Q4 2017 Earnings Call

Company Participants

- Ashish Saran, Investor Relations Contact
- Hock E. Tan, President, Chief Executive Officer & Director
- Thomas Krause, Chief Financial Officer

Other Participants

- Ambrish Srivastava, Analyst
- Chris Caso, Analyst
- Craig M. Hettenbach, Analyst
- Harlan Sur, Analyst
- John William Pitzer, Analyst
- Ross C. Seymore, Analyst
- Stacy Aaron Rasgon, Analyst
- Vivek Arya, Analyst

MANAGEMENT DISCUSSION SECTION

Operator

Good day, ladies and gentlemen, and welcome to Broadcom Limited's Fourth Quarter and Fiscal Year 2017 Financial Results Conference Call.

At this time, for opening remarks and introduction, I would like to turn the call over to Ashish Saran, Director of Investor Relations. Please go ahead, sir.

Ashish Saran {BIO 18971141 <GO>}

Thank you, operator, and good afternoon, everyone. Joining me today are Hock Tan, President and CEO; and Tom Krause, Chief Financial Officer of Broadcom Limited. After market close today, Broadcom distributed a press release and financial table describing our financial performance for the fourth quarter and fiscal year 2017. If you did not receive a copy, you may obtain the information from the Investor section of Broadcom's website at www.broadcom.com. This conference call is being webcast live and a recording will be available via telephone playback for one week. It will also be archived in the Investor section of our website at broadcom.com.

During the prepared comments section of this call, Hock and Tom will be providing details of our fourth quarter and fiscal year 2017 results, guidance for our first fiscal quarter of 2018, and some commentary regarding the business environment. We will take questions after the end of our prepared comments.

In addition to U.S. GAAP reporting, Broadcom reports certain financial measures on a non-GAAP basis. A reconciliation between GAAP and non-GAAP measures is included in the tables attached to today's press release. Comments made during today's call will primarily refer to our non-GAAP financial results. Please refer to our press release today and our recent filings with the SEC for information on the specific risk factors that could cause our actual results to differ materially from the forward-looking statements made on this call.

At this time, I would like to turn the call over to Hock Tan. Hock?

Hock E. Tan {BIO 1460567 <GO>}

Thank you, Ashish. Good afternoon, everyone. Well, we closed our fiscal 2017 on a very strong note with solid financial results for the fourth fiscal quarter. Fourth quarter revenue of $4.85 billion grew 17% year-on-year and 9% sequentially. On the earnings front, earnings per share were $4.59, growing by 32% year-on-year and 12% sequentially.

Our business continue to become more profitable through fiscal 2017. We achieved operating margins of 47% in our most recent quarter, comfortably ahead of our long-term operating margin target of 45% which we had announced at the end of fiscal 2016, and EBITDA rose to 50%. This led to substantially improved free cash flow generation in 2017 which drove the 72% increase in our dividend we announced today.

As you may recall, this latest dividend increase comes on top of the doubling in dividend we had announced at the end of fiscal year 2016. We remain very focused on increasing capital return to our shareholders.

We also continue to successfully execute our M&A strategy. Having completed acquisition of Brocade early in the first quarter of fiscal 2018, this current quarter, adding one more business to our broad portfolio of networking and storage franchises. Against this backdrop, clearly, our business continues to be strong. All our 20 product franchises continue to perform extremely well.

Before I turn to our discussion of segment results, please note that commentary today for the fourth quarter does not include any contribution from Brocade. As I look forward within each of these segment commentary, I will also touch on specific trends and growth drivers for our business in fiscal 2018. Guidance, however, for first fiscal quarter does include a partial quarter of expected contribution from the Brocade fiber channel SAN business. Please also note that this first quarter 2018 is a 14-week quarter for us.

Starting on wired, our largest segment, in the fourth quarter, wired revenue was $2.15 billion, growing 4% year-on-year, declining 3% sequentially. The wired segment represented 45% of our total revenue. As expected, wired segment revenue declined sequentially as a result of the typical seasonal decline in demand for our broadband access and set-top box products. Similar to a number of our peers, we also experienced a slowdown in demand for our optical products from access and metro networks. In contrast, however, demand from data centers continued to hold up quite well into the fourth quarter.

Turning to the first quarter of 2018, we expect to see the bottom of the seasonal decline in demand for our set-top box and broadband access. And if we look further into the rest of 2018, we are rather excited about the ramp that we are enabling for our key cloud customer and couple of OEMs in artificial intelligence.

Okay. In broadband, we are also seeing increasing traction on 10G technology to support broadband video delivery. Beyond even that point, we see that 10G cable technology going full duplex.

Moving on to wireless, in the fourth quarter, wireless revenue was $1.8 billion, growing 33% year-on-year and 40% sequentially. This wireless segment represented 37% of our total revenue. Fourth quarter wireless revenue was driven by the ramp in shipments of next-generation platform from a large North American smartphone customer. The growth was partially offset by a decline in shipments to other customers, and the substantial year on year growth in revenue was driven by the large increase, as we had indicated, in Broadcom's total dollar content in this new platform.

As we look into first quarter 2018, unlike the last two years, we expect wireless revenue to continue to grow sequentially, as the ramp in demand from our North American customer this year was pushed out compared to prior years. Going beyond that into 2018, into the rest of 2018, we see significant increase in FBAR content, driven by the need for additional filtering at the antenna. We are also very excited by the launch, the second half of 2018, of the next-generation Wi-Fi product, the 802.11ax, which we expect to see happen at retail and progressing to handsets.

Let me now turn to our enterprise storage segment. In the fourth quarter 2017, enterprise storage revenue was $645 million, growing 15% year-on-year and declining 12% sequentially. The storage segment represented 13% of our total revenue. Sequential decline in storage revenue was driven by an anticipated correction in demand for hard disk drive products. In contrast, our server and storage connectivity business, the MegaRAID business, experienced an increase in demand driven by the Purley server launch cycle.

Looking into the first quarter 2018, we are seeing this Purley launch continue to gain traction and drive very strong growth in demand for our server storage connectivity products. We also expect hard disk drive demand to have bottomed in the first quarter and start to recover.

Starting with the first quarter of fiscal 2018, this enterprise storage segment will include Brocade's fiber channel SAN business, which is expected to generate a partial quarter revenue contribution of $215 million in Q1 fiscal 2018. Beyond this, as we look into 2018, we see the storage landscape being driven fairly well by our products supporting the adoption of all flash arrays in storage appliances infrastructure, with our PCI Express and NVMe technology.

Finally, our last segment, industrial. Fourth quarter industrial segment revenue was $257 million, representing 5% of total revenue. Revenue for this segment grew 59% year-on-year, 8% sequentially. And this strong year-on-year growth, however, included the impact from a large increase in our IP licensing revenue which, as you know, tends to be quite lumpy in nature.

What is significant is that sustainable industrial resale continue to grow double-digits year-on-year. And looking into the first quarter, while we expect IP licensing revenue to decline sequentially, industrial shipments and resales are likely to continue to trend as they did in the preceding quarter. And in fact, for the rest of 2018, we see the strong adoption and ramp of our optical isolation product to continue to drive growth coming from electric vehicles.

So in summary for the fourth fiscal quarter, we delivered very strong financial results. Our first quarter fiscal 2018 revenue continues to be good as we see an outlook of $5.3 billion, which includes the partial quarter contribution from Brocade. This will position us, we believe, for a very strong start to the new fiscal year.

We have made great progress, we believe, in executing to all key parts of our strategy through fiscal 2017. Solid revenue growth and improved profitability, which ended up exceeding our current financial targets, led to a significant increase in capital return to our shareholders. These achievements, coupled with the expected rapid integration of Brocade and a background of continued strength in our various businesses, will allow us to now improve on our long-term target operating model, particularly as it applies to 2018.

While we will continue, having said all that, to target long-term sustainable revenue growth of just 5%, even as in the first quarter fiscal 2018 we are seeing double-digit growth, we are increasing the gross margin target to 65%. We expect to sustain R&D expenses at about 15% of net revenue and drive SG&A expenses below 3% of net revenue. This positions us to increase the target for operating profit margin to be 47.5% and sustain a 50% EBITDA margin for this company.

With that, let me turn the call over to Tom for a more detailed review of our fourth quarter financials and first quarter outlook. Tom?

Thomas Krause {BIO 17978469 <GO>}

Thank you, Hock, and good afternoon, everyone. My comments today will focus primarily on our non-GAAP results from continuing operations, unless otherwise specifically noted. A reconciliation of our GAAP and non-GAAP data is included with the earnings release issued today and is also available on our website at broadcom.com.

Let me start first with comments on the progress we have made towards our long-term target operating model. As Hock outlined, and I'm pleased to report for fiscal 2017, we did exceed our long-term target of greater than 60% gross margins and 45% operating margins. We delivered fourth quarter 2017 gross margins of 63.3%, a 250 basis point increase from the same quarter last year, and operating margin of 47.3%, which was a 580 basis point increase from the same quarter of last year.

On capital returns, as you recall, starting last year, we did increase the target for aggregate dividends to 50% of free cash flow on a trailing 12-month basis, and as a result of that financial policy, we did double our dividend at the end of fiscal 2016.

Leveraging the significant improvement in profitability and operating cash flow generation in fiscal 2017, we announced today a 72% increase in dividends. This increase takes our interim dividend to $1.75 per share or $7.00 per share on a full-year basis, and represents an approximate return of $3 billion annually to shareholders.

We closed the acquisition of Brocade about three weeks into the fiscal quarter of 2018. We completed the divestiture of Brocade's campus Wi-Fi and switch business to ARRIS for $800 million in cash in the first fiscal quarter of 2018, and we also sold Brocade's headquarter building in Santa Clara for approximately $225 million in cash also in the first quarter.

These transactions, along with the completion of several other smaller deals, marks the completion of portfolio rationalization activities for the Brocade acquisition and results into lowering the total consideration for Brocade to approximately $5 billion. We look forward to fully integrating Brocade over the next few quarters and expect our total operating expenses in fiscal 2018, including Brocade, to remain within our target of 17.5% of net revenue.

Let me take a moment to reiterate our financial policies which we remain committed to going forward. We expect to continue to target long-term permanent growth leverage of approximately 2 times EBITDA as long as the costs of that debt remains attractive. We also plan to continue to target aggregate dividends of approximately 50% of free cash flow on a trailing 12-month basis.

Given our free cash flow generation, we believe that this will also allow us sufficient balance sheet flexibility to pursue acquisitions that are consistent with our proven business model. As we look forward, the credit quality of the business continues to strengthen, and we remain focused on maintaining and improving our investment grade ratings including on our current debt.

As Hock mentioned, we're also updating our long-term target operating model. Sustainable long-term revenue growth remains at 5% on an annual basis. Gross margin target increases to 65% and operating margin target has increased to 47.5%. Target-free cash flow as a percent of revenue increases from 35% to 40%, and I would note that includes our long-term CapEx target remaining at 3% of net revenue.

With that, let me quickly summarize our results for the fourth quarter of fiscal 2017, focusing primarily on balance sheet and cash flow items. We delivered strong financial results for the fourth quarter, starting with revenue at $4.85 billion, which grew by 8.5% sequentially and 16.9% year-on-year. Our days sales outstanding were 46 days, a decrease of 3 days from the prior quarter.

Our inventory at the end of the fourth quarter was $1.447 billion, flattish from the prior quarter. We generated $1.959 billion in operational cash flow, which includes the impact of a $345 million payment to fund our legacy pension plan in the U.S. Free cash flow in the fourth quarter was $1.726 billion or 35.6% of net revenue. I am pleased that even with the impact from the pension payment, which was approximately 7% of net revenue, we were able to drive free cash flow conversion above the 35% target we had set last year.

Capital expenditure in the fourth quarter was $233 million or 4.8% of net revenue. As we have indicated on prior calls, we expect overall CapEx to decline meaningfully starting in 2018. We expect CapEx to approach our long-term target of 3% of net revenue in the second half of fiscal 2018.

Moving on to additional items in the cash flow statement, a total of $439 million in cash was spent on the company dividend and partnership distribution payments in the fourth quarter. We received approximately $4 billion from the issuance of long-term debt to finance the Brocade acquisition, and we also received approximately $440 million from the sale and leaseback of the Irvine campus. We ended the fourth quarter with a cash balance of $11.2 billion, but I would note the cash balance was at an elevated level through the fourth quarter in anticipation of closing the acquisition of Brocade.

Now, let me turn to our non-GAAP guidance for the first quarter of fiscal year 2018, which includes expected contributions from Brocade's fiber channel SAN business for a portion of the quarter. Also to note, this is a 14-week fiscal quarter. This guidance reflects our current assessment of business conditions and we do not intend to update this guidance. This guidance is for results from continuing operations only.

Net revenue is expected to be $5.3 billion, plus or minus $75 million. Gross margin is expected to be 64%, plus or minus one percentage point. Operating expenses are estimated to be approximately $900 million. Tax provision is forecasted to be approximately $106 million. Net interest expense and other is expected to be approximately $126 million.

The diluted share count forecast is for 458 million shares. Share-based compensation expense will be approximately $300 million. CapEx will be approximately $210 million. And as a reminder, our first quarter is generally a weaker quarter for operating cash flow due to the payment of our annual employee bonuses relating to the prior fiscal year. In addition, we do expect to start incurring cash restructuring expenses related to integrating Brocade.

Okay. Finally, before we open up the call for questions, I do want to briefly address where we stand on re-domiciliation and Qualcomm. First, on re-domiciliation, on November 2, I think as everybody knows, we announced our intent to initiate a re-domiciliation process to change the parent company of the Broadcom corporate group from a Singapore company to a U.S. corporation. The re-domiciliation will occur whether or not there is corporate tax reform in the United States. The re-domiciliation is subject to a shareholder vote and is expected to be affected in a manner intended to be tax free to shareholders. We are confident that our shareholders will support this move. The final form and timing of the re-domiciliation and the shareholder vote will depend in part on tax reform efforts in the United States.

On the Qualcomm front, on November 6, we made a proposal to acquire Qualcomm for a per share consideration of $70 in cash and stock. Our proposal represents a 28% premium over the closing price of Qualcomm common stock on November 2, 2017, the last unaffected trading day, and a premium of 33% to Qualcomm's unaffected 30-day volume weighted average price. We expect that the proposed transaction would be completed within approximately 12 months following the signing of a definitive agreement.

Earlier this week, on December 4, we notified Qualcomm of our intention to nominate a slate of 11 independent, highly qualified individuals for election to the Qualcomm board at the 2018 Annual Meeting of Stockholders, which Qualcomm has announced will be held on March 6, 2018.

The highly qualified slate brings significant technology sector, financial and operational experience. While we have taken this step, it remains our strong preference to engage in a constructive dialogue with Qualcomm. We firmly believe that this complementary transaction will position the combined company of the global communications leader enabling us to deliver more advanced syndicator (24:29) solutions for our global customers and drive enhanced shareholder value. We continue to receive positive feedback from stockholders and customers.

In addition, after having had initial meetings with certain relevant antitrust authorities, we remain confident that any regulatory requirements necessary to complete a combination will be met in a timely manner. Given our common strengths and shared focus on technology innovation, we are confident we can quickly realize benefits for all stakeholders.

As a reminder, the purpose of today's call is to discuss our quarterly earnings. Please keep your questions focused on today's financial results. We will not be commenting in the Q&A on Qualcomm or the re-domiciliation activities.

With that, let me turn it back to the operator. Operator?

Q&A

Operator

Our first question comes from the line of Stacy Rasgon with Bernstein Research. Your line is now open.

Q - Stacy Aaron Rasgon {BIO 16423886 <GO>}

Hi, guys. Thanks for letting me ask a question. First, I guess a tactical one. Given where it's falling in Q1, how much revenue and OpEx is actually really coming in in that extra week? Should we think of both of those as a full week or is the revenue maybe less than a full week and the OpEx is a full week? What's the best way for us to think about the different puts and takes on your guidance impacted by that extra week?

A - Thomas Krause {BIO 17978469 <GO>}

Yes, this is Tom. Good question. I think as you look at the seasonality in our business and you look at where we are in Q1 relative to where seasonally, you typically go in Q2, you can argue, I think, we believe it's less than an additional week of contribution. And OpEx, what I would suggest to you is it's flat because you're basically just taking an extra week from a payroll and other fringe perspectives on the OpEx side.

Q - Stacy Aaron Rasgon {BIO 16423886 <GO>}

Got it. Thank you. That's helpful. For my follow-up, I wanted to ask a little bit about the guidance, and particularly, the segments. So, you said wireless was up. I wasn't sure if that was because of the extra week or if that was normalized for the extra week. And I guess, given the metrics, wireless, seems like it's strong, storage looks like it's bottomed and other pieces are growing. It seems to me the wired infrastructure may still be down sequentially, I guess, if I normalize for the extra week, given the drivers that Hock talked about. I guess could you give us a little more color on, I guess, how much of the strength in wireless is extra week versus normalized? And I guess, what are those drivers for the rest of the guidance implied for wireless as we go into the January – or for wired as we go into the January quarter?

A - Hock E. Tan {BIO 1460567 <GO>}

Okay. Best way to describe it, to expand a bit on what Tom was saying is, 80% of our revenues is direct OEM revenues. And so, the extra week has very little impact for Q1 in terms of top line revenue. The industry (27:56) revenue does have an impact, obviously, on a basis that is resale is very time-based. And so, you might say on an overall revenue basis, if I were to (28:08) an estimate, that additional week provides probably an additional one-third addition of a week's revenue, if you want to look at it. But as Tom indicated, expenses, we will be showing a full week of expenses which are largely for a company of a nature, obviously, salaries, people cost. So, a full week of expenses, probably one-third of a week of top line is a best estimate to put in on a conservative basis.

And based on that, to answer your question on wireless, it really doesn't make much difference. Our wireless business is all direct largely. It makes very little difference that there's an additional one week, but it is strong. As I indicated in my remarks, it is strong because of the fact that unlike the year before and on the year before that as well, the rollover of a product life cycle of a North American smartphone manufacturer has been sort of pushed out, pushed out by over one month.

Q - Stacy Aaron Rasgon {BIO 16423886 <GO>}

So, I guess the wired outlook then, is it just the set-top box, I guess, bottoming in Q1 which is driving that or are there other drivers?

A - Hock E. Tan {BIO 1460567 <GO>}

Set-top box and broadband access, carrier access, is bottomed out in Q1. Against that, data centers continue to be good and a big part of it driven by the ramp of our opportunity in AI, in cloud and a couple of OEMs.

Q - Stacy Aaron Rasgon {BIO 16423886 <GO>}

Got it. Thank you, guys.

Operator

Thank you. And our next question comes from the line of Ross Seymore with Deutsche Bank. Your line is now open.

Q - Ross C. Seymore {BIO 20902787 <GO>}

Hi, guys. Thanks for letting me ask a question. Hock, I want to follow up on the wired side of things. The last couple quarters, on average, you've been kind at the low to slightly below mid-single digit growth in that business. You talked a little bit about what the broadband access and set-up box has done, you talked about optical and then the AI side. If we think about those three buckets as we look into fiscal 2018, can you just talk about the direction that they should go? Is there going to be the optical side snapping back or this year, it seemed like you had a number of headwinds that might not persist into next year? So, any color you could give on an annual basis would be helpful.

A - Hock E. Tan {BIO 1460567 <GO>}

Sure. And you did touch on that in your – saying that is true. In 2017, especially the second half of 2017, in our wired business, which we run into a lot of puts and takes but quite a bit of headwinds in that whole regard simply because especially in the second half, you start to see decline, seasonal decline in broadband, (31:18) broadband. Then, in the later – and especially in optical, we all have seen the slowdown in demand from metro and access networks, particularly out of China. But against that, we see data centers continuing to perform very well and the net result of it has been a relatively slow to flattish, if you look at the whole year, flattish, a slow single-digit growth in wired in 2017 with those headwinds.

2018, the sense we have is we've seen a lot of those headwinds, the worst of those headwinds seems to be over. Data centers continue to be very well presenting itself very well, not just from switching, routing, which has always been very good through all this period, but also the additional push from deep learning chips that we are providing for a few large customers. And against that, given that we have seen the worst on broadband, I think our wired business in 2018 will probably grow over 5%.

Q - Ross C. Seymore {BIO 20902787 <GO>}

Great. That's helpful. Tom, switching gears over to your side for a moment, the free cash flow target increasing from 35% to 40%, the dividend increase was a bit more than I expected at 72%. It seems like you guys actually were closer to 60% of free cash flow. So, I guess as we go forward, one, has the policy changed at all? Are you giving back more? And then, two, what's the biggest driver of that free cash flow margin increasing? Is it onetime charges going away, profitability increasing? Any color on those would be helpful.

A - Thomas Krause {BIO 17978469 <GO>}

Yeah. So Ross, obviously, you can do the calculation on the free cash flow just based on the cash flow statements but there were a couple of things that we took into consideration. One, I think you know we had a big campus initiative both in Southern California, around the Irvine campus, and then, up here in San Jose, and a lot of that has tailed off, and then, we went off and actually monetized the Irvine campus which we just reported. So, we thought we should give back that portion as well to shareholders in form of the dividend. So, I think that's the biggest driver. The CapEx initiatives beyond that were really around the test program and the consignment work we did, which I think is largely done.

And then, of course, we de-levered, we de-levered around the pension. So, we've had the Agere pension, which is the LSI pension that we inherited when we bought LSI several years ago. We took steps toward de-risking that pension by fully funding it in effect, and then, turning it more into a fixed income base portfolio. So, we think that was the right thing to do, but there's also a onetime event that hit free cash flow, and so, we backed it out.

Going forward, really, it's all about the business model and the financial model that gets put out of that business model that Hock articulated earlier. CapEx is coming down to 3% as a percentage of revenue, which is consistent with the fabless – or largely fabless business model. And given the operating margins of the business, the balance sheet that's got 2x gross leverage, less than 4% sort of average cost of debt capital, we think 40% is a very achievable target.

Q - Ross C. Seymore {BIO 20902787 <GO>}

Great. Thank you.

Operator

Thank you. And our next question comes from line of Craig Hettenbach with Morgan Stanley. Your line is now open.

Q - Craig M. Hettenbach {BIO 6185428 <GO>}

Yes. Thank you. Hock, now that you've closed Brocade, can you talk about just the synergies from a technology and product perspective and the implications for your enterprise storage business?

A - Hock E. Tan {BIO 1460567 <GO>}

Well, the main reason we acquired Brocade, very simply put, is that we believe that that product line is a very sustainable product franchise. It allows for certain customers with mission critical data center storage requirements. They need to use fiber channel SAN, storage area network. The more conventional, so to speak, basis of (35:56) IP networking stuff are not of a performance level, quality level that will address those mission critical requirements that financial institutions know, as an example, agencies, governments need to make work in those storage systems.

So, it's fairly unique in some regard but it's a nice addition to our enterprise storage portfolio where we stand to address more conventional storage requirements. And we see this business as a business that will continue into the foreseeable future, and not just in America, worldwide, simply because this kind of storage system in network fiber channel is literally bulletproof, mission critical systems and practically non-hackable.

Q - Craig M. Hettenbach {BIO 6185428 <GO>}

Got it. If I could just follow-up and look to expand on your comments about AI and just the type of visibility you have into some of those product ramps, as well as just the role you expect ASICs to play from your side.

A - Hock E. Tan {BIO 1460567 <GO>}

Well, we believe a lot of these emerging requirements that we are seeing in very specific applications, specific end markets, specific requirements for deep learning, as we call it, artificial intelligence, other people call it, where you need training and you need inference on large databases that continually upgrade, we tend to see that's been very customized. A lot of software that needs to be written on a hardware silicon platform that because of the particular nature of the application will tend to be very customized. And we are making, we are producing in a nutshell ASIC or custom silicon solutions that addresses those market niches. And it's pretty substantial. And our visibility today is extremely good in terms of the demand for these products.

Q - Craig M. Hettenbach {BIO 6185428 <GO>}

Got it. Thank you.

Operator

Thank you. And our next question comes from the line of John Pinzer (sic) [Pitzer] with Credit Suisse. Your line is now open.

Q - John William Pitzer {BIO 1541792 <GO>}

Yeah. Good afternoon, guys. Thanks for letting me ask the questions. Hock, in your prepared comments, you talked about excitement around continued FBAR content increases in fiscal year 2018. I'm kind of curious, to what extent is that just new flagship phones growing as a percent of the overall mix where content growth has already been very strong? To what extent is that an expectation that maybe flagship phones that get introduced in calendar year 2018 will continue to have content growth? And to the extent that it's the latter, this year, you gave us pretty explicit guidance as to how much you thought your content was going up. I'd be curious, as we look out to calendar year 2018, how we should think about that FBAR content story?

A - Hock E. Tan {BIO 1460567 <GO>}

Well, it's an interesting story. And by the way, to answer your question, it's not the same old story again about more FBAR, more bands. This is not. This is actually thinking of filtering as being staged. Most of the front-end modules we talked about in the past where we have power amplifiers and FBAR filters, we tend to put it close to the transceivers where you filter signal that are channeled by the antenna.

What we are seeing here is going in and filtering the signals close to the antenna, as before, it channels down to the front-end module, and that's the things that has changed. It's almost like you're creating additional level of filter level, of stage of filtering, which, in effect, enhances, increasing – increases the amount of filters you need. And these FBARs are the only thing that can do very effectively those filtering, we call it extraction of signals, at the antenna. And the benefit of all that is it allows antenna to be shared, as opposed to multiple antenna in a phone.

Q - John William Pitzer {BIO 1541792 <GO>}

That's helpful. Any sense on what this new application could do to your dollar content in the phone?

A - Hock E. Tan {BIO 1460567 <GO>}

I probably should tell you as we progress through the year.

Q - John William Pitzer {BIO 1541792 <GO>}

Okay.

A - Hock E. Tan {BIO 1460567 <GO>}

Now might be a bit premature but it's definitely going to increase it.

Q - John William Pitzer {BIO 1541792 <GO>}

Perfect. And then, as my follow-on, Hock, I just wanted to get back to your AI comments in the prior question. It just seems like over the last couple of quarters, I wouldn't say you were being dismissive of the market opportunity but you clearly weren't sort of highlighting it as one of the key drivers. It sounds like you're being a little bit more front foot on the AI opportunity. Did something change and can you help us understand how you're thinking about your TAM in this market over time?

A - Hock E. Tan {BIO 1460567 <GO>}

Well, the dollars, as it affects us, has suddenly grown a lot. So, I guess I'd better make a few comments on it. (42:01) dollars that drives it.

Q - John William Pitzer {BIO 1541792 <GO>}

Any sense on how we should think about the total addressable market over a three-year horizon, Hock?

A - Hock E. Tan {BIO 1460567 <GO>}

We see driving our dollars to a level not dissimilar but significant level, not that far off from even our switching revenue.

Q - John William Pitzer {BIO 1541792 <GO>}

Perfect. Thank you very much.

Operator

Thank you. And our next question comes from the line of Vivek Arya with Bank of America Merrill Lynch. Your line is now open.

Q - Vivek Arya {BIO 6781604 <GO>}

Thanks for taking my question. Just first, as a near-term question on wireless, Hock, on the last call, I think you said you expected Q1 to hold up which, at that time, sounded sort of flattish. Now, you are saying Q1 could be better. My question is did something change? Was it just perhaps conservatism before? But more importantly, how do you track the sell-through of the different flavors of products that your customer is selling to make sure that you're sort of shipping in line with sell-through?

A - Hock E. Tan {BIO 1460567 <GO>}

Well, as I mentioned, to answer your latter question, 80% of our revenues, over 80% goes direct to customers and we get very good visibility in orders backlog with our customers. So that, to start with, that track is pretty clear. Over 80% goes directly to our various customers itself, and that enables us to track very well. That also enables to track if that's over shipment in terms of in a sense that a customer take on more products than they truly need because it adjusts itself very, very quickly since they are doing it directly, as opposed to going through any distributor or middleman.

And as far as the question of wireless, yeah, I guess the answer is it's nothing of conservatism. Since we last talked a quarter ago, visibility has obviously become full crystal clear and we're just – in the interest of being transparent, we're just passing on what we see today.

Q - Vivek Arya {BIO 6781604 <GO>}

Got it. Thanks. And then, for my follow-up, Tom, you raised your long-term target on margins. When I look at the gross margins versus what you reported in Q4, there seems to be another, I think, 170 basis points of upside to the 65% target. But on operating margins, you're already above the target. So, I'm just curious what's driving that delta.

A - Thomas Krause {BIO 17978469 <GO>}

Well, I'm not sure I totally understand the question, but basically, as you look at it with Brocade, and you're right, we're running 60%, 64%-ish on the guide. I think what you've seen consistently and probably the key driver of the overall financial model and the new targets is our ability to continue to drive gross margin expansion, and I think a lot of that ties back to the business model and continue to introduce more and more content-rich products that carry higher values. And I think that's what's driving it and it's consistent for a very long period of time. And obviously, given the scale of the company, we'll continue to reinvest in R&D at a very healthy clip, 15% of expanded revenue.

But we're growing mid-single digits, obviously, did better last year. We're keeping SG&A lean and simple. That was consistent with our model. And that gives us leverage. So, you're right. I think we'll continue to monitor the long-term model. We've obviously updated it a number of times over the past several years, but right now, we're very comfortable with the target of 65%, 47.5% operating margins.

Q - Vivek Arya {BIO 6781604 <GO>}

All right. Thank you.

Operator

Thank you. And our next question comes from the line of Ambrish Srivastava with BMO. Your line is now open.

Q - Ambrish Srivastava {BIO 4109276 <GO>}

Hi, thank you very much. Hock, I just wanted to visit the longer term driver for wireless, specifically in 2018. Besides the antenna, you also talked about Wi-Fi in the back half of the year and I think, correct me if I'm wrong, you said first, retail, and then, it starts to show up in handsets. So, can you give us some idea on what that would do to content within the handset space? And then, I had a quick follow-up as well.

A - Hock E. Tan {BIO 1460567 <GO>}

Well, it does, but see when you try to run it over time, it becomes very hard and I'm very loath to give you misleading answers. But all it does is it's definitely directionally pushing in the right direction. And I've always indicated to you, guys, on a long-term basis, which is what you're asking, year-on-year, we're seeing a dollar content increase which, I would say, a large part of it is content increase, driving top line revenues in wireless, closer to the range north of 10%, 10%, 15% annually on an annual growth rate basis. And that's all content increase, in our view, where there is an improvement of Wi-Fi connectivity through 802.11ax and/or more FBAR as we enhance the RF experience on smartphones. It all comes back to the same thing. We seem to see, based on history, empirically, that last five year's CAGR, compounded annual growth rate, CAGR, is in around the mid-teens. And using the trends in architecture and design and the needs of phones that in the next five years, we'll see that same CAGR of mid-teens.

Q - Ambrish Srivastava {BIO 4109276 <GO>}

Okay. That's very helpful. And then, on the non-wireless side, Marvell and Cavium are proposed to be combining. Just from your vantage point, does it or does it not change the competitive landscape the way you see it? Thank you.

A - Hock E. Tan {BIO 1460567 <GO>}

We don't really see any material change at all, as far as our business is concerned. As far as their business is concerned, of course, there could be major impact and I'm not dismissing that at all. But as far as we are concerned and our various franchise businesses are concerned, we do not see any impact.

Operator

Thank you. And our next question comes from the line of Harlan Sur with JPMorgan. Your line is now open.

Q - Harlan Sur {BIO 6539622 <GO>}

Good afternoon and thank you for taking my question. On the OpEx guide, if I assume the OpEx run rate similar to Q4 for core Broadcom, and then, normalized to the 14-week quarter, and then, try to back out the implied Brocade OpEx, I'm actually coming out with Brocade OpEx contribution on an annualized basis of around $280 million, which is right where you wanted Brocade OpEx to be post integration back when you first announced this acquisition. So, am I doing the math correctly? And I guess the question is, how much more cost synergies will be coming out on the integration plans over the next few quarters?

A - Thomas Krause {BIO 17978469 <GO>}

Hey, Harlan. Good question and certainly the right one. I think the benefit of being able to spend a little extra time between signed to close, and of course, the benefit of being able to announce a number of the sales processes which were in effect with structuring activities at the same time, has helped us get to our target model with Brocade faster. Now, that doesn't mean there isn't more to do.

I would suggest, we've probably got about $20 million a quarter in operating expenses in the business right now on a run rate basis that still need to come out of the model, but we are ahead of schedule relative to where we normally would be when we close a deal. And I'd expect over the next six months or so, we'll be trending towards sort of getting that $20 million out of the business on a quarterly basis.

Q - Harlan Sur {BIO 6539622 <GO>}

Great. Thanks for the insights there. And Hock, question for you. As we speak with many of your data center customers, they're all anxiously awaiting Tomahawk III, 12.8 terabits of total switching throughput. I think the bigger opportunity here is that you're moving the market of 50 gigabits per switch port using this new PAM-4 technology, which means that you not only change the switch silicon, but you have to change the PHY and NIC products and after components as well, so you've got a lot of potential for content enhancement here for you and the team. So I guess the question is, are you still on track to get Tomahawk III to customers end of this year, beginning of next year? And do you have a view as to how big this opportunity could be for the data center business, probably starting in 2019?

A - Hock E. Tan {BIO 1460567 <GO>}

Concerning your first question, yes, we are very much on track to get samples out to our customers by the end of this year, calendar year. Very much on track. And as far as how big the impact will be, well, to be fair, I think, let's not get – I hope let me not get carried away, Tomahawk III, which goes to 12.8 terabit throughput, will just replace, to a large extent, the existing versions of Tomahawk II, which just started, to be fair, and Tomahawk I, which is 3.2 terabit. Now, of course, it replaces 8x4 x (52:23) and gives us that full room opportunity for delivering more value to our customers.

But at the end of the day, the number of sockets, there's a certain level of replacement of existing sockets. We've higher throughput equipment, silicon, no doubt, which gives us some enhanced dollar value, but it's not a total add-on in the overall scheme of things.

Q - Harlan Sur {BIO 6539622 <GO>}

Got it. Thank you.

Operator

Thank you. And our final question comes from the line of Chris Caso with Raymond James. Your line is now open.

Q - Chris Caso {BIO 4815032 <GO>}

Yes, thank you. Good evening. Your first question is regarding seasonality and how we should be thinking about the April quarter. Of course, I know you don't want to provide guidance for that now, but as we build our models, I assume we would be taking out the extra half week of revenue as we model out April. How should we also be thinking about wireless there, because I guess, there was some extra wireless revenue in the January quarter during the push out. How should we think of that as we build out our April expectations?

A - Thomas Krause {BIO 17978469 <GO>}

Yeah. Hey, Chris. Obviously, we're not going to give guidance on the April quarter. What I'd tell you is, yeah, there is a little bit of the extra week, that's right. But I think more importantly, as we've talked about, the long-term model here is mid-single digits and I think that's where we plan to be going forward.

Q - Chris Caso {BIO 4815032 <GO>}

Okay. Fair enough. And just as a follow-up on Brocade, you guys had set out some targets. I think it was $850 million EBITDA. My assumption at what you're talking about was taking the additional $20 million out. That basically gets you to that target. Are you still – stand behind that target or is there potential for you to do a little bit better than that?

A - Thomas Krause {BIO 17978469 <GO>}

Yeah. No, I mean, I'm sure Hock believes we can do a little bit better than that but we certainly are in or around that target today. And the business actually, I think, what we're happy about is the business is performing very well. It's performing on plan and we think it's a great addition to the other 19 franchises we have in the portfolio.

Q - Chris Caso {BIO 4815032 <GO>}

Great. Thank you.

A - Hock E. Tan {BIO 1460567 <GO>}

Thank you, guys.

A - Thomas Krause {BIO 17978469 <GO>}

Thank you.

Operator

Thank you. And that concludes Broadcom's conference call for today. You may now disconnect. Everyone, have a great day.
