

# Cowen 48th Virtual Annual Technology, Media & Telecom Conference

## Company Participants

- Colette Kress, Executive Vice President and Chief Financial Officer

## Other Participants

- Matt Ramsay, Analyst, Cowen

## Presentation

### **Matt Ramsay** {BIO 17978411 <GO>}

Hi, good morning everybody. This is Matt Ramsay again from the semis team at Cowen. Really happy to have the folks from NVIDIA, Colette Kress, the CFO and Simona and Stewart Stecker from the IR team to join our conference and have a chat about their -- lots of exciting things going on in the business. Just a couple of things before we get started. One is, there is an interface, I think, for all the investors on the line to submit questions. I can't promise I'll get to all of them, but there is a live interface to do that. And I think we'll kind of take the conversation from there.

So, Colette thanks for joining. I just wanted to kind of kick things off for folks on the phone and on the line that are interested in numbers. And Colette's been at the Company seven years now as CFO, and I think the stock's up 20x over that period of time. So, I don't know, it might be kind of interesting to folks on the line, it's been not always have straight line journey, but obviously lots of momentum with the business. And, if you have a few words you might want to say to kick things off. I know there was just earnings last week, but we will get into the Q&A there, but thank you all for joining.

### **Colette Kress** {BIO 18297352 <GO>}

Sure. Thanks so much for hosting and I appreciate we moving things to virtual and still continuing our business. We did launch our earnings just last week after probably one of the most I'd call influential, extraordinary times that we are in. And we produced very solid strong results within the quarter for our business and growing nearly 40% year-over-year, as well as strong overall sequential growth in many of our businesses as well. This also marks the point where we close the overall Mellanox acquisition. Mellanox acquisition has been working for more than 15 months, and we're excited to now almost hit the one-month mark of being together as one Company.

Additionally, there were some great announcements right before we did our overall earnings. Our GTC, which we normally hold in the March timeframe in San Jose, we moved to a digital format. That digital format was a great format to introduce our new architecture for Ampere. Ampere is in full production and did contribute to our overall earnings that we reported within Q1. And so, a great summary of announcements not only about the overall architecture and what A100 platform brings, but also inclusions of software, which is very important part of our end-to-end stack for the data center as well.

So, those are just a couple key things that we talked about at our earnings.

**Matt Ramsay** {BIO 17978411 <GO>}

Got it, now thanks for the introduction. I guess there's a number of different topics that are, as you say, it's an unprecedented time with the COVID-19 situation and obviously hope that all the employees globally at NVIDIA are hanging in there and doing well, but you mentioned the big news on the quarter and over the last couple of months is the highly anticipated launch of Ampere, particularly for the data center business now and then we'll see how that moves into gaming over time.

You mentioned that it did contribute to the results for April and obviously in the guidance as well, but I thought it's also interesting that V100 and T4 also had very strong quarters in the April quarter, if there's any help you could give us in breaking down the data center strength across those three important product lines, I think that would help folks as we think about the business going forward?

**Colette Kress** {BIO 18297352 <GO>}

Great. Absolutely. So, our data center business grew sequentially about 18% and grew year-over-year about 80% and reached for the very first time more than a \$1 billion within the quarter. So, we produced overall record results in terms of our data center business. Our overall T4 and our V100 also had tremendous strength within the quarter. Our T4, which we refer to as our inferencing product and is sold many times to the cloud and or to end-customers to help them with their overall inferencing is still solidly in the double digits as a percentage of our data center revenue.

But now, our Ampere came in and our Ampere 100 is sold with its overall base board with eight GPUs consolidated, contributed meaningful to a percentage of our overall data center revenue. As we had articulated going into the quarter, we expected that to be a part of our overall quarter, and it did prove out to be quite solid. Our visibility into Q1 helped us with our overall Q1 results and we see that continuing as we move to overall Q2.

**Matt Ramsay** {BIO 17978411 <GO>}

Got it. You mentioned also, I mean, the big, the other big news was getting Mellanox closed, I know trying to get acquisitions done and over the line in this political

environment is rather interesting, but congratulations on getting that done, and that whole business from a revenue perspective, I think holds into the data center business, and obviously is included in the guidance that you gave for the July quarter. Maybe just remind folks what those contributions were and the growth rates you've seen out of Mellanox in the recent periods? And then I have a couple of follow ups on the operating expenses and how they move around with bringing that into the Company.

**Colette Kress** {BIO 18297352 <GO>}

Sure. Mellanox is incorporated for in full quarter in our Q2 guidance. We plan to see it as incorporated into our data center revenue. So, we'll take all of Mellanox and incorporate that. We helped in terms of with our guidance to help understand that Mellanox as a percentage of the total Company will probably be in the low teens as a percentage of our revenue to help people understand the comp, both sequentially and overall year-over-year.

Mellanox, since we announced in March in 2009 has been doing quite well, in terms of the market revenue that it is received. They enter into some of the very similar customers and similar configurations that we do in many times. So, we have like customers, we have like partners that we do -- that we use to take the overall products to market. Now, what we've seen throughout last year, and turning the corner into the March quarter for Mellanox is they were looking at approximately in their high teens and sometimes in the 20% year-over-year growth.

So, solid execution from them and we're going to continue now working together on things that we can do to both enter into the market of high performance computing, continue our work in terms of AI, and using those overall interconnections between systems to systems to help us grow that business.

**Matt Ramsay** {BIO 17978411 <GO>}

Got you. Just a follow up there. I had my own personal observations in the semi's landscape over the last, I don't know, three or four years have been tons of M&A and around you a lot of those deals, it bothers me a little bit as a technologist, rather than put my technology hat on rather than my analyst hat on that a lot of those are, I don't know, maybe not quite financial engineering, but they kind of feel that way with the first couple of slides and all these merger decks talking about synergies here and synergies there, and I get the sense that Mellanox for NVIDIA is exactly the opposite.

It's folding in a high growth technology franchise into a larger high growth technology franchise is that -- is that the right way to characterize it and just following up on that, can you talk us through OpEx, I know you gave some numbers for the full year and they might have been a little higher than some folks that modeled. So, if any, any thoughts there would be helpful?

**Colette Kress** {BIO 18297352 <GO>}

Yeah. So, it's a really good question of what type of M&A is NVIDIA interested into? And what was its strategic rationale when it purchased Mellanox? It's very rare that we would make a decision based on financial engineering. It says, hey, the numbers look really great, because our culture is so strong. Our culture is extremely high quality, engineering and leadership in most of the markets that we enter.

Mellanox was a unique piece out there for us to overall acquire, one that was very similar in terms of being best of breed in its market for overall interconnects, and very engineering focused, probably a more of a large startup, which seemed to resonate a little bit with our Company and maybe where we were about 7 years to 10 years ago. And so there were so many likeness in terms of the culture, as well as the focus in terms of high-end overall engineering and leadership, that we felt it was a good combination.

That doesn't mean that we didn't look at it as what do we think we could do in growth together. Because you're right, that was still an option for us to potentially just partner together, but there was a great opportunity for us to work together and build products together and really take the overall accelerated compute to the next level and think about acceleration as a focus is about all the components around the central overall compute in terms of inside the data center and Mellanox was that perfect partner for us to do that with.

Now, incorporating it in, we wanted to make sure because we didn't have any overlap with products to products, most of the things that you've seen people indicating that there was overlap, there are things that we could be more efficient off. There are certainly things that we can be efficient in terms of our G&A overall organizations, as we integrate in terms of long-term. We believe we can do that, but our focus has been on how do we create products going forward? How do we start in terms of those engineering products to be not just a partnership and two things inside of a box, but what can we overall build together?

You'll see that in the years to come more than you'll see that in terms of next quarter. Now, when we look in terms of how we've incorporated this into our guidance, both our guidance in full for the P&L, but also we provided full year overall OpEx. Now, full year OpEx from a GAAP and non-GAAP, GAAP incorporates overall acquisition accounting, probably all of our favorite things out there of the accounts that have been working together on my team, probably for several months in terms of determining what that would be.

The largest piece of that is the purchase price accounting. Two pieces of purchase price accounting, which are important for our investors to see, of course, non cash at this point, because those entries are just the opposite end of the cash that we use to overall purchase the overall acquisition. So, in our overall GAAP results in OpEx, as well as in COGS, we have the amortization of two things, amortization of intangibles, intangible OpEx, as well as intangible overall COGS. That will continue for many years. You'll see things in terms of in the 5 years to 7 years, in terms of that amortization.

Secondly, we have a step-up of the overall inventory to fair value. And you will also find that in our overall COGS. That is one time in nature, one time for overall Q2 results. Thirdly, we have one-time items and deal costs, and other types of pieces that will be in our Q2 OpEx as well. And then lastly, which will be a continuation and just adding together with our existing stock-based compensation.

We have Mellanox overall stock-based compensation that we acquired and those shares will continue to vest over their normal period of time. And we have a small amount of retention, as well so that we keep that overall strong engineering team, essentially the whole Company to assure that we can meet our future goals together.

So, those are the breakdowns of what is in our overall guidance. There's a very good amount of it. That is one-time non cash that is incorporated into our GAAP results. We'll provide more understanding once we get to the end of Q2 that you will see the details of that type of accounting, but a good part of what we're seeing is non-cash in nature and just following the overall rules of acquisition accounting.

**Matt Ramsay** {BIO 17978411 <GO>}

Got it. That makes sense. I just kind of back up and now that the deals closed and you described the Mellanox revenue growth rate recently and you folded in the operating costs. Just big picture as you think about growth of the top line of NVIDIA or growth of the operating expenses, anything that -- I mean is it just a step-up on both lines and I'm we're sort of on the same growth trajectory as an integrated Company? Is that the right way to think about it or any difference in the way you would see the business growing or the investments growing now that you've integrated?

**Colette Kress** {BIO 18297352 <GO>}

Yeah, we're definitely spending time right now working on the growth across the two Companies. There's many discussions about which team do we want to do that engineering in, and we're actually spending that time to re-plan both of them together. You can imagine that Mellanox was, given how much time it was taking to overall close the deal, that they just continued saying, we've got to run the Company as normal. So, we spent this last month working with them to help understand where we will grow together now, as we are one Company.

There are many things that several of the organizations can do together more efficiently in terms of their investments, but it's the same thing when we refer to the overall G&A organizations. Keep in mind, we have to move the processes and the systems together to one Company, because we do hope to have them integrated fully within the next year, but then any types of investments we see as probably something that we can cross invest, and not necessarily have to invest externally. So, those are some of the things that we are doing. There's of course, some efficiencies in the G&A that we'll see over time, after we feel that overall integration that we need to do.

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**Matt Ramsay** {BIO 17978411 <GO>}

Got it. Since we've been talking about data center and Mellanox there is one question that always pops up and I think a couple of the prominent companies in the data center space have talked about maybe a little bit of a different shape to calendar 2020 with some -- a lot of work from home-based and other types of cloud spending in the beginning of the year, and then a little bit of, I don't know, concern among some of the investment community about what is this -- what's the back end of this pull-in or spending look like in the back half of the year and your Company is at the -- right at the beginning of a big cycle with Ampere, but we had a little bit of cyclicity and data center spending that affected the business over the last couple years.

So, you know, I think Jensen's talked about this in a couple of forums since the earnings and you would speak -- spoke to it on the public call as well, what -- this visibility that you have in data center now and maybe how the business is at scale versus where it might have been a couple of years ago when there was a sort of down cycle and spending and how you think you might manage through that over the coming months?

**Colette Kress** {BIO 18297352 <GO>}

Yeah. So when we think about our turn the corner to introduce A100 this time versus probably more than three years ago when we launched V100, there's a lot of differences. I would agree with you on the scale. The scale of the business are essential installed base as well as our partnerships. Our partnerships with hyperscalers across the world, as well as a strong piece within cloud, and the beginning of what we see in terms of enterprise workloads and what that means.

Now, when we introduced overall V100 and we started the work with the overall hyperscales, that's time to incorporate one of the most important pieces, which is called qualification period. That qualification period, depending on where they are using it in their infrastructure can take time. We did a little differently with A100. A100 whether you think about the full software stack or you think about all of the different hardware components, it is sold with an overall baseboard and the overall AGP's together.

So, you can synchronize everything and all of the hardware around it, as well as the software to ease and improve the overall qualification time period for that. That was very helpful to our initial customers. They know that we have worked to find the best overall components to buy -- to find the best overall software to run in all of their different types of environments. So, that is something that's very different than what we had with V100. We have begun overall sampling with them, and if you think about our overall development process, it probably incorporated a good point of input from the overall hyperscales in terms of what we need.

A100 is unique. A100 is maybe what you would refer to as a universal platform. It is not geared just to training this time. It is not geared just to inferencing. It has the

capability of a platform to do both. It also has the ability to create multiple instances at the same time, so that you could choose to have part of those instances be overall training, part of them overall be inferencing and many other different types of combinations around that.

Creating that overall flexibility is really helpful when people are choosing their overall compute workload that they want to do. We want them to say, I just have the overall A100, I don't need to determine which one of the SKUs I need to overall purchase through them. So, there's a lot of overall benefits with A100 as this launch. Now, yes, further about or what is demand? What is demand when we think about where we are right now in COVID-19 as well as there are and can be sometimes cycles in terms of the overall procuring?

Those cycles are pretty much a statement of getting the overall data centers ready, if you are a large purchaser, and how you work through that process of setting up the data center and getting all the pieces before you insert the overall compute through that. We have indicated those we moved into Q1, as well as when we move into Q2, we've indicated that we do have visibility. That visibility is strong as we go into Q2, but we're going to need a little bit more time to think through what does that look like for the second half of the year. This hasn't been a quarter in Q1 and or Q2 that we refer to it as Poland's.

We don't have any view that there were any Poland's associated with the purchase of overall Ampere or any other part of the overall data center business. This is a case where AI can be and we hope it will be overall strategized as a key type of investment that people make. An investment not only in hyperscales in the cloud, but as the enterprise turns this corner, how do they remain competitive in this environment if they are not overusing AI. We've seen overall COVID-19 though have people turn to their existing compute, to use overall NVIDIA products to help them both solve solutions, to solve the overall virus, whether it be looking for why certain people get the overall virus versus others, but also looking how they can improve their process.

As you can imagine, if you think about storefronts and retails as they are opening up, they want to assure that they have the distancing. The overall distancing within their stores, and they are keeping track of that with the overall use of AI. So, there's a tremendous opportunity that the unfortunate virus brings, but this is also an era where when you think about your future, you will think about how do I stay competitive and use overall AI in those scenarios?

**Matt Ramsay** {BIO 17978411 <GO>}

Now, thanks for that. I think, just in the interest of time, we might want to jump in and talk about gaming a little bit, considering it's such a big part of the Company, but I just say that the team at Cowen has done quite a bit of work on Edge Cloud, and I think it's very interesting to see Ampere bring inference and training into the same piece of hardware that can be virtualized and I think maybe save that conversation for offline because I think there's a lot more work to do there, but just quickly diving

into gaming that there's a push/pull with COVID there as well, a ton of people stuck at home gaming, driving interest in demand for your products, at the same time there's the iCafe market remains really challenged in Asia and I think there's been a bit of a mixed change between desktop and notebook in your own business.

So, do the best you can talk about the moving parts as we get into the July quarter with gaming and maybe an unusual year with some of the conferences moved around and difficult launch dates changed around as well as how you're thinking about the next couple of quarters and gaming at the moment is there?

**Colette Kress** {BIO 18297352 <GO>}

Let's start in terms of the base, in terms of what we saw in Q1 regarding gaming. When we had announced overall guidance for the quarter all the way back at Valentine's Day, we were in the initial stages of the overall virus. At that point, it had not moved to a pandemic and it was really just taking place in the Asia-Pac overall area. An important part of the market though for us, we indicated that we expected impact to our overall gaming business. Now, during the quarter, this is what we saw. We saw it move to an overall pandemic. We saw a shutdown of the overall retail channel almost across the world. Additionally, the overall iCafes were shut down for a period of time in overall China.

What that led to is, work from home, learn from home, and probably one of the most important pieces, entertain gaming at home that says, if there's nothing else to do, and you are in your home, it was a great opportunity to use that time in your spare time for the overall gaming and we saw that consistently across the world. That means in terms of people on our platform, whether that be steam, whether that be a GFN, or other things that we could see people increasing their time gaming, increasing the number of hours that they were gaming, but also those increasing just number of people on our overall platform.

So, we're really pleased with those results, but let's talk about what we saw as that movement from retail to e-tail during that quarter, fairly efficiently. So, you could imagine that the overall channels of things going into retail versus e-tail is quite different, but it moves quite well. So, people were looking for some form of ability to get the gaming that they could purchase e-tail and we also saw people probably looking for things that are dual. Can I game and also have a compute mobile workstation or work computer, excuse me, through at home. And so we saw some strength in our overall notebook business as well.

Now, as we turn the corner to looking at Q2 and our overall guidance, we're going to still, we believe see a solid interest in the overall gaming as much of the things around the world are still in a bit of shutdown mode, and slowly improving. Our iCafes are still practicing distancing as well in there. So, they may be open, but they're not necessary open to a 100%. And that's something that we took into account when we thought about our overall guidance, but I think the most important thing is the underlying strength, even in the good times, and in probably some of



the more challenging times, gaming becomes front and center as a great overall platform to overall entertain.

We've increased that over the last 5 years to 10 years as well, that it is probably one of the most economical forms of overall gaming because it can be something that you have with an existing platform that you purchase, and you can either have an add-in card, or you can buy an overall (inaudible) -- overall notebook to do that. As you know, we're also in the overall consoles on the switch. So, that has also helped just the overall need for gaming during this challenging time.

So, you asked in terms of what we think in the next couple quarters. As you know, we're all working virtually. We have so many conferences and we sit in front of our little screen and on little videos, and I think that will continue. We're getting better at it. We've been doing it now for about 12 weeks. So, I think the industry will adapt. We were able to launch A100 from, you know, Jensen's kitchen. I'm not sure anybody is going to worry about the conferences, I think they'll still get the information of the great games that are going to be coming out.

As we get to the end of the summer, we're going to be starting to think about both back to school, and we are going to be starting to think about the holiday. Those are great times for games. And, when games come out, people also do that second purchase as they purchase their overall compute, to play the games. So, we're still excited for that. It's just going to be a different format and in terms of how people, you know present that information.

**Matt Ramsay** {BIO 17978411 <GO>}

Now that makes sense. I, yeah, I think you said, we're all getting used to this new virtual world put together as we're doing now. Just in the interest of time I'm getting, there's a little interface up here to my right that has red, yellow and green lights on. Some lights are starting to beep at me, but I wanted to have you touch just briefly on the automotive business.

I know that the guidance was down 40% sequentially, but obviously a huge opportunity for the Company over the next 5, 10 years in autonomous driving. I think the near term revenue will be what it is, but maybe you could talk a little bit about the level of investment that you're making in the automotive space and how you expect that to sustain through the near term bumps in the auto market?

**Colette Kress** {BIO 18297352 <GO>}

Sure. So, to remind everybody in our Q1 results that we've reported, our automotive business did have some impact due to COVID-19, but as we guide it for overall Q2, we do expect the automotive business to be down 40% sequentially. That is really associated with our legacy infotainment systems as much of the overall automotive industry both as manufacturing was significantly injured during the COVID-19 and also the overall demand for the purchase of overall cars. We continue to work with them in terms of long-term, on the overall AV solutions and the work in terms of

producing overall AV across a spectrum all the way down to ADAS up to our overall robotaxis. Over the last several quarters, we've continued to work even in the COVID-19 arena, on thinking through how best they can optimize the auto motive spend on building out AV.

They like the idea of one single end-to-end platform that takes them to ADAS to the high level types of robotaxis or overall self driving, and the reason why is the overall testing, the overall software development is a lot of work, both for them, as well as the work that we are providing individually. If they could standardize on a platform that takes them all the way through those different pieces, it helps them both, possibly faster to market, but also really helping them with the overall time that it is taking to build out these overall platforms.

Now internally, we continue to work with automotive companies in terms of building out that software platform with them. In many cases, we have specific agreements that we're working together for them. Now, when you think about our software development, remember, we have a universal and unified architecture across the Company that we use in terms of our overall hardware. And then the software is kind of an added on top of that for the specific industries. And that's what you have with automotive. And so we're able to really treat it as a vertical and our overall investments there in terms of bringing out AV.

**Matt Ramsay** {BIO 17978411 <GO>}

Got it. Not to cut off the conversation abruptly, but I think we're getting the virtual hook given the time we have together, but congratulations on Ampere and closing Mellanox we'll be all awaiting, I think that would be Ampere launch in the gaming space. And thanks to all of you for spending a bit of time with Cowen. We very much appreciate it and thank you, everybody.

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