today to more than five by the end of the year.

I will now turn the call back over to Jeff to discuss our future milestones.

Jeff Shealy

Thank you, Ken.

While we are not expecting sequential revenue growth in the current quarter given the supply chain impact on our customers, we do expect to see a return to top line growth in the December quarter and beyond, as we begin to layer in several new customers. In fact, as Ken stated earlier, we expect to deliver record quarterly revenue in the December quarter as multiple design wins in WiFi 6, WiFi 6E, and network infrastructure begin their respective production ramps. As we enter calendar 2022, we expect the supply chain issues to begin to be addressed, which should allow for more normalized run rates from our customers, which should further help our top line growth.

In the September quarter, we expect to generate revenue from each of our business segments including 5G Mobile, WiFi, 5G network infrastructure, and other markets including defense. We continue to strive toward executing our targeted milestones and will continue to keep you informed of our progress.

Our anticipated September 2021 quarter milestones include; first, we expect to receive at least two new WiFi 6E design wins. In addition, we plan to begin ramping our second WiFi 6 customer into production. Further, we expect to ship the first of two 5G Mobile engineering samples to our Tier-1 RF component customer. Next, we plan to ship our first pre-production WLP wafer to our Tier-2 RF front-end module

customer, and further, we expect to ship filters in volume to two CBRS customers. And, we expect to receive an order for our second generation 3.8 Gigahertz filter from our existing defense customer. Finally, we expect to receive an order for a new advanced multi-chipset module for applications including radar.

Looking further out, our anticipated calendar 2021 milestones include the design lock of our 5G Mobile filter with our second RF mobile module maker, plus the delivery of 5G Mobile XBAW filters meeting our customer spec to our Tier-1 RF component customer. In addition, we plan to ramp production with multiple WiFi 6 and WiFi 6E customers, including two announced WiFi 6 and four announced Tier-1 WiFi 6E customers. We expect that the production qualification of CSP XBAW package filters for 5G Mobile, 5G infrastructure and WiFi. Finally, we expect to ramp production with two CBRS network infrastructure customers.

In conclusion, we believe the market opportunity for our patented high frequency XBAW filters is substantial. With 52 issued patents and 82 patents pending, we are well positioned to capitalize on that opportunity. We continue to work diligently to achieve each of our stated objectives and will continue to update you on our execution against these objects going forward.

We continue to add key hires across our sales, design and manufacturing teams. Beyond our previously announced expansion plans, the Company is positioned to further scale as our New York fab can ultimately be equipped to produce up to 5 billion XBAW filters per year.

Finally, I would to thank our employees for their hard work, passion and dedication throughout fiscal 2021, particularly during this ongoing pandemic, as our team has kept momentum going on our R&D, which has led to multiple design wins across the WiFi 5G network infrastructure and defense markets. We have also experienced exceptional momentum in the 5G Mobile market, driven by our leadership and filters that operative above 3 Gigahertz, and our new and expanding wafer level packaging capabilities. I also wish to thank our shareholders, who continue to support the Company.

With that, I would like to open the call for questions from the investment community.

Operator, please go ahead with the first question.

Operator

Our first question today comes from the line of Anthony Stoss with Craig-Hallum. Please proceed with your question.

Anthony Stoss

Hi guys. Congrats on the progress on WiFi. Maybe the first question is for Ken; is there any updated revenue per quarter that you guys would need to hit to break even if—I'm not sure if gross margins have changed? Probably for Jeff, do you have everything you need right now in the manufacturing plant to be able to handle, say, volume on the handset side? Thanks.

Jeff Shealy

Okay, good morning, Tony. We'll start with Ken for your first question.

Ken Boller

Good morning, Tony. As far as operating cash flow break even goes, I expect to reach operating cash flow break even at approximately \$15 million per quarter, depending on our product mix, and I do expect that to occur, in the next 12 to 21 months, just to give it a little time frame around that.

Jeff Shealy

Okay, Tony. Good morning, thanks for the comment.

From a manufacturing standpoint, we have made tremendous progress up in the New York facility. The fab now, we hit a pretty key milestone in early August with overnight shifts that allowed us to hit the mark that we were hunting in terms of capacity expansion for the mid-year point. Then, we expect through a 24/7 operation by the end of the year, to be able to hit that 500 million filter target that we were positioning for, and we are on track for that. Certainly, a tremendous amount of work in terms of the team in New York bringing that together, but also a lot of planning to get the equipment in place. As you know, lead times in equipment have been pushing out and this was something we got ahead of and had been positioning ourselves to be successful from a capacity expansion standpoint.

Anthony Stoss

Just as a quick follow up, Jeff, on the 5G infrastructure small cell, I know you talked about component shortages, when do you think you will start shipping again, what quarter?

Jeff Shealy

I will bring Dave in here and I will probably end with some comments, but Dave?

Dave Aichele

Good morning, Tony.

The CBRS, as we commented on, two customers are going to be ramped in with the CBRS. We have been shipping some volume pre-production parts this quarter and production ramps are going to be next quarter. On the 5G Asia, the line of sight that we have, and it's all going to depend on timing with the Chinese providers on shifting back up to the higher frequency. We are expecting end of this year, first quarter of next year, but it's all going to be really driven by the timing of the market. The good news is that we believe the chipset supply, particularly with the wider bandwidth is sampling and able to ramp as well, which has been part of what's hampered us.

Then, looking further out, the arms (phon) estimate that we are looking at, right now with the 5G U.S. market, we are going to be sampling toward the end of this year, but it takes a while to get designed into the infrastructure market so that we will be a further ways out, as well as the U.S. market ramping.

Jeff Shealy

Tony, I would like to add to Dave's comment, really, just for those of you not familiar with that Asian market. What has transpired there, as Dave touched on, is this move to much significantly wider bandwidth. Initially we saw specs in the 100 Megahertz bandwidth range. Those have expanded out to 300 Megahertz. While we were ready to ramp with the portfolio that we announced, up at 300 Megahertz, there were some other, as Dave mentioned, chipset availability was a challenge. Also, some of the operator deployment focus was an issue.

I did want to point out, as a milestone in June, I don't think we advertised tremendously, but we did take the opportunity with this lull to really make some improvements on the product portfolio and enhance some of the performance for our wide bandwidth filter portfolio.

Then, as Dave touched on, I wanted to make sure we brought in the C-Band engagements Dave talked about sampling, but multiple customer engagements on the C-band that we're pretty excited about for the U.S. market.

Anthony Stoss

Thanks for the color, guys. Best of luck.

Jeff Shealy

Thank you, Tony.

Dave Aichele

Thanks, Tony.

Operator

Our next question comes from the line of Suji De Silva with Roth Capital. Please proceed with your question.

Suji De Silva

Good morning Jeff, Dave, and Ken. Congrats on the progress here.

I just want to understand on the WiFi 6E market, a lot of momentum here; in 6E are those all tandem 5.5/6.5 opportunities? Can you talk about what the Ultra Tri-Band product is? I don't know if I've heard that term before.

Jeff Shealy

Okay, let's let Dave start.

Dave Aichele

Good morning, Suji. Thanks for the comment.

Yes, pretty much everything—well, not pretty much. Everything that we are shipping right now, both for WiFi 6 and WiFi 6E, is tandem. The number of MIMO that you see in the 6E has increased. Traditional WiFi 6 was 2 plus 2, sometimes 2 plus 4. What we are seeing primarily in the WiFi 6E multiuser MIMO is 4 plus 4, and we are actually seeing some that even go up to 8. This tandem approach, depending on how they configure the system, it's multiple filters per system. It could be 8 going up to 12 and even higher. The ASPs on these filters, the average selling price, is higher as well, so it's a good opportunity for us.

With reflective to the Ultra Tri-Band, that really is an architecture that we are enabling in the market that allows the transition of 50 Megahertz bandwidth transition from UNII-4, which ends at a frequency of 5895, and the start of UNII-5, which starts at 5945. We are the only supplier of filters in the market today,

that is in design phase and sampling, which we believe will production ramp next quarter, that will enable that 50 Megahertz transition, which is significant because it enables the full utilization of UNII-1 through UNII-4 for the 5 Gigahertz, and then UNII-5 go UNII-8 for the 6 Gigahertz.

Suji De Silva

Thanks, Dave.

Jeff Shealy

Let me add a couple of things, and thanks, by the way, for your comments opening.

I did want to emphasize; WiFi is a clear strength for us. As we said in the prepared comments, we've got 12 filters for this market; four in the WiFi 6, and then another 8 for the 6E market. I think Dave touched on, depending on the partitioning of the system, that requires either standard tandem or the spectrum is broken up and then additional customized filters are used there. I want to emphasize, Akoustis is an enabler for this Ultra Tri-Band architecture, and as Dave said, that is certainly one of the opportunities that we mentioned. One point of emphasis, we have been in production in the current quarter with one WiFi 6 customer, we are expanding that in both WiFi 6 and WiFi 6E to a total of five customers we expect for the December quarter. A lot of the activity that has been gearing up in the Company has been on the qualification and supply chain readiness and delivery of preproduction units to a broad range of customers in WiFi.

Suji De Silva

Thanks, Jeff and Dave, for that really detailed color there.

Then switching over to wireless infrastructure, I just want to understand, obviously, that the China ramp has paused but is going to come back, will the non-China wireless infrastructure opportunities be of a similar magnitude or potentially bigger than the China wireless opportunity that comes back, or what is the relative sizing of those two buckets?

Dave Aichele

Hi Suji, it's Dave.

The China market ramp is pretty significant in that they are looking at, obviously, replacing the 4G network that I think wasn't fully deployed in China, so they are putting a significant investment in the 5G deployment, it just depends on the frequency spectrum, but we are seeing signs that other markets are strong. Mainly what we are looking at is the 5G U.S. deployment around the 3.7 to 3.98, so we believe that that one is going to be as strong as the China market in some respects, but it's timing, it's not really going to happen until 2022. We're ahead of the curve in the development of the components that we want to be sampling, and as Jeff highlighted earlier, we will continue to make improvements on our designs. There are some touch specifications that you see when you look at the 5G network infrastructure. The BAW technology is very well suited to meet the needs of performance plus size in the small cell application, so we are excited about the opportunity.

Jeff Shealy

Suji, let me add to that. For the non-China market you've got, as we detailed, both CBRS, which is unlicensed by the way, and then the C-Band. In the prepared notes we talked about the auction for those licenses was pretty substantial. I think Dave touched on, and I will emphasize, in our product portfolio is

further ahead. We invested in that for the Asian market, but we are now seeing significant design activity in the CBRS market; we touched on that in the script. We have been investing forward in the C-Band and producing samples to be able to deliver to the market later this year. Just some additional color there to add.

Suji De Silva

I appreciate that. Thanks, guys.

Jeff Shealy

Thank you, Suji.

Dave Aichele

Thanks, Suji.

Operator

The next question comes from the line of Harsh Kumar with Piper Sandler. Please proceed with your questions.

Harsh Kumar

Hey guys. First of all, congratulations; it looks like a tremendous amount of activity, design wins, and you guys are grabbing it with both hands, so this is exciting times indeed.

I had a quick question, Jeff, for you, maybe Dave or Jeff. Can you talk about the process for 5G Mobile? You talked about engineering samples being shipped very recently to your customer number 2, Tier-2 customer. Can you talk about the steps from here to maybe seeing, what I would call a design win or a manufacturing agreement or however you want to call that in terms of significant revenue with a customer? What is the process that's involved?

Jeff Shealy

Good morning, Harsh. Thanks for your comments. I will let Dave start and maybe add some comments at the end.

Dave Aichele

Good morning, Harsh. With the two customers that we have good progress with right now, one of them we have signed a foundry agreement with, and that's given some pricing, it's given access to the PDK, which is a design kit to allow them to do the designs into our fab process, and then we've talked about program timing. We have a good strategic engagement going with them. We have to get through the development cycle of the designs of our filter in their WLP process and integrating into their module, so we're in the midst of that right now.

Then, with the Tier-1 component supplier, this is an architectural change within their company that's utilizing the high performance Akoustis core engine that will enable them to hit some of the touch coexist requirements that can't be handled with more traditional technology. That platform is, we have shipped our first design to them, and the process is for them to really characterize and model the performance measured against the model, and then make some design changes potentially to their core substrate.

Then, if we need to, we will go back in and do the same with our dye, but our hope is to iterate to a design that proves the performance. They have customers identified that they are already engaged with that if things go well through this process, we'll be looking at a potential ramp at the end of next calendar year. It's something that we are excited about.

Then, we have our next design with that customer that we are looking to ship by the end of next quarter. Both of those are going to be characterized and evaluated and they're going to feed back to see if we need to iterate or not.

Jeff Shealy

Harsh, let me add to that. Dave touched on the foundry model for 5G Mobile. I want to emphasize that that allows us to leverage what we have in terms of capacity up in New York for the mobile market without interfering with our product portfolio and WiFi and infrastructure. It also couples in, but didn't really touch on, but we did touch on in the script, but I want to emphasize, the wafer level package, or WLP, technology that we developed. I want to emphasize the progress that we've made there, that is an enabler for this mobile market. It addresses a size and cost point that allows our filters to be integrated into a module, but it also opens up, and we commented in the script, on diplexer product development for the PC market. Looking ahead, this WLP could be in, what I would estimate, make up 80% of our product portfolio going forward. It addresses cost savings that we're looking for, and as to a question earlier by Tony in terms of break even point, it really allows us to drive cost savings to get us to a point of break even.

We have also, over the last quarter, I think it's relevant to mention, is that we have made enhancements in that supply chain, really to make that supply chain robust, as well as shorten cycle time, as it's clearly going to be a very important facet of our design and manufacturing business model.

Harsh Kumar

Thanks, guys.

I now have a follow up. I know that the basics of the benefits of your technology, high frequency, etcetera, but I am trying to understand, as you are winning these 5G Mobile wins, Dave and Jeff, what are the customers benefitting from here? When they come to you, are they coming to you because of smaller size, or just the performance is that much better and therefore the battery proposition is much better? Just could you help us understand what is in it for the customers with your superior technology?

Dave Aichele

Harsh, it's Dave.

It really is performance, is the main thing. With our expansion in the fab, we're able to be cost competitive as well, being able to drive more volume through the fab, but it's really coming down to performance. These customers are targeting the more difficult specs, particularly with the 5G deployment, that their traditional technology that they've always had access to, can't address those specs. It's both the insertion loss, which is going to help obviously with the battery usage, and it's also the rejection for the coexist. Particularly when you get into some of these quadplexer-type designs, they're more complex where isolation between adjacent bands is very important.

We can address, for some customers in the TX, transmit chain, where traditional SAW is not going to be able to handle the power, but also the tough coexist requirements, so BAW is better suited for that part of the duplexer. Also, with more traditional LTCC-type technology, which has lower cues, which basically

impacts the coexistent requirements, when they get access to our core Akoustis technology, they can get that sharp projection that's required. This is really a theme that we've carried for the last five years, but just didn't have the capacity at the time in the past to really enable some of these customers to grab market share. We are excited about the opportunity of working with them and, it's a very well-defined need that we address.

Jeff Shealy

Harsh, let me add to that.

Dave talked about the performance. You've got bandwidth and power handling capability, which is very critical in these modules. There's frequency performance. Clearly, you've got frequencies that are increased not only in the 5G spectrum 3 to 5, but we've shared a lot of information about what we are doing in the 5 to 7, for WiFi 6, WiFi 6E. Frequency performance is extremely critical.

In adding to what Dave said, there is very low moding in our technology and that produces smooth characteristics, both in the pass band as well as out-of-band, as Dave talked about when you are coupling multiple filters together.

Finally, in terms of value proposition to the customer on the 5G Mobile, is it has to be in a form factor that can be integrated, and what we've been able to put together in the wafer level package, we think is going to be highly able to be integrated in various technologies, particularly in the module technologies, but also in a wide range of product configurations.

Harsh Kumar

Very helpful, guys. Thank you so much.

Jeff Shealy

Thank you, Harsh.

Dave Aichele

Thanks, Harsh.

Operator

Our next question is from the line of Rich Schafer with Oppenheimer. Please proceed with your question.

Rich Schafer

Thanks, and let me add my congrats guys on hitting a whole lot of milestones, it's tough to keep up, even taking notes, of all the announcements you guys had.

I have a couple questions. First is, Jeff, I don't know to the degree you can share, but if you could give some more color and help us understand better your sales funnel, whether you talk about it by size or how that ramp maybe looks over the next 12 to 24 months? I'm curious, within that, if you can talk about what the pipeline looks by some of these end markets; how much of it's WiFi, how much of it's 5G RAN, how much of it's defense and handset. Can you give us any idea of what that looks like?

Jeff Shealy

Rick, good morning to you, and thanks for your comments.

In terms of color on the sales funnel, I'll pull Dave in here in a minute, but let me comment of what we've said and what we see for looking ahead.

What we are driving to from a plan standpoint, we mention is double digit growth quarter-over-quarter, for the December quarter, and that's driven purely by the number of programs that we're planning on ramping. We mentioned WiFi 6, WiFi 6E; there's infrastructure that's starting to come into play as well, but predominantly over the next few quarters, revenue is going to be dominated in the WiFi arena.

Also, for the full year, we feel very confident with the sales funnel that we have and the design win notifications that we've received from customers, that from a plan standpoint, we are fully expecting triple digit growth year-over-year, and that's FY22 over FY21. I think the market expects that out of us; but I am very pleased that we have a robust sales funnel that actually supports that.

The activity in WiFi 6 we are adding additional customers into WiFi 6; I know that's been some time coming. There's been some headwinds in the market, but from a WiFi 6E standpoint, that's a new market. We talked about what we're doing in Ultra Tri-Band as well as in the WiFi 6E, bringing in the new 6 Gigahertz band and solutions into that band. For us, it starts with having the product portfolio that you can attract customers, but then having the back-end application sales organization that can drive and work with customers to solve any system issues, board level issues, that can drive toward these design wins.

Our approach has always been, in terms of sales funnel, part of the sales funnel is earlier in the sales funnel, is the design win. If you look at what we've announced previously, when we talk about design wins, those you can actually build that sales funnel at look at what's dropping in. If you look at where we're ramping, you can see clearly there's WiFi 6 and WiFi 6E dropping through to the sales revenue portion of the sales funnel. We've talked about some of the headwinds in infrastructure, but we think that we've got a product portfolio and design win pipeline there that's going to support growth going forward.

Dave, do you want to add anything?

Dave Aichele

Just a couple of comments, Rick.

We have a CRM tool that we utilize and we've got a model, and there are quarterly metrics that we track to for the sales funnel. We are focused right now on the WiFi 6E. That has the fastest growth opportunity for us and if we are delivering technology right now that's ahead of the competition, and we expect to and will continue to drive R&D to maintain that lead. That is a focus with the sales organization, on securing the design wins that Jeff highlighted. The infrastructure we still believe is a good market, that layers in next year, calendar year 2022. Then the Mobile, as we highlighted, more comes into the latter part of next year, really being significant in the calendar year of 2023.

That's really the motivation and the drive that the team is looking at right now.

Rick Schafer

Thanks, guys.

In line with that, I am curious on capacity. It sounds like you guys are on track for the 500 million exiting this year; that's great. I'm just curious, along the way, if you are bumping into any bottlenecks on the labor

side or tool side? Where I'm going with that is, you see this hockey stick ramp in your model next year with all these designs wins and all this activity, I don't know if you could talk at all about what your capacity plans are for next year. I'm curious with the CHIPS Act, it's the Innovation and Competition Act making it's way through congress, are you seeing tool lead times start to stretch out or extend as people anticipate those monies coming loose, maybe by the end of this year? I know there's some speculation, so I didn't know if you are having to order stuff now, maybe a little earlier than you have in the past in terms of tools? Thanks.

Jeff Shealy

Thanks. To that, additional color on the capacity, we saw this problem coming and got ahead of it. Capacity is not something that you dial in overnight, you've got to commit to it. In terms of the labor, the labor pool has come together quite well. We've been able to, from a recruiting standpoint, been able to tap the local community colleges, the local universities there in New York, as well as recruit from out of state, so labor has come together pretty well. Again, this is something that happens over a period of quarters. We have to have labor in place at least one quarter in advance of when you are really going to get the productivity out of that.

I would like to comment, and I think this is a credit to our New York fab team, if you look at the productivity, as everybody's well aware from the pandemic we've been weathering, if you look at the productivity from January of last year to now in our factory, it has been a straight line up, and that has been through a combination of the tools as well as the labor that we've brought on board. I've always said our strategy there is to get to a point where we can support cash flow break even, and then we will adjust accordingly.

You mentioned the CHIPS Act or the innovation Bill that has been making it's way through congress; to our knowledge, that's not yet been approved on the House side. Obviously, we are watching that very closely and certainly, we've got some ideas on how we can continue to expand moving forward. I think strategically for us, we can look at larger scale wafers and additional capacity, taking from 500 million filters into several billion filters would give us capacity then to attract Tier-1 type activity in Mobile.

Then, the final point I would like to emphasize, and I think we hit this in the script, but I want to emphasize it, we are very pleased with the capacity that we have available to us. Where we're focused on, I've always talked about cycle time, but also adding to the expertise in the engineering on this front, as we've actually added some talent, as most people know, Ron Holden (phon) is our Chief Product Officer. He's carried the weight and water getting us into the mobile, as well as the infrastructure thus far, and we've added Kamram Cheema over the last quarter to help expand out that expertise.

We are really focusing on improvement of efficiency and velocity of products into the market and if you look at really where we're fine tuning, the capacity, we're in an excellent position there. I don't see any roadblock to us being able to deliver the product. It's more the engineering and cycle time of engineering; we're focusing on shorter time to market, getting—from the time we get a spec from the customer to the time we deliver the product.

Overall, I think that's a benefit of the model that we have, in terms of design and manufacturing, and that's how we're built and we're just focused on design throughput efficiency and that's where we're working currently in the engineering.

Rich Schafer

Thanks for that color.

Jeff Shealy

Okay, thank you, Rick.

Dave Aichele

Thank you, Rick.

Operator

At this time, we have reached the end of our question-and-answer session and I will turn the floor back to Management for closing remarks.

Jeff Shealy

I wanted to take the opportunity to thank everyone that's joined us today. We'll continue to plan to update you on significant milestones moving forward. I wish everyone a safe and healthy day. Thank you again, and goodbye.