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PRESENTATION

Operator

Welcome to the Q3 2021 Harmonic Earnings Conference Call. My name is Towanda, and I will be your operator for today's call. (Operator Instructions) Please note that today's conference is being recorded. (Operator Instructions)

I would now like to turn the call over to David Hanover, Investor Relations. David, you may begin.

David Hanover

Thank you, operator. Hello, everyone, and thank you for joining us today for Harmonic's Third Quarter 2021 Financial Results Conference Call. With me today are Patrick Harshman, President and Chief Executive Officer; and Sanjay Kalra, Chief Financial Officer.

Before we begin, I'd like to point out that in addition to our audio portion of the webcast, we've also provided slides to this webcast, which you may see by going to our webcast on our Investor Relations website.

Now turning to Slide 2. During this call, we will provide projections and other forward-looking statements regarding future events or future financial performance of the company. Such statements are only current expectations, and actual events or results may differ materially. We refer you to documents Harmonic filed with the SEC, including our most recent 10-Q and 10-K reports and the Forward-looking Statements section of today's preliminary results press release. These documents identify important risk factors, which can cause actual results to differ materially from those contained in our projections or forward-looking statements.

And please note that unless otherwise indicated, the financial metrics we provide you on this call are determined on a non-GAAP basis. These metrics, together with corresponding GAAP numbers and a reconciliation to GAAP, are contained in today's press release, which we posted on our website and filed with the SEC on Form 8-K.

We will also discuss historical financial and other statistical information regarding our business and operation, and some of this information is included in the press release. The remainder of the information will be available on a recorded version of this call or on our website.

And now I'll turn the call over to our CEO, Patrick Harshman. Patrick?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

All right. Thank you, David, and welcome, everyone, to our third quarter call. Harmonic delivered another quarter of strong financial and strategic results with 33% year-over-year revenue growth and $0.09 EPS. Both our Cable Access and video segments again contributed materially, each with double-digit revenue growth, positive operating income and important strategic progress. Our Cable Access business delivered 43% top line growth and the number of customers deploying CableOS grew 79% year-over-year. Our video business was up 26% year-over-year with streaming SaaS revenue up 69% year-over-year. These results demonstrate continuing strong market momentum for our company, driven by our newest products and services. The combination of this momentum, our near-record backlog and deferred revenue and an increasingly robust cash position provide a strong foundation for continued growth through the balance of this year and into 2022.

Looking now more closely at our Cable Access segment, it was another record quarter. Segment revenue was $57.6 million, up 43% from a year ago and 68 operators were deploying our CableOS cable and fiber solution worldwide, up 79% from the third quarter of 2020. This updated end-of-quarter customer count includes 1 new international Tier 1 operator. At quarter end, these ongoing deployments had scaled to serve over 3.9 million cable modems, up 77% year-over-year.

As Sanjay will address in more detail, the quarter was also characterized by continuing higher supply chain costs, particularly for our industry-leading DAA nodes. It's a very tough environment, and we're proud of the job our supply chain team is doing to keep our node platforms flowing and our customers' programs on track.

As most of you know, we established our market-leading position in virtualized cable broadband by investing in R&D, innovating and collaborating with like-minded customers. Our commitment to continuing to invest and innovate was on full display during the third quarter. In the fiber-to-the-home arena, we introduced a significant new enhancement to our fiber-to-the-home solution targeted specifically at the rural market. We also closed several new fiber-to-the-home wins and made encouraging progress getting our fiber-to-the-home solution qualified by a couple of targeted larger operators.

Back on the broadband-over-cable realm, we leveraged our unique software foundation to introduce a new solution we call MAC Anywhere, further extending and solidifying our leadership position in distributed access networks. We also worked closely with an innovative customer to demonstrate groundbreaking progress on DOCSIS 4.0 solution that's way ahead of the rest of the market, with our converged software core, again, being the key to our agility, and time-to-market advantage.

And finally, again, leveraging our cloud-native core platform, we announced really innovative work done with Google to integrate their Google Cloud Marketplace with our CableOS. This solution enables operators to leverage CableOS to deploy new revenue-generating cloud services at the Cable Network Edge, a truly unique advantage Harmonic has in the marketplace and an opportunity we aim to exploit further as the cloud edge market develops.

Summarizing for our Cable Access business, I want to remind you that in June, we laid out our 3-year vision for the strategic evolution and financial growth of this business. We identified a greater than $2 billion addressable market and a path for us to leverage our cloud-native and DAA technology leadership to drive a greater than 40% annual growth rate for the next several years. The technology, marketplace and financial progress we've since achieved, our strong sales pipeline of Tier 1 and smaller operator engagements and our Q4 guidance, which implies approximately 59% year-over-year growth in 2021, all demonstrate that we remain firmly on track to deliver on our growth vision.

Turning now to our video segment. Here also, we delivered another very solid quarter. Third quarter segment revenue was $68.7 million, up 26% year-over-year and segment gross margin was 61.9%, a new record for this business and further evidence of our transformation to a more software- and services-centric business model.

Recurring streaming SaaS revenue grew 69% year-over-year, driven principally by expanding existing customer usage and aided by new customer additions. As with our Cable Access business, in June, we laid out our multiyear video business strategic plan. This plan has 2 core elements: taking a leading position in the growing billion-dollar streaming infrastructure market and maximizing revenue and profit from the larger but slowly declining video broadcast market. On the streaming SaaS side of things, 69% revenue growth reflects good progress, both domestically and internationally.

Overseas, during the third quarter and early in the current fourth quarter, we secured new streaming SaaS design wins with several Tier 1 media companies. These important new wins are still in the process of launching, creating a healthy pipeline for continued SaaS revenue growth.

Domestically, in addition to scaling our SaaS business with several larger media customers, we announced a new partnership with Jackson Energy Authority to provide a fully hosted video streaming solution, branded E+ Premier for smaller and rural cable, broadband

and telecommunications providers. This solution supports a host of advanced capabilities, including targeted ad delivery enabling smaller operators to stay competitive. We already have several operators on the platform and see this as an important expansion of our addressed market.

Regarding the second element of our video strategic plan, we continue to see a resurgence in broadcast project activity globally, including growing momentum for an investment cycle and moving video transport from satellite to terrestrial IP networks. We recently won our first multimillion dollar North America satellite to IB fiber -- IP fiber transformation project that was driven by operating efficiency and not by FCC mandate and funding. We believe this kind of transformation will be a growing trend globally, one that we're well positioned to capitalize on through our new software-based XOS platform.

In summary, for our video business, we delivered another strong quarter, characterized by solid revenue growth, gross margin expansion, operating profit and new wins. The video sales pipeline and outlook for the remainder of the year remain positive. And looking further ahead, we continue to be confident in our ability to deliver on our multiyear strategy.

With that, I'll now turn the call over to you, Sanjay, for a closer look at our financial results and outlook.

Sanjay Kalra *Harmonic Inc. - Senior VP & CFO*

Thanks, Patrick, and thank you all for joining us today. Before I discuss our quarterly results and outlook, I'd like to remind everyone that the financial results I'll be referring to are provided on a non-GAAP basis. As David mentioned earlier, our Q3 press release and earnings presentation includes reconciliations of the non-GAAP financial measures to GAAP that are discussed on this call. Both of these are available on our website.

Turning to Slide 7. Let's start with an overview of our third quarter. We delivered solid results, which were ahead of our guidance, including revenue of $126.3 million, up 33.1% year-over-year; gross margin of 52.8%, a 60 basis point improvement year-over-year; adjusted EBITDA of $14.8 million, or 17 -- or 11.7% of revenue, up 106% year-over-year; and EPS of $0.09, up 200% year-over-year.

We ended Q3 with a strong backlog and deferred revenue of $333.3 million, up 54.1% year-over-year. Cash was $128.4 million at the quarter end, up 81% year-over-year, positioning us well for the remainder of this year and into 2022.

Now let's review our third quarter financials in more detail, turning to Slide 8. As mentioned earlier, total company Q3 revenue was $126.3 million, up 11.4% sequentially and up 33.1% year-over-year. Looking first at our Cable Access Business segment. Revenue for the quarter was $57.6 million, up 15% sequentially and up 42.9% year-over-year, reflecting both the continued ramp of existing customers and new customer wins. In our video segment, we reported Q3 revenue of $68.7 million, up 8.5% sequentially and up 25.8% year-over-year. This year-over-year video growth reflects solid broadcast demand and strong SaaS revenue growth.

During the third quarter, our SaaS revenues grew 69% year-over-year due to increased usage from existing customers and activation of new customers. We ended Q3 '21 with 101 SaaS customers, 36% year-over-year growth. In the quarter, we added 8 new SaaS customers, including several new Tier 1 international streaming customers and saw a churn of 9 small deployments. We had 1 customer representing greater than 10% of total revenue during the quarter. Comcast contributed 23% of total revenue compared to 31% in Q2 '21 and 20% in Q3 '20.

As mentioned earlier, total company gross margin improved by 60 basis points to 52.8% in Q3 '21 compared to 52.2% in Q3 '20. Cable Access gross margin for Q3 '21 met our expectations at 42% compared to 47% in Q2 '21 and 48.9% in Q3 '20.

Extraordinary supply chain costs have depressed margins for both Q2 and Q3 this year relative to last year, with the sequential decline primarily reflecting a higher DAA hardware mix in Q3. Video segment gross margin was a record 61.9% in Q3 '21 compared to 59.3% in Q2 '21 and 54.6% in the year ago period, reflecting both an improved software mix within our appliance category and expanding SaaS business.

Moving down the income statement on Slide 9. Q3 '21 operating expenses were $54.9 million compared to $54.6 million in Q2 '21 and

$45.3 million in Q3 '20. The year-over-year increase is primarily due to increased Cable Access research and development and sales and marketing for both segments as we continue to invest in our growth initiatives. Operating expenses represented 43.5% of revenue in Q3 '21 compared to 48.1% and 47.8% of revenue in Q2 '21 and Q3 '20, respectively, reflecting our business's inherent operating leverage as revenues ramp. On a sequential basis, Q3 '21 reflects flat operating expenses, while quarterly revenue rose 11.4%.

Adjusted EBITDA for Q3 '21 was 11.7% of revenue at $14.8 million, comprised of $5.1 million from Cable Access and $9.7 million from video. This compares to an adjusted EBITDA of 8.4% of revenue at $9.5 million in Q2 '21 and 7.6% of revenue at $7.2 million in Q3 '20. This all translates to Q3 '21 EPS of $0.09 per share compared to $0.05 per share in Q2 '21 and $0.03 for Q3 '20.

We ended the quarter with a diluted weighted average share count of 106.4 million compared to 103.8 million in Q2 '21 and 98.4 million in Q3 '20. The sequential decrease is primarily due to convertible debt dilution of 1.2 million shares and the dilutive effect of outstanding RSUs and options by 0.5 million shares, both resulting from an increase in our average stock price in the quarter and 0.9 million shares due to weighted effect of stock issued to employees and ESPP shares.

The year-over-year increase reflects the dilution of our convertible debt by 2.8 million shares and the dilutive effect of outstanding RSUs and options by 0.7 million shares, both resulting from an increase in our average stock price during the quarter and 4.5 million shares due to the weighted effect of stock issued to employees and ESPP shares.

Q3 bookings were $114.3 million compared to $186.9 million in Q2 '21 and $100.7 million in Q3 '20.

Following record second quarter bookings, we are pleased to report another strong quarter of new bookings, demonstrating robust demand for our solutions. Our book-to-bill ratio was 0.9 in Q3 '21, 1.6 in Q2 '21 and 1.06 in Q3 '20. Our strong bookings momentum during the past 3 quarters has generated a year-to-date book-to-bill ratio of 1.1. The year-to-date book-to-bill exceeds 1 for both segments.

Turning to Slide 10. We'll now discuss our liquidity position and balance sheet. We ended Q3 with cash of $128.4 million compared to $115.2 million at the end of Q2 '21 and $70.8 million last year. The $13.2 million sequential cash increase is comprised of $15.2 million of cash generated from operations, primarily attributable to both Cable Access and video segment operating profits and strong collections in the quarter, net of $2.9 million cash used for purchases of fixed assets and $1.3 million received primarily from stock option exercises.

Our day sales outstanding at the end of Q3 was 54 days compared to 80 days at the end of Q2 '21 and 77 days in Q3 '20. The sequential and year-over-year decrease reflects strong collections in the quarter. Our days inventory on hand was 78 days at the end of Q3 compared to 74 days at the end of Q2 '21 and 73 days at the end of Q3 '20, reflecting increasing inventory at the end of the quarter as we prepare for heavy fourth quarter and 2022 shipments.

We are also stocking up on constrained inventory at more than normal levels as we manage the supply chain landscape. At the end of Q3, total backlog and deferred revenue was $333.3 million, up 54.1% year-over-year from $216.2 million at Q3 '20 and a slight decrease of 4% sequentially from $347.2 million at Q2 '21. This near-record Q3 backlog and deferred revenue reflects increasing commitments from our large cable customers growing demand for new broadcast edge appliances, including 5G bandwidth reclamation projects and growing video streaming SaaS volume commitments. Note that historically, about 80% to 90% of our backlog and deferred revenue gets converted to revenue within a rolling 1-year period.

As mentioned on previous calls, not included in our backlog is additional contractually agreed CableOS business with 3 of our initial Tier 1 cable customers. At the end of Q3 '21, this incremental amount was approximately $136.7 million, down from $145 million last quarter as approximately $8.3 million went through the purchase order process and therefore, moved into bookings. Taking these CableOS contracts into account, we have total future contracted revenues of approximately $470 million, which continues to provide us with a very solid foundation for the remainder of 2021 and into 2022.

Now I'll turn to our non-GAAP guidance for 2021, beginning on Slide 11. I will now review guidance for our cable segment for Q4 and the full year. For our Cable Access segment in Q4, we expect revenue in the range of $65 million to $70 million. At the midpoint, this reflects an increase of $12.5 million compared to prior Q4 guidance. This increase is driven primarily by accelerating deployment momentum with our Tier 1 customers.

Gross margin in the range of 40% to 41%. At midpoint, this reflects a decline of 550 basis points versus prior guidance. This is mainly due to increased hardware mix resulting from incremental hardware revenues based on growing demand from our customers procured at higher-than-standard costs.

Adjusted EBITDA to range from $7.4 million to $9.1 million. At midpoint, this reflects an increase of $2 million versus prior guidance, primarily due to additional gross profit on increased revenues. For the full year 2021, based on our progress to date, we now expect for Cable Access revenues in the range of $214 million to $219 million.

At the midpoint of our guidance, this reflects a $17 million increase versus prior full year guidance. At midpoint, it also reflects 59% revenue growth for the full year, indicative of our business building momentum worldwide. Gross margin in the range of 42.6% to 42.9%, a 175 basis point decline versus prior guidance at the midpoint. This is due to increased hardware mix resulting from incremental hardware revenues as discussed and associated higher supply chain-related costs, as we have discussed.

Supply chain costs increase have been significant this year and make a tough year-over-year comparison, especially as we have prioritized market share gains. Absent supply chain impact, our blended gross margins for the full year are expected to be nearly flat with 2020 despite a much heavier mix of hardware. In other words, absent supply chain impact, both software and service and hardware margins are expected to improve in 2021 year-over-year, which is an encouraging indication that we are on the right track to achieving our long-term margin expansion targets. Adjusted EBITDA in the range of $21.6 million to $23.3 million, an increase of $2.2 million versus prior guidance at the midpoint.

Now I will discuss video segment guidance. For our video segment in Q4, we expect revenue in the range of $82 million to $87 million as we guided previously. Gross margin in the range of 54.5% to 55.5%. At midpoint, this is consistent with our previous guidance. Adjusted EBITDA to range from $9.6 million to $12.7 million. At midpoint, this reflects a decline of $1.9 million from prior guidance, primarily due to timing of delayed hiring for sales and marketing, originally planned in the third quarter getting pushed out to the fourth quarter.

For the full year 2021, video segment results, we now expect revenue in the range of $285 million to $290 million. At the midpoint of our guidance, this reflects a $4.5 million increase versus prior guidance, attributable to both a continued rebound in broadcast market demand and growth in streaming sales. Gross margins in the range of 57.3% to 57.7%. At the midpoint of our guidance, this represents a 125 basis point increase over prior guidance, mainly due to product mix. Adjusted EBITDA in the range of $28.9 million to $32 million, an increase of $4.9 million compared to prior guidance at the midpoint.

Slide 12 presents the consolidated total company guidance for Q4 and full year 2021, calculated as a sum of the 2 segment charts we just reviewed. Reading out these submissions for Q4, we expect revenue in the range of $147 million to $157 million. At midpoint of our guidance, this reflects an increase of $11.5 million versus prior guidance. Gross margin in the range of 47.8% to 49%. At the midpoint of our guidance, this represents a 270 basis point decline over prior guidance, mainly due to product mix and associated higher supply chain costs. Adjusted EBITDA to range from $17 million to $21.8 million. At midpoint of our guidance, this reflects an increase of $0.2 million versus prior guidance. EPS to range from $0.10 to $0.14. At midpoint, there is no impact on what we guided previously. A weighted average diluted share count of approximately 106.9 million. And at the end of Q4, cash is expected to range from $125 million to $135 million. At midpoint, this reflects a decline of $5 million, primarily due to increased investment in inventories as we ramp up for 2022 shipments.

For the full year, we now expect total company revenue in the range of $499 million to $509 million, reflecting raised expectations at both the low and high end of the range due to strong demand we saw in the third quarter and our updated Q4 expectations for both segments. Gross margin in the range of 51% to 51.3%. At midpoint of our guidance, this represents a decrease of 25 basis points versus prior guidance at midpoint. Adjusted EBITDA to range from $50.5 million to $55.3 million, an increase of $7 million versus prior guidance at the midpoint. EPS to range from $0.28 to $0.32 per share, a $0.06 or 25% increase compared to the midpoint of prior guidance, an effective tax rate of 10%, a weighted average diluted share count of approximately 105.1 million. And finally, cash at the end of the year is expected to come in between $125 million and $135 million.

In summary, during the third quarter, we continued to execute on our long-term strategic priorities and goals. Our performance and outlook continue to be in line with the multiyear revenue and operating models we shared with you during our video and Cable Access segment investor events midyear.

We appreciate your attention today and look forward to updating you on our continued progress. With that, thank you, everyone, and now I'll turn it back to Patrick for final remarks before we open up the call for questions.

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Okay. Thanks, Sanjay. So let's pick up on your closing comments there and review our strategic priorities as we conclude the year and head into 2022. For our Cable Access business, our objectives remain supporting volume deployments with our growing list of Tier 1 customers. Winning and scaling with new global operators and expanding our addressed market through our converged software core, DOCSIS and fiber-to-the-premises capabilities. For video segment, our objectives continue to be accelerating the growth of our streaming SaaS customer base and per customer's usage, capitalize on the coming transformations of traditional media and broadcast infrastructure, particularly the new edge processing opportunity that we've talked about and delivering consistent margin expansion, recurring revenue growth and profitability.

As you've seen in the third quarter, we continue to deliver industry-leading solutions to enable superior subscriber experiences and to create value for our customers and our shareholders. We thank you all for your continuing support. And with that, we'd like to open up the call for questions.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Our first question comes from the line of Steven Frankel with Colliers.

Steven Bruce Frankel ***Colliers Securities LLC, Research Division - Senior VP & Director of Research***

Patrick, let's spend a couple of minutes talking about these Tier 1 deployments in Cable Access. Kind of could you characterize your visibility into their deployment plans? And is that improving as we go through these ramps?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Yes. In short, it is. We're developing increasingly close and collaborative relationships with both existing and new Tier 1 operators, Steve. And through that process, we're gaining better visibility and understanding. And at the same time, they're developing better understanding of the capabilities of our technology and how to best handle it operationally. All of that is -- I mean, it's work in progress, but visibility continues to improve.

Steven Bruce Frankel ***Colliers Securities LLC, Research Division - Senior VP & Director of Research***

And a while back, you threw out this 50 million node number, I wonder if you might update us on what that universe of even just the Tier 1 customers you have now. And how many nodes that might be as an addressable market?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Yes. I think it's not nodes, but...

Steven Bruce Frankel ***Colliers Securities LLC, Research Division - Senior VP & Director of Research***

Homes, I'm sorry.

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Homes, yes. I regret I don't have a specific number for you, but I think since we threw that out, it has definitely gone up. Well, better for me not to hazard a guess here. It's up. I think since that time, we've added several. We've talked about 9 global Tier 1s, that is top 10 customer in the respective geographies as well as just shy of 70 total customers, Steve. So indeed, the number has gone up, I would say, materially since 50, but I don't have a specific number to give you here today, and I'd like to get back to all of you with an updated count.

Steven Bruce Frankel ***Colliers Securities LLC, Research Division - Senior VP & Director of Research***

Okay. But to use a world series analogy, are we like in the bottom of the second inning? Kind of where are we in this rollout?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Well, certainly, we believe so. I mean, although we're pleased on one hand with the growth of the models we rolled out to, we're still -- as of the end of the third quarter, we were just below 4. So let's just assume that the total addressable market of customers we've won is somewhere between 50 million and 60 million modems. I mean, that says where something on the order of 7 percentage -- of 7% of being rolled out across just those customers that have already started rolling out CableOS, not to mention customers who are still in our sales pipeline. So I think by any measure, that says we're really still very early innings or inning in terms of the rollout potential in front of us.

Steven Bruce Frankel ***Colliers Securities LLC, Research Division - Senior VP & Director of Research***

Great. And then you mentioned your first non-FCC mandated win in video distribution. Could you give us some hints in terms of timing and scale and what the pipeline from other operators might look like?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Well, yes, it's a several million-dollar project. I don't want to go further than that. The project is -- was won in the third quarter. It's not been deployed. There is no revenue yet. So that is still ahead of us. But we think it's noteworthy. This is a, let me say, a household name, a kind of operator out there. And it's meaningful that they are, who has, historically used satellite to move video around. And the fact that on their own nickel, they see enough operating flexibility, efficiency and in fact, new service delivery, yes, opportunities that they are themselves funding, moving off of a satellite and getting on to terrestrial networks. And as we've commented before, well, the FCC and 5G may have been kind of the catalyst for some of this activity in the market, we think it's an architecture that makes a ton of sense from a strategic flexibility point of view as well as from an economic point of view.

And so we think it's simply going to be a growing trend worldwide. We're still, again, to use the previous analogy, very early innings on this thing. But we continue to be optimistic about it, both in terms of a trend in the market that's going to drive overall spending and in terms of our competitive positioning by virtue of our software-based edge platform.

Steven Bruce Frankel ***Colliers Securities LLC, Research Division - Senior VP & Director of Research***

One last quick one, and you've mentioned this number before. How many of those 101 SaaS customers have not launched yet on the video side?

Sanjay Kalra ***Harmonic Inc. - Senior VP & CFO***

I believe they'll be around 15% to 20%.

Operator

Our next question comes from the line of Simon Leopold with Raymond James.

Simon Matthew Leopold ***Raymond James & Associates, Inc., Research Division - Research Analyst***

I wanted to see if you could give us a little bit of help in terms of how to think about the gross margin for 2022. Because what you've highlighted in the prepared remarks looks like some elements of supply chain, but a lot of what's pressuring gross margin in the fourth quarter, it sounds like a hardware mix aspect. So I just want to see if maybe you can bridge to some of the commentary you had offered us back in June to how to think about the overall gross margin trend in 2022 as you see it today?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Thanks for the question, Simon. I mean let me first address. When we say mix, and specifically, I don't want you or anyone else to think, oh, well, it's more hardware and less software. In fact, what it is, it's simply more hardware. When we presented our 3-year model, we actually assumed by 2024, our global share of DAA hardware would be around 30% from a market share perspective. And indeed, even from the beginning of this, we've spoken publicly about it, we expected in our -- in most of our initial -- or many of our initial CableOS deployments, our core software with several hours as well as our competitors' hardware kind of hanging off of our software, if you will, of being fed by our software.

And what we're seeing right now is a trend where we're getting much larger market share. We're seeing our hardware used for -- we think we're way above 30% in short. And that is driving both revenue upside, gross -- and profit upside, as well as a relative mix differences, but by no means any less software than was originally anticipated. So now coming back to your specific question, I think maybe to if I slightly reframe it, the question becomes, well, in 2022, will Harmonic continue to win more or much more than its fair share of hardware revenue? And I think that that's something we're still trying to assess is the durability of customers' preference for our hardware versus competitors'. I -- and I think that will be manifest in our guidance for 2022, both at the top line and corresponding to that to the gross margin line.

But I think it is important to understand that even in a scenario where we see ourselves for a longer period of time, capturing a much greater market share of hardware that doesn't imply lower gross profit. It's kind of the original business we talked about in our 3-year plan plus some incremental hardware, albeit at low margin. I hope that's not too much of a long or complicated answer, Simon. So I'll pause there and see if that makes sense to you.

Simon Matthew Leopold ***Raymond James & Associates, Inc., Research Division - Research Analyst***

No, no, it makes sense. So the gross margin percent may be lower, but the profitability, the EBITDA, earnings you're coming away with on higher revenue is basically a tailwind?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

That's right.

Simon Matthew Leopold ***Raymond James & Associates, Inc., Research Division - Research Analyst***

Okay, great.

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Of course, I mean, the elephant in the room, that's kind of what's happening strategically apart from anything to do with supply chain. And you and everyone else probably on this call has heard more than you care to hear about supply chain. So I don't want to belabor all of it, but that continues to be a somewhat dynamic headwind as we go into next year. And I think that that's -- we don't think that that's a permanent fixture in our business, but it certainly will be a headwind for most, if not all, of next year. And that also will weigh into the guidance that we'll eventually provide for 2022.

Simon Matthew Leopold ***Raymond James & Associates, Inc., Research Division - Research Analyst***

That all makes sense. And then if you could give us any updates you have on your participation in RDOF-related projects, whether you're contributing in the fourth quarter? And your longer-term outlook for RDOF as an opportunity?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Yes. We envision modest contribution in the fourth quarter, but growing contribution in 2022. To be clear, our point of entry or our area of go-to-market focus is on those cable operators who are doing RDOF work or hybrid operators who kind of operate both fiber or historically a twisted pair as well as cable infrastructure. So we're not going for the entirety of the RDOF space, but we're going through what I think is a growing subset of it, which are those -- the RDOF opportunity being addressed by people who have some play in cable. And there, the main thrust is qualification of our fiber-to-the-home solution, alongside DOCSIS.

And as I mentioned in the prepared remarks, we're pretty encouraged with the progress we're making. We're -- by virtue of the wins that we have so far, we're gaining credibility. A lot of prospective customers are looking to see how well the early rollout of the technology is going. And we're working with a couple of larger customers who have the potential to do quite a bit in RDOF. And there, it's a kind of a different dynamic or process, but we're working on getting our fiber-to-the-home solution qualified there and I call it cautious optimism that we will be part of -- that they will be rolling out to taking advantage of RDOF in 2022, and it will be part of their solution. But certainly, more to come on that.

Simon Matthew Leopold ***Raymond James & Associates, Inc., Research Division - Research Analyst***

Great. And then one last one. Not looking for the tutorial right now on cable architecture, but last week, we did hear one of the larger operators talking about high split. And that stimulated a lot of questions. Could you help folks understand what does that mean in terms of an opportunity for Harmonic if an operator chooses to upgrade through high splits?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Well, before I get to the specifics of your question, I understand it may be confusing. I mean there's a tool bag right now of options that cable operators are looking at long and short term. And so there's just multiple directions that they can go. And I'll tell you, I think that our software core is really coming into focus is a very big strategic advantage because of what it means is without kind of having to wait from new hardware, develop new hardware, we can kind of pivot or expand to address, to basically program -- reprogram the functionality of our solution to handle these use cases.

But when you come to now specifically high splits and mid split before that, in fact, I think in prepared remarks a couple of quarters ago, we talked about early work we did there with a large customer and how we jumped on that, we think, ahead of the rest of the market. So in short, we think we have a great solution for high split. It dovetails perfectly into what CableOS is all about. And we see that as a specific competitive advantage or a specific instance of the broader competitive advantage we have with the flexibility of our CableOS platform.

Operator

Our next question comes from the line of Ryan Koontz with the Needham & Company.

Ryan Boyer Koontz ***Needham & Company, LLC, Research Division - MD***

Great quarter, guys. First one, are you seeing any customer at all express interest in going with a multisource CMTS core software? Or is it primarily single source predominantly?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Primarily single source.

Ryan Boyer Koontz ***Needham & Company, LLC, Research Division - MD***

Yes. Okay. Good. And then a more complex question as we kind of peel back the onion on the gross margin recovery here. How much of this is transitory versus permanent change? And do you look at pricing adjustments to account for your permanent cost changes? I mean where are you in that cycle right now in terms of thinking about that?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

I think we see, Ryan, what's going on now is primarily transitory. But the last thing I would say is what we've learned is that we don't know what we don't know. And we don't have a time limit on it.

I think one of the advantages of our position or this market is that we're not dealing with thousands of customers. We have strong strategic relationships with large customers. They're well aware of what's going on. And that creates the opportunity to have open, transparent discussions about how to ensure the health of their deployment plans and their pipeline. So as part of that, absolutely -- pricing adjustments are absolutely on the table. And whether those pricing adjustments become permanent or not, I think, is very much related to how this whole thing plays out. But that's -- hopefully, that gives you a little bit of a flavor of the way we're thinking about it and addressing it.

Ryan Boyer Koontz ***Needham & Company, LLC, Research Division - MD***

Okay. Great. And on the competitive front, with regards to the hardware side of RPDs and such, any change in the competitive environment there? It sounds like you're winning more share than you thought, so it sounds like you're more confident in your competitive position.

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Yes. I think that that's right. In a nutshell, that is correct.

Operator

Our next question comes from the line of Tim Savageaux with Northland Capital Markets.

Timothy Paul Savageaux ***Northland Capital Markets, Research Division - MD & Senior Research Analyst***

I'll add my congratulations. I actually did want to start with the supply question. And while recognizing you're seeing some cost pressures from a top line standpoint, you've arguably managed this about as well as anybody has. And I want to try and dig into that a little bit more. In terms of, I guess, to what do we attribute your ability to ship pretty significantly. I see inventories are up. And for once, that's a good thing, right? But the fact that the hard -- a lot of the hardware products are based on standardized platforms or just overall kind of supply chain execution, any comment on the node side as to putting aside the cost pressures for a moment, how you're able to do such a good job managing the supply chain. Then I have a follow-up.

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Well, I very much appreciate the question. I think we have done a pretty good job, but we're not sitting here pounding our chest. I mean it's come at the expense really of heavier expenses. I think maybe 1 advantage that we had, Tim, is we went into the year with an aggressive posture. We weren't 100% sure, but we felt that there was upside on the year.

And we were ready to put money behind that hypothesis really before this whole supply chain thing go up. So we were already kind of leaning into our supply chain. We were looking at how we can pull in components, et cetera. That was the mode that we were in. And so we -- as the situation got tougher and we had to pull in hard and get even more aggressive, we weren't starting from 0, if you will. The car was already -- or the effort -- the lean-in was already pretty significant, I would say. I think that's one fact.

And associated with that, we -- as I communicated a quarter or 2 ago or Sanjay did, we had no qualms at all. We wasted no time thinking about optimizing to the nth degree cost versus getting it done. We've been very clear internally and strategically that our #1 priority is accelerating deployments, accelerating market share gains, et cetera.

So when confronted with, let's say, an opportunity to bring more things in or accelerate at a cost, I don't want to say we've been indifferent to cost, but we've leaned in to spending more when necessary.

And the third thing I would say though is that I just have to give kudos to our team. We have a supply chain team that has -- I mean maybe same thing with our peers and competitors, but I can tell you from firsthand experience, our supply chain team has just been excellent this year. This team has worked around the clock feverishly. I mean we have people who have literally during the middle of COVID have spent months in other parts of the world under very different -- difficult quarantine conditions, et cetera, doing whatever it takes to get it done.

And so I'll take the opportunity to really acknowledge the tremendous effort of our team and the conviction and the commitment to deliver good results. And I think that, that is -- as you pointed out, I think that's really come through. None of that is to say we won't have further challenges ahead or we think we're out of the woods. Every day, almost it seems brings another challenge as we play whack-a-mole here. But to date, I think we've done very well, and it's a combination of those 3 things that I mentioned.

Timothy Paul Savageaux ***Northland Capital Markets, Research Division - MD & Senior Research Analyst***

Great. And I guess a couple of questions on the Cable Access business, and that will be it for me. One, you're -- you appear to be diversifying a bit. And obviously, you saw nice growth sequentially in Cable Access and a lower contribution from Comcast, which is always good to see. In that context, if you talk about your 9 Tier 1s, I think now 9, I think you commented last quarter that maybe half of those customers were kind of meaningfully or if not fully up and running.

Do we see more of that in terms of providing that diversification of the business broadly in Cable Access? And then maybe in the quarter, as you look forward, is the PON opportunity starting to contribute? Or do you expect it to sometime soon? And any comments on the size of that pipeline?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

Well, in short, yes. We think that the -- as additional Tier 1s come online and more broadly, as the total number of customers grow, you will see the continued diversification of the of the revenue. I mean, that being said, the big guys are big. And as long as they're rolling, that will represent a good part of the business, which is not bad news at all. So I think the cable industry, for better or worse, is inherently concentrated and hence, our intense focus strategically on Tier 1s from day 1. As we get a bigger basket of Tier 1s, which we aim to continue to do, I think you'll see some diversification amongst them. But no doubt about it, the top 10 or 15 customers we have will command an outside position in our market. And you can see the power of what it means when they're accelerating.

Regarding the PON effort, we are very encouraged by what's happening there. That being said, we're still very much on the on-ramp of that business. And comparing that business as I think ahead to 2022, comparing that business, which I think will begin to grow in 2022 more substantially. But then the question is, as a percentage, does it take the growth of cable? I'm not sure.

Long term, there's no doubt about it. Having a strong position in fiber is great strategically, great financially, and that's absolutely where we're headed. As both things kind of scale and ramp though, I think it will take a little bit more time for -- financially for the fiber-to-home to kind of get its head above the parapet, so to speak. But we remain incredibly strategically focused on it and continue to see fiber as a very important, not only diversification, but additional growth lever for our business.

Operator

Our next question comes from the line of Kyle McNealy with Jefferies.

Kyle P. McNealy ***Jefferies LLC, Research Division - Equity Analyst***

Great job with the results, particularly for Cable Access. I'm wondering if you could parse out for us what the budget position looks like across your cable customers to the extent that you could have visibility into it? What does it look like entering Q4? And how much of the increased Q4 outlook might be coming from any kind of budget flush versus general increased momentum or share gain in your cable business? And were there any specific larger customers that you've seen an uptick in Q4 orders that you'd consider to be some type of budget flush?

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

I think it's still early in Q4 to characterize what's happening is budget flush or not. Frankly, as Sanjay outlined, we came into the quarter with a strong backlog and deferred revenue. The majority of the orders that we'll take this quarter, we -- actually, we anticipate to be for 2022. It's not quite that black and white. But particularly in the context of the supply chain issues, the whole industry has been working with, we've been -- we're encouraging our customers to be looking and working ahead.

Now that being said, it's true that Q4 -- on both sides of our business, Q4 is historically strong. And indeed, whether you call it budget flush or catch up, some amount of that activity is -- I think, is part of the historically -- the historic seasonality in Q4. But relative to any other year, right now, I mean, Sanjay chime in if you see it any differently, but I don't think we see any difference in the historic seasonality pattern.

Sanjay Kalra ***Harmonic Inc. - Senior VP & CFO***

Well, there's nothing. I mean what we saw last year or the year before is very similar to what we are seeing this time in Q4. It's very similar.

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

So coming back, I guess part of your question is, well, where is the uptick? We think it's more to do with just growing a deployment momentum kind of regardless of the quarter. So maybe a modest impact for seasonality. But more than that, it's just a continuing momentum with broader-based cable customers.

Kyle P. McNealy ***Jefferies LLC, Research Division - Equity Analyst***

Okay. That's great to hear. Just one follow-up. Is there any way for you to quantify at all how much revenue you think you weren't able to ship this quarter due to the supply chain issues and constraints that you would have otherwise been able to ship in the quarter?

Sanjay Kalra ***Harmonic Inc. - Senior VP & CFO***

Well, we can't quantify that. I think, as Patrick earlier mentioned, we are trying to address all of our customer demands, and we have done that in all the quarters and especially Q4 as we are raising the guidance further to what we said earlier 3 months ago, which itself was a raise as well. I think we are marching on the path to address all of our customer demands.

Operator

I am not showing any further questions in the queue. I would now like to turn the call back over to management for closing remarks.

Patrick J. Harshman ***Harmonic Inc. - President, CEO & Director***

All right. Well, thank you very much for your time today, and more generally, your support. We remain excited about our business, excited about the progress we're making, and we look forward to updating you again soon. With that, we'll say good day.

Operator

Ladies and gentlemen, this concludes today's conference call. Thank you for your participation. You may now disconnect.