Q1 2023 Earnings Call

Company Participants

- Hock E. Tan, President and Chief Executive Officer
- Ji Yoo, Head of Investor Relations
- Kirsten Spears, Chief Financial Officer and Chief Accounting Officer

Other Participants

- C.J. Muse
- Edward Snyder
- Harlan Sur
- Harsh Kumar
- Karl Ackerman
- Pierre Ferragu
- Ross Seymore
- Stacy Rasgon
- Vijay Rakesh
- Vivek Arya

Presentation

Operator

Welcome to Broadcom Inc's First Quarter Fiscal Year 2023 Financial Results Conference Call. At this time for opening remarks and introductions, I would like to turn the call over to Ji Yoo, Head of Investor Relations of Broadcom Ink.

Ji Yoo {BIO 22177393 <GO>}

Thank you, operator, and good afternoon, everyone. Joining me on today's call are Hock Tan, President and CEO; Kirsten Spears; Chief Financial Officer; and Charlie Kawwas, President Semiconductor Solutions Group.

Broadcom distributed a press release and financial tables after the market closed describing our financial performance for the first quarter fiscal year 2023. If you did not receive a copy, you may obtain the information from the Investors section of Broadcom's website at broadcom.com. This conference call is being webcast live and an audio replay of the call can be accessed for one year through the Investors section of Broadcom's website.

During the prepared comments, Hock and Kirsten will be providing details of our first quarter fiscal year 2023 results, guidance for our second quarter as well as commentary regarding the business environment. We'll take questions after the end of our prepared comments.

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.

In addition to US 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.

I'll now turn the call over to Hock.

Hock E. Tan {BIO 1460567 <GO>}

Thank you, Ji, and thank you everyone for joining us today. In our fiscal Q1 '23, consolidated net revenue that was -- revenue was $8.9 billion, up 16% year-on-year. Semiconductor Solutions revenue increased 21% year-on-year to $7.1 billion. While as we expected infrastructure software declined 1% year-on-year to $1.8 billion, even as our core software sustained growth of 5% year-on-year.

Stepping back, let me sum up what happened in Q1. From our view, infrastructure spending continues to be up, particularly in service providers even as hyperscale and enterprise sustain. Spending in technology for infrastructure has been strong, showing double-digit growth for nine consecutive quarters. We continue to be booked for fiscal '23 and our lead times and visibility on semiconductors remain largely at 50-weeks. While there have been a small number of requests to push out certain orders, we know that these are the exceptions and they have not had a material impact on our business.

Because we ship linearly throughout the quarter to our customers, inventory on our books has been consistent around 80 days and overall inventory of Broadcom products across the ecosystem remains very well managed. We continue, needless to say, to be very disciplined in shipping our backlog only as and when needed by our end customers.

With that, let me now provide more color on each of our end markets, starting with networking. Networking revenue was $2.3 billion and was up 20% year-on-year, in line with guidance, representing 32% of our semiconductor revenue. We see continued deployment of our advanced Tomahawk switches by hyperscalers in their leaf and spine architectures. Even as we deliver on increased bandwidth for the hyperscalers, having said that, power remains a major challenge. So just this week, we announced the industry's first integrated silicon photonics networking solution, codename Bailey, which integrates the active optical interconnects with our next-generation Tomahawk 5 switch at 51.2 terabit per second. Bailey, doubles switching performance, but it will reduce total system power.

Keep in mind that at hyperscalers, a growing portion of our switches are being deployed within the AI networks, which are separate from the traditional x86 CPU scale outrunning existing workloads. Now, this is today. Tomorrow, with generative AI using large-scale -- large language, I should say, models with billions of parameters, we have to run thousands of AI engines in parallel, enabling large and synchronized burst of data at speeds of 400 gig and 800 gig. The networks to support this massive processor density is critical and as important as the AI engines. Such networks have to be lossless, low latency and be able to scale. So as you know, such AI networks are already been deployed at certain hyperscalers through our Jericho2 switches and Ramon Fabric.

In fact, in 2022, we estimated our Ethernet switch shipments deployed in AI was over $200 million. With the expected exponential demand from our hyperscale customers, we forecast that this could grow to well over $800 million in 2023. We anticipate this trend will continue to accelerate and mindful that we need even more higher performance networks in the future. We've been investing in a new generation of this lossless low latency Ethernet fabric designed specifically to handle such data and compute intensive AI workloads.

Of course, additionally the exciting growth prospects for generative AI are driving our compute offload accelerated business at hyperscalers. As we have indicated to you last quarter, this business achieved over $2 billion in revenue in 2022. We are on-track to exceed $3 billion in revenue in our fiscal '23. In Q2, looking forward short term, we expect these tailwinds to drive our networking revenue to grow about another 20% year-over-year.

Moving on next to our server storage connectivity revenue, there was a record $1.3 billion or 18% of semiconductor revenue and up 57% year-on-year. Once again, as we discussed in preceding quarters, the rapid transition to next-generation MegaRAID solutions drove this substantial year-on-year content increase. After four consecutive quarters of such increases, this transition, however, is significantly complete and we expect that in Q2 on a year-on-year basis, server storage connectivity revenue will moderate towards 20% year-on-year growth.

Moving on to broadband, revenue grew 34% year-on-year to a record $1.2 billion, and represented 17% of semiconductor revenue. During this quarter, our broadband business particularly benefited from robust deployments of -- by telcos of 10G PON and cable operators of DOCSIS 3.1. These gateways have high attach rates of Wi-Fi 6 and 6E. And in Q2, we expect the secular drivers behind broadband to sustain momentum on a sequential basis, and year-on-year broadband will grow a solid 10%.

Moving on to wireless, Q1 revenue of $2.1 billion represented 29% of semiconductor revenue. Demand from our North American customer drove wireless revenue up 4% year-on-year, reflecting content increases, which we had previously indicated last quarter. Sequentially, wireless was flattish compared to Q4. And seasonally, we expect wireless to be down sequentially in Q2 and down high single-digit percentage year-on-year.

Finally, Q1 industrial resale of $229 million decreased 4% year-over-year, as softness in China offset strength in renewable energy and medical. And in Q2 we forecast industrial resales to be down low single-digit percentage year-on-year on continuing softness in China. So in summary, Q1 Semiconductor Solutions revenue was up 21% year-on-year and in Q2, we expect semiconductor revenue growth of high single-digit percentage year-on-year.

Turning to software, in Q1, infrastructure software revenue of $1.8 billion, declined 1% year-on-year and represented 20% of total revenue. While core software revenue grew 5% year-on-year, the Brocade business declined because of lumpiness in enterprise consumption in this very narrow vertical of SAN storage.

For core software, consolidated renewal rates averaged 119% over expiring contracts. And within our strategic accounts, we averaged 129%. And within these strategic accounts, annualized bookings of $536 million included $197 million, which represent 37% of cross-selling of our portfolio of products to these same core strategic customers. Over 90% of the renewal value represented recurring subscription and maintenance.

Now by way of comparison over the last 12 months, consolidated renewal rates averaged 119% over expiring contracts. And in our strategic accounts, we averaged 134%. Because of these, our ARR, the indicator of forward revenue, at the end of Q1 was $5.3 billion, which was up 3% from a year ago. In Q2, we expect our infrastructure software segment revenue to be up low to mid-single digit percentage year-on-year, as the stable core software growth continues to be partially offset now by weakness in Brocade.

So in summary, we are guiding consolidated Q2 revenue for the company to be $8.7 billion up 8% year-on-year. Before Kirsten tells you more about our financial performance for the quarter, let me provide a brief update on our pending acquisitions of VMware. We continue to make progress with our various regulatory filings around the world, having now receive legal merger clearance in Brazil, South Africa and Canada, and foreign investment control clearance in Germany, France, Austria, Denmark, Italy and New Zealand. As we stated on our last earnings call, we continue to anticipate that the timeline for the review process will be extended in other key regions, especially given the size of this transaction.

Having said that, we continue to expect the transaction to close within our fiscal 2023. We believe the combination of Broadcom and VMware is about enabling enterprises to accelerate innovation and expand choice by addressing their most complex technology challenges in this multi-cloud era. And we are confident, regulators will see this when they conclude their review.

Finally, Broadcom recently published its third annual ESG report available on our corporate citizenship website, which discusses the company's ESG initiatives. As a global technology leader, we recognize Broadcom's responsibility to have a positive impact on our customers, employees and communities, through our product and technology innovation and operational excellence, we remain committed to this mission.

With that let me turn the call over to Kirsten.

Kirsten Spears {BIO 19712531 <GO>}

Thank you, Hock. Let me now provide additional detail on our financial performance. Broadcom had another great quarter with robust financials. Consolidated revenue was $8.9 billion for the quarter, up 16% from a year ago. Gross margins were 74% of revenue in the quarter, about 10 basis points higher than we expected.

Operating expenses were $1.1 billion, down 1% year-on-year. R&D of $929 million was also down 1% year-on-year, primarily from streamlined project and other variable spending, offset in part by higher people costs resulting from increased headcount as we are hiring.

Operating income for the quarter was $5.4 billion and was up 17% from a year ago. Operating margin was 61% of revenue, up approximately 50 basis points year-on-year. Adjusted EBITDA was $5.7 billion or 64% of revenue. This figure excludes $127 million of depreciation.

Now, a review of the P&L for our two reportable segments. Revenue for our Semiconductor Solutions segment was $7.1 billion and represented 80% of total revenue in the quarter. This was up 21% year-on-year. As Hock discussed, this came from strength across all of our semiconductor end markets.

Gross margins for our Semiconductor Solutions segment were approximately 69%, down approximately 160 basis points year-on-year, driven primarily by product mix within our semiconductor end markets. Operating expenses were $802 million in Q1, down 2% year-on-year. R&D was $716 million in the quarter, down 1% year-on-year. Q1 semiconductor operating margins were 58%. So while semiconductor revenue was up 21%, operating profit grew 23% year-on-year.

Moving to the P&L for our Infrastructure Software reportable segment. Revenue for Infrastructure Software was $1.8 billion, down 1% year-on-year and represented 20% of revenue. Gross margins for Infrastructure Software were 91% in the quarter and operating expenses were $346 million in the quarter, down 1% year-over-year. Infrastructure Software operating margin was 72% in Q1 and operating profit was stable year-on-year.

Moving to cash flow, free cash flow in the quarter was $3.9 billion, representing a 16% increase year-over-year. Free cash flow represented 44% of revenues in Q1 '23, consistent with what we achieved the same quarter last year. We spent $103 million on capital expenditures.

Days sales outstanding were 33 days in the first quarter, compared to 30 days in the fourth quarter. We ended the first quarter with inventory of $1.9 billion, down 1% from the end of the prior quarter or 78 days on hand. Overall, inventory of Broadcom's products across the ecosystem as Hock indicated remains well-managed.

We ended the first quarter with $12.6 billion of cash and $39.3 billion of gross debt of which $1.1 billion is short-term. During the quarter, we repaid $260 million in senior notes that were due on maturity. The weighted average coupon rate and years to maturity of our fixed rate debt is 3.61% and 10.2 years respectively.

Turning to capital allocation, in the quarter, we paid stockholders $1.9 billion of cash dividends. Consistent with our commitment to return excess cash to shareholders, we repurchased $1.2 billion of our common stock and eliminated $333 million of common stock for taxes due on vesting of employee equity, resulting in the repurchase and elimination of approximately 2.7 million AVGO shares.

The non-GAAP diluted share count in Q1 was $434 million. As of the end of Q1, $11.8 billion was remaining under the share repurchase authorization. Excluding the potential impact of any share repurchases, in Q2, we expect the non-GAAP diluted share count to be 438 million.

Based on current business trends and conditions, our guidance for the second quarter of fiscal 2023 is for consolidated revenues of $8.7 billion and adjusted EBITDA of approximately 64.5% of projected revenue. In forecasting such profitability, we expect gross margins to be up approximately 150 basis points sequentially on product mix, and R&D spending to be up sequentially on continuing hiring of engineers and seasonal payroll tax step-ups.

That concludes my prepared remarks. Operator, please open up the call for questions.

Questions And Answers

Operator

(Question And Answer)

Thank you. (Operator Instructions) Our first question will come from the line of Harsh Kumar with Piper Sandler. Your line is open.

Q - Harsh Kumar {BIO 3235392 <GO>}

Yes. Hey guys. Congratulations on yet another solid quarter and guide, and thanks for all the color, you guys provided. Hock, you mentioned generative models in your commentary. I wanted to understand the difference between what you're doing in AI so far versus maybe what our understanding of generative is. You talked about $200 million in Ethernet related to AI. Is that largely generative because we've heard other companies say that for a large part, the generative models are using it for the band. And then you talked about $2 billion in compute offload going to sort of $3 billion. My understanding was that was mostly for video processing. Maybe help us think about how we think of Avago's place or Broadcom's place in the generative process?

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

Well, yeah, thank you for that question and opportunity to clarify why we highlighted -- way I highlighted it very purposefully. In 2022 generative is bare -- just barely starting to kick off. But there exist AI networks within the hyperscalers particularly in fairly significant volume. And one we're trying to say is very similar to CPUs, traditional CPUs in traditional workloads in those same data centers.

We've constrained on performance of those silicon CPUs and on Moore's Law, we're starting to see scale out buying positioning rows and rows of servers, CPUs and networking them together to work closely in parallel. As we step up to large language models in AI, generative AI in particular coming into play.

GPUs are starting to be strung together in hundreds, soon to be thousands of racks and working in parallel and you know how that goes. And basically, those GPUs work in parallel in fairly synchronous manner to basically run and do what we call bulk parametric exchange, basically you run GPUs together, all AI engines together, whether they are GPUs, AI or TPUs or other AI engines, you run them together, becomes network.

The network becomes now potentially a critical part of this whole AI phenomenon in hardware. To make it work, you've got to put together many racks of AI engines in parallel, very similar to what we have been doing, hyperscalers have been doing on CPUs to make them run faster, high performance as Moore's Law comes to an end and doesn't make any difference here in the form of AI engine. They come from silicon, they have -- they face similar constraints. So network becomes a problem -- becomes a constraint, network becomes a very key part of fulfilling generative AI dream here.

And what we are saying here -- what I'm saying in my comments is, last year, 2022, this -- these are more -- AI -- what you call, the AI workloads that are running in hyperscale and the advent of generative AI is still relatively fresh and new. We're doing $200 million as far as we could estimate of silicon Ethernet switches and fabric that goes into those AI networks as far as we could identify in hyperscalers.

With generative AI and the urgency and excitement of it coming in that we're seeing today. We are seeing that increase very, very dramatically and we're seeing urgency in our hyperscale customers coming to us to secure products, to secure ability to put in place those very, very low loss -- lossless, I would call, very low latency networks, that can scale. And Ethernet is what makes those networks scale.

Q - Harsh Kumar {BIO 3235392 <GO>}

Understood. Thanks, Hock.

Operator

Thank you. One moment for our next question. And that will come from the line of Harlan Sur with JP Morgan. Your line is open.

Q - Harlan Sur {BIO 6539622 <GO>}

Good afternoon. Thanks for taking my question. Hock, as your cloud customers are now aggressively focused on generative AI development and deployment across their data center footprints, right? This is driving strong AI- focused Ethernet switch port demand and demand for your compute offload ASICs like TPU for this year, as you mentioned. But from a new product ramp and design win funnel perspective, is this also causing your cloud customers to want to pull forward some of your future programs like, Tomahawk 5 or Jericho 3 next-gen switching and routing products and/or pulling the design and tape out of their next generation compute offload AI ASIC programs?

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

Yes. We're seeing all of the foregoing, by the way, and that happened over the last 90 days. We have seen a lot of that urgency, a lot of that, you might call it excitement, but you hit it right on. Yes, which is accounting for the color in my commentary about both net generative AI-based networks and pushing us to develop a new generation altogether of Ethernet switching that can support this kind of very compute and data intensive workloads.

So that's one side of it. And the other side of it, you're right. We have typically not want to talk much about compute offload, which is another way of saying. Yes, these are very related to some of the engines that certain -- that are fairly customized dedicated to certain hyperscalers.

Q - Harlan Sur {BIO 6539622 <GO>}

Thank you, Hock.

Operator

Thank you. One moment for our next question. And that will come from the line of Vivek Arya with Bank of America. Your line is open.

Q - Vivek Arya {BIO 6781604 <GO>}

Thank you for taking my question. Hock, I'm just curious to understand just the views about the second half. If I look at the last few years, Broadcom has managed to grow semiconductor sales, right, anywhere between 5% to kind of double-digit, second half, half-over-half. Just the broader business environment, just kind of more of a broader business environment question, not guidance per se, what could change that trend for Broadcom in a positive or negative way this year?

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

Sort of broadly conceptual, not a guidance as you say, but trend this way, we're kind of getting rather hopeful that it would be a soft landing. There will be moderation as we are indicating this future -- in this Q2 quarter moderating growth, but we see nonetheless as probably leading to a soft landing of still a year-on-year improvement in the second half.

Q - Vivek Arya {BIO 6781604 <GO>}

Understood. Thank you, Hock.

Operator

Thank you. One moment for our next question. And that will come from the line of Stacy Rasgon with Bernstein. Your line is open.

Q - Stacy Rasgon {BIO 16423886 <GO>}

Hi, guys. Thanks for taking my question. I just wanted to verify, did you say that you started hearing urgency from your hyperscale customers around the AI in the last 90 days? And -- given that, how do I think about that in the context of lead times that are still 50 weeks. You've got like sounds like $1.6 billion in incremental networking growth in year-over-year in '23 from these AI across both Ethernet and the ASICs. I guess, given the lead times, is that more of a second half kind of thing when that contributes to the model or does it contribute more linearly to the year? Or I guess just how do I think about the timing of all this in the wake of the strong demand right now just given the broader lead times?

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

Stacy, thank you for your question, very perceptive. And as I say, we don't -- we're not -- we're trying not to -- we are not guiding you guys what happens beyond the second quarter, not the second half of this year.

Q - Stacy Rasgon {BIO 16423886 <GO>}

But you did give us some guidance for the year on this, right? So --

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

No guidance, sorry. I give you a conceptual trend, how's that. But having said that, no, we're still working through timing of when our customers need those urgent -- those products in a fairly urgent manner and our ability to obviously want to be very, very helpful to help customers, launch aggressively into generative AI. So we are in the midst of that.

Q - Stacy Rasgon {BIO 16423886 <GO>}

Okay, because like the networking implied guide for Q2 got to be up like call it mid-teens sequentially. Is that some of that contributing or do I get even more, I guess, as we go beyond because we're already -- once you get through this quarter, we're already through the first half, right? So I guess it has to get to the second half, right?

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

Stacy, I wish you guys would not do too much analysis, but I know that won't happen. I'm only guiding Q2. I'll let you figure out what happens in the second half. I think you're probably better off at it than I am.

Q - Stacy Rasgon {BIO 16423886 <GO>}

Got it. Okay. Thank you so much, Hock.

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

Thank you.

Operator

Thank you. One moment for our next question. And that will come from the line of C.J. Muse with Evercore ISI. Your line is open.

Q - C.J. Muse

Yeah, good afternoon. Thank you for taking the question. And I know that it might be difficult to share too much on the ongoing review from the European Commission. But I was hoping, maybe you could speak a little bit about, where they're concerned, i.e., next fiber channel host burst adapters and other storage adapters. Do you view these as core businesses within Broadcom? Are they easy to extract out of your portfolio? And is there IP that is critical for these businesses that are clearly used by your other larger core businesses? Anything to kind of help us understand would be grateful. Thank you.

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

C.J., I appreciate the fact that you have been definitely reading a lot of those Reuters and Bloomberg and Lexicon reports. And you equally know that I cannot and will not comment and honor any of these as we are working very, very positively and progressively with regulators on all the issues related to our clearance. So, sorry, I can't comment, but just to let you know, we're making good progress.

Q - C.J. Muse

Thank you.

Operator

Thank you. One moment for our next question. And that will come from the line of Vijay Rakesh with Mizuho. Your line is open.

Q - Vijay Rakesh {BIO 5884146 <GO>}

Yeah. Hi, Hock. Just a quick question on, you talked about generative AI, just wondering as you look at the workload, what percent of workload would be on generative AI like exiting, 20 -- calendar '23 or '24? And also I want to hit on the silicon photonics side. I think you briefly mentioned the silicon photonics cable with integrated switch the 51.2 terabytes switch. When do you see this ramping and what's the power advantage on that? Thanks.

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

Okay. Well it's, we all -- as I'm sure I don't need to elaborate on what we all hear about on generative AI and is -- I think it's still early innings on generative AI, but we obviously are also indicating as we are seeing a very strong and a strong sense of urgency among our customers especially in the hyperscale environment to be -- to not miss out -- not to be late in this trend.

And what with generative AI, as I said, with many more, much more billions of parameters that come into the models that they are doing. You're talking about scale out of, A, our data centers driving AI engines network together in a manner that we probably have not seen before. It's not a problem that's not solvable. It is very, very clearly solvable. As evidenced by the fact that we have and deploy technology to support AI networks, even today to certain hyperscalers, where we're talking about at least hundreds, if not thousands, of AI engines, AI servers networked together and working in a synchronous manner.

So this is about ability to scale out in a fairly substantial manner. And I was -- the color I was providing and is really about trying to make sure that happens and not be the bottleneck to our ability to get the best system performance and I emphasize the word system performance of an AI data center. And where it's coming from right now is frankly how to network them and how to do those massive parametric exchange, so to speak, when you run large numbers of engines or machines in parallel as you grind through this huge database and that we need to do.

So that's -- we're in early innings. And which is why we think we have time to come -- to start to work on, even a new generation of switches in Ethernet that are dedicate -- that are specifically designed, dedicated to this kind of workloads, which are very different from the normal workloads that we see today traditionally in data centers. And we have to address that. They have to be as I say, literally lossless, virtually lossless, very low latency, and be able to scale into thousands of engines.

And that's the main three criteria we are aware of and we're driving solutions, silicon solutions that enable that -- we have it, but we think we need to improve the performance of what we have to -- and in anticipation of a trend that we foresee over the next several years. And so we're putting a lot of investment in that direction.

Q - Vijay Rakesh {BIO 5884146 <GO>}

On the silicon photonics cable just wondering when the time of ramp and the power advantages there? Thanks.

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

Well, we intend to launch Tomahawk 5 early '24 as we indicated previously. And that's the conventional silicon-based with pluggable optics switch top-of-the-rack switch Tomahawk 5, 51.2 terabit per second. Bailey [ph], which is the fully integrated silicon photonic version, you don't fully integrate the active element of those pluggable optics into the switch. We anticipate launching that shortly thereafter.

Power-wise, you can see it's silicon photonics, that's a lot. Tomahawk 5 compared to what we have today is 2x the performance of Tomahawk 4 and we believe we can do Tomahawk 5 at the same power, close to the same power if not lower than a Tomahawk 4.

Q - Vijay Rakesh {BIO 5884146 <GO>}

Great. Thank you.

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

Sure.

Operator

Thank you. One moment for our next question. And that will come from the line of Ross Seymore with Deutsche Bank. Your line is open.

Q - Ross Seymore {BIO 20902787 <GO>}

Thanks for letting me ask the question. I wanted to go into the compute offload number that you talked about, Hock, the $2 billion last fiscal year going to $3 billion this year. I know it's a touchy subject and so no customer specifics, of course. But generally speaking, can you just talk about the breadths and types of compute offload? And how that's changing in the mix from the $2 billion last year to $3 billion this year?

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

Well, I rather not answer that question, Ross. Highly sensitive to some of my very limited customer base. But as I said, it includes some of the engines, the compute engines and some are related components that support this engine.

Q - Ross Seymore {BIO 20902787 <GO>}

Is the concentration changing? So are you broadening customers in that growth?

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

No. No, very concentrated.

Q - Ross Seymore {BIO 20902787 <GO>}

Okay. Thank you.

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

Thank you.

Operator

Thank you. One moment for our next question. And that will come from the line of Edward Snyder with Charter Equity. Your line is open.

Q - Edward Snyder {BIO 2498283 <GO>}

Thank you very much. Good quarter, Hock. So apparently over the last quarter, you were getting out of wireless, you're getting into wireless or handset guys are going to be -- start doing wireless? So I wanted to get a couple of updates, so maybe you could set the record straight. First of all, even if you see a sea change in let's say silicon, mixed silicon

baseband providers in the next year or two, does that fundamentally change your opinion of your wireless group?

And either way, actually, does it get better, does it get worse? Because obviously, if architectures change, it has a big impact on supply chain and I know, historically, you've worked very closely with key players and helping develop all the other pieces of the puzzle like transceivers that are required if you're going to do your own. So maybe you could just kind of reset the bar on what you expect for without guides, but in general, the wireless division in the next year or two, does it -- does that attribute you to get greater? Thanks.

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

Thanks. Good question, Ed. As you know, our wireless division -- group, as you call it, not division, is really not one single product line or one single division. It's not one homogenous group either. It is sell -- a few key products that comprises this wireless division, all selling -- you're right, you are correct, to the same application and very high-end flagship status handsets and largely focused on one key customer, a North American, a much beloved North American OEM customer. So in that sense, it's one single focus area.

And to answer your question while we're -- on these multiple products, and they tend to keep progress, as each new generation happens may not be every year, but it happens pretty -- fairly regular frequency on a cadence that is pretty predictable after a while, each on its own cadence. It's a very, very good business for us. And to answer your question directly, no, nothing significant -- meaningful has changed. Our relationship, our strategic engagement continues very much the same as it has for the last multiple years. And we see that to continue in a fairly predictable, stable manner.

Q - Edward Snyder {BIO 2498283 <GO>}

And then just to remind if we could, three-year roadmap, I mean, you see stuff pretty far out, right?

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

Yes.

Q - Edward Snyder {BIO 2498283 <GO>}

Great. Thank you.

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

Thank you.

Operator

Thank you. One moment for our next question. That will come from the line of Pierre Ferragu with New Street Research. Your line is open.

Q - Pierre Ferragu {BIO 15753665 <GO>}

Hey, thank you for taking my question. Can you hear me well?

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

Yes, yes.

Q - Pierre Ferragu {BIO 15753665 <GO>}

Great. So I'm trying to put together a perspective of what's happening at hyperscale clients this year. So if I look at your networking division, if you grow like, at least $600 million this year in AI and if you have computer flow division growth by a billion, that might well represent all your growth in networking. So that would mean, the only thing that is really growing in the -- growing a lot this year in that space is AI. And when I look at outside of Broadcom, what we've seen is memory and like the x86 CPU servers are having a very difficult time at the moment, we expect a recovery in the second half, while the GPU segment of the market is actually in very, very good shape and growing very well and accelerating again.

So my question at the end of the day is, is it fair to say that in these large data centers this year only AI is growing? And is that a sign of what the future will be? Or do you think that the general purpose part of the infrastructure like centered around x86 or similar general purpose CPUs still is a very good growth market?

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

You put -- you pose very, very interesting and good questions, Pierre. The problem is I do not -- my customers, hyperscale customers, do not necessarily honor me by sharing all those insights that you -- and on those questions, you are asking. I do not know. I do not know. All I know -- what I do know because I don't sell them CPUs. I don't even sell them GPUs, by the way, but I know what you know out there which is in certain areas of their business, we are seeing some of these hyperscalers bringing on a sense of urgency and focus and of course, spending to be up to speed if not to -- to not be left behind as we see the excitement hyped perhaps in pushing applications and put workloads in generative AI. That's what we see driving a lot of this excitement. And we are -- all we are saying is we think some of that effect on our networking business with those hyperscalers. That's what it is.

Beyond that, we unfortunately, other than the backlog we get in normal networking switches, routers, and key components, we see that and as I indicated in our this -- last quarter's results, we continue to see sustained strength. Now, last quarter and continuing as we indicate this particular quarter Q2. Beyond that, we don't get to see -- we do not want to guide what we're going to see beyond that. But right now, last quarter, this quarter, yeah, traditional data centers scale out in networking and deployment in networking continues to be strong and sustained in hyperscalers as well I might indicate in enterprise.

Q - Pierre Ferragu {BIO 15753665 <GO>}

Okay, right. And just to clarify, specifically on what you are doing, is that fair to assume that the majority or a very large majority of your growth this year in networking is going to come from AI, which you have $600 million coming from AI Ethernet, and $1 billion coming from elsewhere chips or is that not the right way to think about it? Just for your business, not looking at anything else.

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

I will not think about it at this point, it might be a bit too mature. Don't forget generative --

Q - Pierre Ferragu {BIO 15753665 <GO>}

Okay.

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

AI is still early stage.

Q - Pierre Ferragu {BIO 15753665 <GO>}

Yes. Okay, that's very clear. Thanks, Hock.

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

Thank you.

Operator

Thank you. And we do have time for one final question, and that will come from the line of Karl Ackerman with BNP Paribas. Your line is open.

Q - Karl Ackerman {BIO 19693285 <GO>}

Yeah. Thank you for taking my question. There were many great questions quite frankly on the networking business, which I think is quite significant for you. Maybe if I could, a clarification on that and then a broader question that I want to address on broadband. On the networking piece, I was curious if you could discuss the growth opportunity in your Tomahawk portfolio now that a peer has elected to stop investing in their switch division?

And then as it relates to broadband, several companies across the broadband ecosystem have guided a softer outlook due to a buildup of inventory, but quite frankly, that's been on the customer premise side. You obviously have more weighting towards fiber and sell into the infrastructure portion. And so I was hoping you could discuss how you're thinking about the growth of your fiber business within broadband, both from an infrastructure side and a consumer equipment standpoint as governments begin to deploy funds for broadband infrastructure? Thank you.

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

Thank you for that question. Yes, broadband is to us a very, very good business and very sustaining. It used to be boring, boring is good at this point and last quarter Q1 as I

reported, we actually grew 34% year-on-year. In my view, that's rather exceptional even though in broadband we have been seeing year-on-year growth now, at least for the past four, five quarters, but still 34% was rather exceptional and sure enough, Q2, it normalizes to a more sedate level, but still growing. And the growth in that is simply because we're very well positioned with respect to next generation PON, 10 gig PON which has been deployed in big volumes now by telcos, supported by their governments, countries, all over Europe and even in North America, not to mention other country -- other nations beyond that. Basically, it is about reaching these key utility broadband service to every household and we see a lot of deployment.

And then more vertical market, we also see simultaneous with PON or fiber, as you call it, a large -- a strong continued deployment of cable, DOCSIS, coaxial to the home because the cable operators, a few of them on the scale of the telcos and who need to maintain competitiveness as the telcos launch 10 gigabit PON that cable has to update DOCSIS to be able to compete and not lose subscribers in the same market they compete against each other. So we see strength, both in cable DOCSIS 3.1 as I call it and potentially next generation not yet happening, but hopefully within the next couple of years, DOCSIS 4.4.0.

Meanwhile PON is happening, which accounts for the strength we saw last quarter and continuing strength over the last several quarters and content increases come to not just unit deployment of those gateways and infrastructure, but also the fact that a lot of this deployments come with very high attach rates of Wi-Fi 6 and 6E, and that provides additional boost, content increases more what I would call it, to our revenue growth in broadband. So that's quietly still chugging along very nicely for us. All right.

Operator

Thank you. As I'm showing no further questions in the queue at this time, I would now like to turn the call back over to Ji Yoo for any closing remarks.

A - Ji Yoo {BIO 22177393 <GO>}

Thank you Sherri. In closing, we would like to highlight that Broadcom will be attending the Morgan Stanley Technology Media and Telecom Conference on Tuesday, March 7. Broadcom currently plans to report its earnings for the second quarter of fiscal '23 after close of market on Thursday, June 1, 2023.

A public webcast of Broadcom's earnings conference call will follow at 2:00 p.m. Pacific Time. That will conclude our earnings call today. Thank you all for joining. Sherri, you may end the call.

Operator

Thank you all for participating. This concludes today's program. You may now disconnect.